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Micro-credential (MC) is an innovative and disruptive technology-based learning model. In higher education (HE), MCs are typically certified in the form of a digital badge (DB) issued to learners upon completion of a credential. The introduction of MCs and DBs has the potential to revolutionise the way in which HE institutions deliver degrees, and how students learn and achieve their tertiary qualifications. To explore this innovative learning, this study investigates the potentials and challenges of implementing MCs in HE. Through a systematic literature review of 56 peer-reviewed articles on MCs and related DBs in HE published between 2015 and 2021, we find that research on MCs in HE is gaining attention. While different aspects of MCs in HE have been studied using various research methodologies and theoretical lenses, further research is needed to capture the influence of technology and to understand different stakeholder perspectives. This study contributes to the growing literature on MCs in HE by synthesising the relevant knowledge areas into key themes and developing a conceptual framework for implementing MCs in HE. This study also identifies critical research gaps to advance the literature on MC implementation in HE.


This study employed the design-based research (DBR) methodology to explore how to design instructional prompts integrated into a computer-based cognitive tool, GeoGebra, for gifted mathematics education. This study was divided into two iterative research phases lasting for 3 semesters, in which differentiating the instructional prompts for gifted students was explored. During two iterations, a combination of quantitative and qualitative data collection and analysis procedures were used to examine the effect of the designed prompts on gifted students' learning achievements and explore their feedback on the learning activities based on the research conducted on 60 participants who were tenth-grade students. The findings led to a set of design propositions that contribute to the literature on both instructional prompts integrated into computer-based cognitive tools and gifted mathematics education. The propositions emphasize (a) prompts’ types, the algebraic-based prompts (ABPs) and software-based prompts (SBPs), (b) prompts’ order, emphasizing on presenting ABPs before SBPs, (c) prompts’ sequencing, adjusting the number of prompts’ sequences to gifted students' characteristics, and (d) prompts’ combination, merging ABPs and SBPs to gain higher order learning outcomes. The prospective studies for the next phases of the DBR study are also discussed.

Early evidence suggests that robot programming offers an important foundation for spatial reasoning and computational thinking; however, researchers have debated how to introduce young children to these skills. We explored how preschoolers develop understanding of spatial concepts and computational thinking as the children took turns navigating a path during guided play with a programmable robot. Our analysis of the data included a multimodal visualization of the exchanges between the teacher, children, and a programmable robotic device. The findings highlight the effects that arose from the physical-digital convergence of technology integrated into play including: (a) the robot evoked a chain of actions, enacting pedagogic forces that transformed children’s learning; (b) children used their own bodies as spatial referents, co-locating themselves in space with the robot; (c) the teacher remained a key actor, providing verbal and nonverbal scaffolding to promote children’s understanding and mastery of spatial and computational concepts; and (d) talking with the teacher about spatial concepts combined with the interactions with the robot enhanced children’s acquisition of spatial ideas relative to the quantity of children’s verbal expressions and complexity of their applied spatial skills and computational thinking.


This article describes the content validation of the Transitioning Learners to Calculus in Community Colleges Institutional Self-Assessment Tool. The instrument comprises five content areas, each with an associated set of items representing practices to promote the success of underrepresented racially minoritized (URM) students as they transition into and through mathematics courses required for degrees in science, technology, engineering, and mathematics (STEM). Five subject matter experts participated in the content validation. Scale-level index scores for each content area were above .85, and 18 of 22 items met the content validity index threshold of 1.0. The instrument has demonstrated strong content validity and is recommended for mathematics programs in community colleges to self-assess the degree to which they have implemented these practices and to identify next steps to enhance their support of URM students in mathematics courses required for STEM degrees.


Executive functions (EFs) are an umbrella term that includes various cognitive abilities (such as inhibition, planning, goal-setting, monitoring, and shifting). There is common agreement that there are three main EFs: inhibitory control, cognitive flexibility, and working memory. Further studies have reported that compared to typically developing peers, children with cerebral palsy (CP) show deficits in EF skills. This study aims to evaluate children with CP’s inhibitory control and cognitive flexibility skills. Forty children with CP between the ages of 7–13 were included in the present study. EF scores of the CP group were compared with scores of typically developing peers matched one-to-one by age...
and sex. The EF skills were evaluated with Wisconsin card sorting test (WCST), Stroop color–
word test (SCWT) TBAG Form, and executive function behavior rating scale parent form
(BRIEF-P). It was determined that there was a significant difference in the WCST total trials,
total errors, categories completed, and percent conceptual level responses scores (p <
.05); SCWT-TBAG scores (p < .05), and BRIEF-P all scores (p ≤ .01) of children with CP. The
results of this study suggest that children with CP are disadvantaged with EF skills in terms
of inhibitory control and cognitive flexibility.

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Face aux difficultés des élèves en langues, ne faut-il pas trouver des moyens de les
enseigner autrement ? À l'occasion de la Journée européenne des langues, présentation d'un dispositif en vogue.

epistemological beliefs to children’s early numeracy abilities: Pathways through parents’
home practices and children’s numeracy interest. Early Childhood Research Quarterly,
65, 13-22. https://doi.org/10.1016/j.ecresq.2023.05.005
Many existing home numeracy models focus only on the roles of home activities in
children’s numeracy abilities. Parents’ beliefs, teaching strategies, and children’s
numeracy interest are seldom considered. As such, this study investigated the relations
between parents’ epistemological beliefs about mathematics, how often children
engaged with numeracy activities at home, parents’ use of indirect teaching strategies,
children’s early interest and ability in numeracy. Three hundred twenty-seven Hong Kong
kindergarteners and their parents participated in the study. After controlling for the
children’s gender, age, non-verbal intelligence and language abilities, results showed
that parents’ dynamic beliefs about the nature of mathematics were associated with
their use of indirect teaching strategies. The frequency of home numeracy activities and
parents’ use of indirect teaching strategies were linked with children’s numeracy abilities
through numeracy interest. Our findings demonstrate the importance of helping parents
to appreciate the dynamic nature of mathematics, and of coaching parents how to
guide children’s numeracy learning.

Designing formative assessments of early childhood computational thinking. Early
With growing interest in supporting the development of computational thinking (CT) in
early childhood, there is also need for new assessments that serve multiple purposes and
uses. In particular, there is a need to understand the design of formative assessments that
can be used during classroom instruction to provide feedback to teachers and children
in real-time. In this paper, we report on an empirical study and advance a new unit of
observational analysis for formative assessment that we call an indicator of a knowledge
refinement opportunity or as a shorthand, KRO indicators. We put forth a new framework
for conceptualizing the design of formative assessments that builds on the Evidence
Centered Design framework but centers identification and analysis of indicators of
knowledge refinement opportunities. We illustrate a number of key indicators through
empirical examples drawn from video recordings of Kindergarten classroom lessons.


Multiple factors including the child’s non-linguistic characteristics and caregiving environment can affect language development. Since preterm birth (<37 weeks’ gestation) can negatively affect language development, this study used path analysis to investigate whether the influence of preterm birth on expressive language development at 3 and 5 years of age is mediated by a child’s non-linguistic characteristics (temperament and cognitive, motor, and social-personal abilities), caregiving environment (maternal and paternal stress and depression, mother-child and father-child relationship quality), and interactions between these domains. These analyses were conducted using three waves of data (ages: 9 months, 3 years, 5 years) on 8,712 children (4,300 female; 535 preterm) from a nationally-representative longitudinal study in Ireland. Preterm birth was indirectly (but not directly) associated with expressive language at 3 years of age via cognitive and social-personal abilities (but not motor abilities, mother-child relationship quality, or father-child relationship quality) at 9 months. There was no direct or indirect effect of preterm birth on expressive language at 5 years of age. Preterm birth negatively affected mother-child and father-child relationship quality at 3 years via fussy-difficult temperament and mother’s/father’s stress (but not depression) at 9 months. These findings are discussed with reference to international standards for neonatal care, including the need for long-term developmental monitoring of children born preterm by multidisciplinary healthcare teams, alongside parental supports promoting mental health and confidence in caregiving tasks. Future study recommendations are made to expand the tested models in line with family systems perspectives.


We extended research on social skills training to determine if the activities first-grade students were engaged in while Tootling would influence their performance of two recently trained social skills: complimenting and encouraging peers. After receiving
social skills training, students engaged in two experimental small-group activities, a cooperative activity and a parallel-play activity. During both activities, a Tootling intervention was applied and interdependent group rewards (e.g., every student in the class receives the reward) were delivered contingent upon the number of peer reports of classmates providing compliments and encouragements meeting an unknown, randomly selected criterion. Students also engaged in their typical classroom activity, an individual competition, without Tootling. Statistical analysis indicated that during the cooperative-play activity there were significantly higher levels of complimenting and encouraging than during the parallel-play and individual competition activities. More compliments were delivered during the parallel-play activity than during the individual competition, but there was no significant difference in encouragements across the two conditions. Also, during the parallel-play activity, compliments where higher than encouragements. These findings suggest that after social skills training, Tootling can enhance social skill performance when educators schedule activities that provide opportunities to engage in these recently trained skills. Discussion focuses on task and goal structures associated with activities and applied implications for enhancing social skill development.


Flipped classroom (FC) has recently attracted researchers’ interest in teacher education thanks to its potential for promoting pre-service teachers' (PTs) professional development. However, some of major issues are the lack of interactivity, disengagement, and amotivation of PTs for pre-class activities due to poor online instruction design. This explanatory sequential mixed study explores the effects of the microlearning-supported FC on PTs’ learning performance for professional development, motivation, and engagement. A total of 128 PTs participated in this study from a university in Turkey. In the quantitative phase, a quasi-experimental pretest-posttest design was conducted and the treatment lasted for 14 weeks. The PTs were divided into two experimental groups and one control groups using random sampling technique. In first experimental group (m-FC, n = 43), the participants learned with microlearning-supported (by using a-bit sized learning chunks outside the classroom) FC model. In the second experimental group (t-FC, n = 39), the participants learned with traditional FC model. A control group (non-FC, n = 46) was not taught using FC model and teacher-centered approach was adopted in this group. The findings indicated that FC model (in both experimental groups) increased learning performance, intrinsic motivation, emotional, and behavioral engagement compared to a group that was not used to FC. Moreover, m-FC group had better intrinsic motivation and engagement than both t-FC and non-FC groups. Semi-structured interviews showed that two major themes emerged regarding benefits and challenges of microlearning-supported FC. Most of PTs had positive perceptions that it enhances the willingness to participate in pre-class activities. The implications for teacher education, recommendations and directions for further studies were also discussed.

There is rich literature on the predictive role of the caregiver’s language richness in child development outcomes during caregiver-child interaction. However, it is unclear whether this is true in rural China, where many young children are still not developing to their fullest potential. Our study supplements the current evidence in rural China by answering three questions. First, is the rural caregiver’s language richness associated with child development outcomes? Second, do different child characteristics, caregiver characteristics, and household poverty status affect the relationship between caregiver language richness and early child development outcomes? Third, does the caregiver’s language suitability moderate the association between language richness and child development outcomes? We observed and recorded 10-minute-long videos of 591 rural children aged 6–30 months and their primary caregiver dyads in a free toy play session and collected their social-demographic information. Trained coders coded videotaped interactions to obtain measurements of the caregiver’s language richness and suitability. Children were assessed for cognitive, language, motor, and social-emotional development. A multivariate linear regression model adjusted for covariates was used to estimate the association between the caregiver’s language richness and child development outcomes. Interaction terms were then added to the adjusted model to explore the moderating role of caregivers’ language suitability, child characteristics, caregiver characteristics, and household poverty status. The caregiver’s language richness is positively associated with the child’s cognitive, language, motor, and social-emotional development. The association is more pronounced for children who are boys, in later toddlerhood, or from registered poverty households. In addition, we found that the caregiver’s language suitability could enhance the association between language richness and child development outcomes.


This study presents the outcomes of a semi-systematic literature review on the role of learning theory in multimodal learning analytics (MMLA) research. Based on previous systematic literature reviews in MMLA and an additional new search, 35 MMLA works were identified that use theory. The results show that MMLA studies do not always discuss their findings within an established theoretical framework. Most of the theory-driven MMLA studies are positioned in the cognitive and affective domains, and the three most frequently used theories are embodied cognition, cognitive load theory and control–value theory of achievement emotions. Often, the theories are only used to inform the study design, but there is a relationship between the most frequently used theories and the data modalities used to operationalize those theories. Although studies such as these are rare, the findings indicate that MMLA affordances can, indeed, lead to theoretical contributions to learning sciences. In this work, we discuss methods of accelerating theory-driven MMLA research and how this acceleration can extend or even create new theoretical knowledge. Practitioner notes What is already known about this topic Multimodal learning analytics (MMLA) is an emerging field of research with inherent connections to advanced computational analyses of social phenomena. MMLA can help us monitor learning activity at the micro-level and model cognitive, affective and social factors associated with learning using data from both physical and digital spaces. MMLA provide new opportunities to support students’ learning. What this paper adds Some MMLA works use theory, but, overall, the role of theory is currently limited. The three theories dominating MMLA research are embodied cognition, control–value theory of
achievement emotions and cognitive load theory. Most of the theory-driven MMLA papers use theory ‘as is’ and do not consider the analytical and synthetic role of theory or aim to contribute to it. Implications for practice and/or policy If the ultimate goal of MMLA, and AI in Education in general, research is to understand and support human learning, these studies should be expected to align their findings (or not) with established relevant theories. MMLA research is mature enough to contribute to learning theory, and more research should aim to do so. MMLA researchers and practitioners, including technology designers, developers, educators and policy-makers, can use this review as an overview of the current state of theory-driven MMLA.


This paper discusses a three-level model that synthesizes and unifies existing learning theories to model the roles of artificial intelligence (AI) in promoting learning processes. The model, drawn from developmental psychology, computational biology, instructional design, cognitive science, complexity and sociocultural theory, includes a causal learning mechanism that explains how learning occurs and works across micro, meso and macro levels. The model also explains how information gained through learning is aggregated, or brought together, as well as dissipated, or released and used within and across the levels. Fourteen roles for AI in education are proposed, aligned with the model’s features: four roles at the individual or micro level, four roles at the meso level of teams and knowledge communities and six roles at the macro level of cultural historical activity. Implications for research and practice, evaluation criteria and a discussion of limitations are included. Armed with the proposed model, AI developers can focus their work with learning designers, researchers and practitioners to leverage the proposed roles to improve individual learning, team performance and building knowledge communities. Practitioner notes What is already known about this topic Numerous learning theories exist with significant cross-over of concepts, duplication and redundancy in terms and structure that offer partial explanations of learning. Frameworks concerning learning have been offered from several disciplines such as psychology, biology and computer science but have rarely been integrated or unified. Rethinking learning theory for the age of artificial intelligence (AI) is needed to incorporate computational resources and capabilities into both theory and educational practices. What this paper adds A three-level theory (i.e., micro, meso and macro) of learning that synthesizes and unifies existing theories is proposed to enhance computational modelling and further develop the roles of AI in education. A causal model of learning is defined, drawing from developmental psychology, computational biology, instructional design, cognitive science and sociocultural theory, which explains how learning occurs and works across the levels. The model explains how information gained through learning is aggregated, or brought together, as well as dissipated, or released and used within and across the levels. Fourteen roles for AI in education are aligned with the model’s features: four roles at the individual or micro level, four roles at the meso level of teams and knowledge communities and six roles at the macro level of cultural historical activity. Implications for practice and policy Researchers may benefit from referring to the new theory to situate their work as part of a larger context of the evolution and complexity of individual and organizational learning and learning systems. Mechanisms newly discovered and explained by future researchers may be better understood as
contributions to a common framework unifying the scientific understanding of learning theory.


Grade retention is a commonly used intervention for children who struggle in school. However, empirical research does not unequivocally support its efficacy. Of particular interest are the prevalence, predictors, and outcomes of students who are retained more than once in elementary school. To date, limited research examines students who are held back multiple times in school. We examined multiple retentions within a large, ethnically diverse (52.7% Latinx, 43.7% African American/Black, 3.6% White/Asian/Other) sample of students who had been retained at least once (N = 5,490). Most of these students (90.3%) were receiving free/reduced-price lunch. This sample of retained students was derived from a larger dataset (N = 32,551; 58.3% Latinx, 34.5% African American/Black, 7.2% White/Asian/Other). Results indicate that twice-retention was rare in this sample, with only 460 (1% of all students; 8% of students who were retained) being held back more than once. When twice-retention did occur, the second retention happened most often in 3rd grade, likely due to the state-wide promotional gate. In this sample, students who were retained twice performed more poorly early on in school and were much more likely to be Black and receive free lunch. Students who were retained twice had poorer outcomes on 5th grade GPA, even after controlling for poverty and initial school performance with small effect sizes. Students who were retained twice performed more poorly on 5th grade standardized reading with a small effect size, but no differently on math tests. These results suggest that, within this predominantly low-income, ethnically diverse sample, multiple retentions in elementary school does not appear to benefit struggling students, and this practice disproportionately affects Black children. These findings suggest retention policies should be more closely examined.


There is no consensus on definitions of educational or academic integrity, and their philosophical relationship with the notion of responsibility is complex. Here, we aim to i) disentangle these three notions. We lean on a philosophical framework of ethics and our method involves different kinds of reasoning and the modeling of complex thinking. We combine this frame with a three-level epistemic dimension to allow us ii) to model the psycho-epistemic (level 1), epistemological (level 2), and phenomenological (ground 0) ways in which subjects interact with their own norms and knowledge and with those of the surrounding institutions. Finally, iii) we also aim to propose concrete educational means by which to implement educational integrity. Our theoretical findings lead us i) to consider responsibility as a process that consists of establishing a dialogical relationship between one’s inner and outer worlds, which relies on an epistemic decentering. Based on this, we argue that education for responsibility founds a new, expanded definition of educational integrity. Moreover, ii) empirical evidence suggests that this model can be operationalized by psychological indicators such as critical and complex thinking, cognitive flexibility, contextual relativism, and decentering, all of which are skills that can be fostered in spite of simplifying thinking, dogmatism, naive epistemology (and dualism) and cognitive fusion, respectively. It points to iii) the benefits of an educational approach
in which subjects are encouraged to practice different types of meditation and to feel free to break institutional rules. Therefore, promoting educational integrity may require methods that lie beyond the obvious choices. After discussing the scope and limitations of our results, we propose a new research agenda for educational integrity, which could ground a field of research broader than just academic integrity, but complementary to it. The article is available here: https://edintegrity.biomedcentral.com/articles/10.1007/s40979-023-00134-3


This study investigated the extent to which self-report and digital-trace measures of students’ self-regulated learning in blended course designs align with each other amongst 145 first-year computer science students in a blended “computer systems” course. A self-reported Motivated Strategies for Learning Questionnaire was used to measure students’ self-efficacy, intrinsic motivation, test anxiety, and use of self-regulated learning strategies. Frequencies of interactions with six different online learning activities were digital-trace measures of students’ online learning interactions. Students’ course marks were used to represent their academic performance. SPSS 28 was used to analyse the data. A hierarchical cluster analysis using self-reported measures categorized students as better or poorer self-regulated learners; whereas a hierarchical cluster analysis using digital-trace measures clustered students as more active or less active online learners. One-way ANOVAs showed that: 1) better self-regulated learners had higher frequencies of interactions with three out of six online learning activities than poorer self-regulated learners. 2) More active online learners reported higher self-efficacy, higher intrinsic motivation, and more frequent use of positive self-regulated learning strategies, than less active online learners. Furthermore, a cross-tabulation showed significant (p < .01) but weak association between student clusters identified by self-reported and digital-trace measures, demonstrating self-reported and digital-trace descriptions of students’ self-regulated learning experiences were consistent to a limited extent. To help poorer self-regulated learners improve their learning experiences in blended course designs, teachers may invite better self-regulated learners to share how they approach learning in class.


Skills shortage in the fields of Sciences, Technology, Engineering, and Mathematics (STEM) poses a significant challenge for industries globally. This study examines the interrelationship between high school students’ gender, their proficiency in Information and Communication Technology (ICT), and their career preferences in the STEM domain. Based on representative data for German teenagers, our study shows that female adolescents are less likely to choose a career in STEM unless they have strong ICT skills in secondary school. The relationship does not hold for male students. Our findings can be explained with evidence that teenagers sort into occupations they believe to be good at and that female teenagers rather underestimate their true potential. Using different empirical approaches, we also show that ICT skills act as a moderator and not as a
mediator in the gender-specific choice of training upon graduating from secondary school.


Based on the Teaching Through Interaction (TTI; Hamre et al., 2013) framework and the observational tool Classroom Assessment Scoring System (CLASS; Pianta, La Paro, et al., 2008), some professional development (PD) programs combined with video-based coaching had been developed. Previous studies have well-documented the effects of these PD programs on in-service teachers’ mastery of interactional skills; however, little research has been done on the effects for preservice teachers. In the current study, we aimed to explore: (1) if video-based coaching improves preservice teachers’ interactional skills, and (2) how the personal characteristics of teachers (whether they attend coaching or not) predict the change of interactional skills during their practicum. Using an experimental approach, the study recruited 56 preservice teachers from a Chinese university to participate in the assessment and intervention. Results showed that preservice teachers in the coaching group who received one semester of sustained and individualized coaching support demonstrated a greater improvement in teacher-child interaction skills in the Emotional Support domain than those in the control group. Further, preservice teachers’ higher levels of child-centered beliefs and initially lower levels of knowledge of effective teaching, ability of identifying effective teaching behavior, and teacher-child interactional skills related to a greater increase in interactional skills during the internship. These findings shed light on how to design effective preparation programs for preservice teachers during their practicum.


Although studies have shown that computational thinking (CT) can enhance learning processes and outcomes across traditional subjects, they have not shown how teachers might scaffold children’s CT processes in a technology-mediated learning context. This exploratory study examined how teacher talk and technologies impacted the CT of three children (6 to 8 years old). Seven videotaped 90-minute sessions of weekly project-based activities yielded 4,842 turns of talk (2,974 by children). Statistical discourse analysis revealed the following results. After a teacher command, the children more often executed a sequence of actions toward a solution but less often demonstrated problem understanding than otherwise. Following a teacher’s open question, the children were more likely to offer logically organized ideas. In response to a teacher’s rhetorical question, they more often searched for information. These results inform educators regarding when to use each type of teacher talk to scaffold children’s CT processes.


Interactive apps are commonly used to support the acquisition of foundational skills. Yet little is known about how pedagogical features of such apps affect learning outcomes, attainment and motivation—particularly when deployed in lower-income contexts,
where educational gains are most needed. In this study, we analyse which app features are most effective in supporting the acquisition of foundational literacy and numeracy skills. We compare five apps developed for the Global Learning XPRIZE and deployed to 2041 out-of-school children in 172 remote Tanzanian villages. A total of 41 non-expert participants each provided 165 comparative judgements of the five apps from the competition, across 15 pedagogical features. Analysis and modelling of these 6765 comparisons indicate that the apps created by the joint winners of the XPRIZE, who produced the greatest learning outcomes over the 15-month field trial, shared six pedagogical features—autonomous learning, motor skills, task structure, engagement, language demand and personalisation. Results demonstrate that this combination of features is effective at supporting learning of foundational skills and has a positive impact on educational outcomes. To maximise learning potential in environments with both limited resources and deployment opportunities, developers should focus attention on this combination of features, especially for out-of-school children in low- and middle-income countries. Practitioner notes What is already known about this topic Interactive apps are becoming common to support foundational learning for children both in and out of school settings. The Global Learning XPRIZE competition demonstrates that learning apps can facilitate learning improvements in out-of-school children living in sub-Saharan Africa. To understand which app features are most important in supporting learning in these contexts, we need to establish which pedagogical features were shared by the winning apps. What this paper adds Effective learning of foundational skills can be achieved with a range of pedagogical features. To maximise learning, apps should focus on combining elements of autonomous learning, motor skills, task structure, engagement, language demand and personalisation. Free Play is not a key pedagogical feature to facilitate learning within this context. Implications for practice and/or policy When developing learning apps with primary-aged, out-of-school children in low-income contexts, app developers should try to incorporate the six key features associated with improving learning outcomes. Governments, school leaders and parents should use these findings to inform their decisions when choosing an appropriate learning app for children.


Cette thèse étudie la construction du métier d’ingénieur à l’École Centrale de Marseille, avec comme point de départ les apprentissages curriculaires en gestion de projet. Cette recherche mobilise des méthodes mixtes ainsi qu’une approche pluridisciplinaire (sciences de l’éducation, sciences de gestion, sociologie). Parmi les résultats, il a été montré que les étudiants apprennent inégalement la gestion de projet. Ainsi, elle ne peut définir la professionnalité émergente de l’étudiant dans son intégralité, du fait que c’est un élément curriculaire de la formation de l’ingénieur parmi d’autres éléments relevant de l’apprentissage en contexte organisationnel (stage, vie associative, etc). Malgré l’hétérogénéité des expériences, les professionnalités émergentes reflètent majoritairement une définition de l’ingénieur centralien correspondant aux objectifs du référentiel d’ingénieur de l’École Centrale de Marseille.

Cette thèse, ancrée dans une approche sociocognitive, s’intéresse aux apprentissages professionnels des conseillers principaux d’éducation novices (CPES) en matière de régulation de l’équipe de vie scolaire, dans le cadre d’une formation en alternance établissement scolaire/INSPE (Institut Supérieur du Professariat et de l’éducation. Elle est adossée à une démarche de recherche-intervention (RI), contractualisée avec un rectorat, et qui s’est déroulée dans le cadre de la formation des CPE tuteurs (CPET). L’objectif de la thèse est de décrire et comprendre le processus de construction des apprentissages professionnels dans le cadre d’un dispositif de formation en situation de travail co-élaboré avec les CPET dans le cadre de la RI et d’identifier les savoirs professionnels construits par les CPES. Au plan théorique, nous étudions les processus d’apprentissage mobilisés et les savoirs professionnels construits par les CPES lors de leur participation à ce dispositif de formation en situation de travail en retenant deux indicateurs : d’une part les savoirs professionnels perçus (Marcel, 2009 ; Lefeuvre et al, 2009 ; Tali, 2016), au travers de l’évolution du sentiment d’efficacité professionnelle (SEPro) des CPES ; d’autre part, les savoirs professionnels constatés (Tali, 2016), au travers de l’évolution des pratiques professionnelles (Marcel, 2005). L’analyse de l’évolution des pratiques professionnelles repose sur le modèle quaternaire des pratiques théorisé par Marcel (2009) et opérationnalisé, au plan méthodologique, par la démarche des récits de pratiques (Marcel, 2014b). A partir d’une méthodologie qualitative et dans une démarche diachronique, la thèse présente les résultats d’une recherche conduite auprès de six CPES et de leurs tuteurs. L’analyse des savoirs repérés dans l’évolution des pratiques montre que les CPES partagent en fin de dispositif la conception d’un management basé sur une éthique du care associé à une visée participative. Par ailleurs, l’analyse de l’évolution du SEPro met au jour les épreuves de la dimension managériale du métier. Enfin, la mise en relation des configurations de tutelles (liées aux interactions tutorales), avec les savoirs professionnels construits par les CPES permet de proposer d’une part une modélisation du processus de construction des apprentissages professionnels dans un dispositif de formation en situation de travail ; d’autre part une modélisation du potentiel d’apprentissage d’un dispositif de formation en situation de travail.


The online and offline blended learning mode based on SPOC has gradually become a popular teaching mode in higher institutions due to COVID-19 pandemic. However, students of English as a Foreign Language (EFL) in SPOC-based blended learning environments continue facing problems of low participation and persistent intention. In order to explore the influencing factors of EFL students’ continuance intentions to learn under the SPOC blended learning environment, this study recruits 48 EFL students from three higher vocational colleges based on the grounded theory. Through the triple coding method of open, axis, and selective coding based on the grounded theory and the used of software Nvivo to conduct a triple coding analysis of the text data obtained from the in-depth interviews and focus group interviews, a theoretical model of the influencing factors of EFL students’ continuous learning intention (pre-influencing factors,
external situational factors, and continuance intention) is proposed. Besides, a systematic framework based on stakeholders response to improve EFL students’ continuance learning intentions in SPOC-based blended learning environments is constructed accordingly. This study can provide reference for basic theory and variable selection for subsequent research on the influencing factors of EFL students’ continuance learning intentions in China and elsewhere.


This research aimed to explore the views of 8th grade students on digital game-based English language learning as a foreign language (EFL). A total of 69 students between the ages of 12 and 14 participated in the study. Students’ vocabulary acquisition skills were tested using a web 2.0 application called «Quizziz.» The study utilized a triangulation method in which the results of a quasi-experiment and the metaphorical perceptions of the learners were obtained. The results of the tests were recorded at two-week intervals, and students’ reactions to the results were collected using a data collection tool. The study used a pre-test, post-test, and control group design. The experimental and control groups took a pre-test before the study began. The experimental group then practiced vocabulary using Quizziz, while the control group practiced vocabulary by memorizing it in their mother tongue. The post-test results showed significant differences between the control and experimental groups. In addition, content analysis was used to analyse the data, with metaphors being grouped and frequencies calculated. The students generally expressed positive views on digital game-based EFL, stating that it was highly successful and that in-game power-ups, competing with other students, and receiving rapid feedback improved their motivation.

Using a large-scale school readiness survey in Thailand, this paper presents empirical evidence of learning losses from school closure due to the COVID-19 pandemic for kindergartners. Overall results indicate that school closure during the outbreak of COVID-19 causes significant learning losses in cognitive skills, especially in mathematics and working memory. The negative impact is heterogeneous across several dimensions, including child gender, special needs, wealth, private tutoring, caregiver education, and
parental absence. This paper also estimates daily learning gains, of which significant results confirm that going to school has significantly benefited young children, especially in receptive language, mathematics, and working memory.


Given the still existing restrictions of COVID-19, blended learning is undoubtedly becoming a better-fitting strategy for higher education institutions in underprivileged countries. Acknowledging the current changes in higher education, this study aims to investigate the elements that influence students’ satisfaction and their future preferences regarding blended learning in Algeria. A total of 782 questionnaires were collected from different Algerian universities. A structural Equation Modeling (SEM) analysis was conducted to investigate the relationship among the latent variables of the proposed theoretical model. Moreover, an unsupervised sentiment analysis approach was applied to analyze the qualitative data received in the form of feedback from the participants. The results show that students’ perceived ease of use and perceived usefulness of blended learning had a significant positive impact on their satisfaction. Similarly, satisfaction had a positive influence on students’ future preferences regarding blended learning. In turn, students’ perceived ease of use and usefulness had an indirect effect on their future preferences, mediated by satisfaction. Additionally, qualitative data echoed students’ eagerness to adopt more advanced learning technologies and what obstacles currently stand in their way. The contribution of this study is to reflect the current situation of blended learning adoption in developing countries and to support future curriculum planning and development. It can also help teachers, students, and policymakers to make better decisions and recommendations for an improved and more sustainable learning and teaching environment in the future.


This paper describes a study designed to investigate the promise of resources that support the development of computational thinking (CT) in preschool children. This study was the culmination of a collaborative research process between researchers and media developers of a home-based intervention that included media and hands-on activities created to support the development of young children’s CT. The mixed-methods study included 108 families, each with a 4- or 5-year-old child. Families, who participated in the study at home for six weeks, were randomly assigned to an intervention group that viewed media and engaged with hands-on activities with a CT focus or a control group that viewed and engaged with non-STEM literacy content. Data collection consisted of parent surveys, parent interviews, and CT learning and pre-coding tasks to assess children’s CT abilities. Results indicate that the learning intervention demonstrates promise in supporting parental understanding of CT. Experience with the intervention over the six weeks also appeared to cultivate some CT strategy use in children as evidenced by parental reports and performance on learning and pre-coding sequencing tasks.
Motivated by an increasingly globalized and technological world, countries around the world are rewriting their education policies in favor of play-based learning. South Korea, a country that recently reformed its early childhood curriculum to reflect an emphasis on a whole-child, active play pedagogy, is an important case of how child- and play-centered curriculum may translate into implementable practices. This study surveyed 182 Korean early childhood educators to explore their difficulties in implementing the 2019 Revised Nuri Curriculum. It investigated how these teachers conceptualize play from a science of learning perspective. Understanding their role in play and how play can elicit learning were reported as specific challenges. The study reports a misalignment between teachers’ belief that free play is most beneficial for learning and findings from the scientific literature supporting guided play as most effective for achieving a learning goal. The potential of further Nuri Curriculum revisions reflective of the science of learning paired with continuous professional development for Korean teachers is discussed.

Collecting and organizing data to understand and answer real-world questions is an increasingly important skill in our current world. Fostering data collection and analysis (DCA) skills in young children leverages key mathematics skills as well as the data representation, visualization, and interpretation skills of computational thinking (CT), culminating in a problem-solving approach with data. As such, the intervention, comprising investigations and a digital app, supported preschool teachers and children to answer data-focused questions by engaging in each step of the DCA process in order to foster CT and math skills. Teachers appreciated that the app offers a new way for children to visualize data and noted that the app provided learning opportunities for children that would not otherwise be possible or easy to implement. Results also suggest that the app provides a systematic process for data collection, entry, and interpretation. Children in classrooms that completed the intervention had significantly higher scores at post-intervention compared to children in classrooms that did not complete the intervention, controlling for pre-intervention scores, \( B(SE) = 0.13(0.05), t(6) = 2.48, p = .048 \).
influencing adolescent students’ online learning engagement systematically and comprehensively. This study applied the Presage-Process-Product (3P) model of learning to investigate the direct effects of presage factors (i.e., information literacy and self-directed learning skills) and process factors (i.e., academic emotions) on high school students’ online learning engagement; and the mediating role of process factors. Data from 1993 high school students in China (49.3% males and 50.7% females) were analyzed using structural equation modeling. The result showed that students’ information literacy, self-directed learning skills, and positive academic emotions positively predicted their online learning engagement. Moreover, the positive impact of self-directed learning skills on students’ online learning engagement was significantly and largely enhanced through the mediation effects of positive academic emotions ($\beta = 0.606, 95\% CI = [0.544, 0.674]$). Based on these results, to enhance adolescent students’ online learning engagement, it is important for school administrators, teachers, and parents to improve students’ information literacy, self-directed learning skills, and positive academic emotions.


A discussion forum is an indispensable part of a massive open online course (MOOC) environment as it enables knowledge construction through learner-to-learner interaction such as discussion of solutions to assigned problems among learners. In this paper, a machine prediction model is built based on the data from the MOOC forum and the depth of discussion of solutions to assigned problems on the topic among students was analyzed. The data for this study was obtained from Modern educational technology course through Selenium with Python. The course has been offered to a total of 11,184 students from China seven times since February, 2016. The proposed model includes the formula of the depth of problem-solving discussion in MOOC forum and its prediction probability. The efficiency of the prediction model and the most important factor of the depth of problem-solving discussion in MOOC are explained in the paper. Based on the results, useful suggestions for effective teaching in MOOC forums are provided in the article.


Collaborative programming can develop computational thinking and knowledge of computational programming. However, the researchers pointed out that because students often fail to mobilize metacognition to regulate and control their cognitive activities in a cooperation, this results in poor learning effects. Especially low-achieving students need more metacognitive support. Therefore, this study proposed a metacognition-based collaborative programming approach (M-CPA) to improve students' performance in collaborative programming. To evaluate the effectiveness of the method for students with different levels of learning achievement, a 7-week experiment was conducted. A total of 222 middle school students were divided into the experimental group with the M-CPA learning and the control group with the conventional collaborative programming approach (C-CPA). The results showed that
learning methods and learning achievement had interactive effects on computational thinking tendency, critical thinking tendency, and metacognition tendency. M-CPA could significantly improve students’ computational thinking tendency, critical thinking tendency, and metacognition tendency. Moreover, the proposed approach is more effective for low-achieving students. The results also showed that M-CPA could improve the students’ achievement in program analysis questions.


With the rapid development of Artificial Intelligence, automatic writing evaluation (AWE) has received much attention from English Foreign Language (EFL) writing teachers. However, the obstacles and potential problems of integrating AWE in EFL writing instruction have yet to be explored. Scholars have indicated that the effectiveness of AWE in EFL writing instruction depends on the learners’ depth of reflection. Hence, this study proposes a learning approach that integrates AWE and peer assessment (PA) based on the knowledge-building theory, with the expectation that learners will be able to strengthen their reflections on AWE feedback through PA, and thereby improve their EFL writing performance. To examine the effectiveness of the proposed approach, a quasi-experiment was conducted in a university EFL writing class. One of the classes (33 students) was the experimental group using the PA-AWE approach, and the other class (31 students) was a control group that studied using the conventional AWE approach (C-AWE approach). Findings revealed that the PA-AWE group outperformed the C-AWE group regarding EFL writing performance, learning motivation, critical thinking, and reduced EFL writing anxiety. In addition, a thematic inductive qualitative analysis of the interview data indicated each approach’s benefits and learning conceptions.


Reflection plays a very important role in the learning process, contributing to improved learning performance and potentially influencing cognitive process. Few studies, however, have used computer-based mind mapping to enhance student reflective activities and examine the relationship between reflection, cognitive presence, and learning outcomes. Therefore, a quasi-experiment was implemented by recruiting students from a big data class at a normal university in central China. The collected data was analyzed by jointly using analysis of covariance, cognitive network analysis, linear regression, and moderating effect analysis. The results were as follows: (a) Students who used computer-based mind mapping performed better on reflection, higher-order cognitive presence, and learning outcomes. (b) The epistemic network analysis showed that students who used computer-based mind mapping had strong connections in higher levels of cognitive presence. (c) Reflection had a positive predictive effect on cognitive presence and learning outcomes, with mind mapping positively moderating the relationship between reflection, cognitive presence, and learning outcomes.

The aim of the current research is to show how adults’ skill needs can be met and to explain different processes, tools and means that can foster limited training to adult coaching. In limited training to adult coaching, it is preferable to teach adults new practical skills; to obtain new information aimed at reaching the new skills; to have a training that satisfies the adults’ personal and professional desires; to improve a skill or an already acquired professional experience. We also presented some of the ways in which training is encouraged, including self-training, continuing education and distance learning.


ABN (Abierto Basado en Números—Open Calculation Based on Numbers) is a method for teaching basic arithmetic operations in primary education that has become popular in recent years and that is based on the decomposition of numbers through manipulative materials that encourage mental calculation. Currently there is limited number of tools that can be used to support the ABN method and so this article presents the design and development of two tools that facilitate learning with this method, a physical device, ABENEARIO-P, and a virtual device (web application), ABENEARIO-V, that complements the physical device. In addition, a study of the use of these tools was carried out with 80 learners (ages 7 and 9) and 9 teachers with a focus on ABENEARIO-V. The results of this study showed a positive evaluation of the tool by both learners and teachers, an adequate time to complete the mathematical operations assigned to learners and an improvement in performance as the tool was used. As a conclusion, it is important to provide adequate tools that can support teachers and learners in the practice with the ABN method as in the case of ABENEARIO-P and ABENEARIO-V. Limitations refer mainly to the context of the study, which was conducted at a time of severe social distance restrictions during the COVID-19 pandemic on touching physical devices or being able to gather a larger number of learners in the classroom.


In 2012, IJED published a special issue on vocational education and training and development that reflected the sense of being at a potential turning point for policy, practice and research in this area as UNESCO convened the Third International Conference on Technical and Vocational Education and Training. A decade on, we reflect on the way that the research literature has evolved in this period, suggesting a five-fold typology of literature that seeks to explore the VET-development relationship. First, we note that the vast majority of research published on VET in developing countries is practice-focused, concerned with improving classrooms, curricula and colleges, largely in the public sector. Whilst it considers VET in development contexts, it is typically not concerned with questions about the relationship between VET and development.
Second, there is a well-established literature that provides an economic analysis of skills development in the Global South. As we explain in the paper, this has two main strands: one from the supply and the other from the demand side. The former focuses on the cost-efficiency of the VET system, while the latter pays attention to the labour market demands for skills and education. Third, there is a constructivist tradition in which researchers emphasise empirically observing ways skills are demanded and used in the lives of people who embody them, instead of taking the models and logic of the public VET structure and educational programmes as paramount. Fourth, the political economy of skills tradition is concerned with the rules of how skills development operates, with a strong historical and comparative sensibility. Fifth, we identify a “post-political economy of skills”, which seeks to build from the political economy tradition through drawing on diverse theoretical influences, such as critical realism, political ecology and the capabilities approach. We argue that this pluralism is to be welcomed but, nonetheless, advocate for better dialogue across these traditions.


Much research has been done on the benefits of video games in a physical education context (Camunas-Vega & Alcaide-Risoto, 2020; Fang et al., 2020). However, little attention has so far been paid to the effectiveness of commercial video games combined with actual basketball practice in helping students improve their reasoning skills (Chuang et al., 2021; Rogers et al., 2020). The study presents a quasi-experimental pre-post design with a control group in order to evaluate the impact of a specific training program in reasoning with the video game NBA 2K16. A convenience sample of 215 high school students participated in the study. Three reasoning subscales of the Evalu9 psycho-pedagogical test (inductive $\alpha = 0.88$; deductive $\alpha = 0.85$; spatial $\alpha = 0.89$) were used for data collection. Our findings show a significant moderate effect in the students who participated in the training program. An additional outcome was that sex differences in spatial and deductive reasoning in the pre-test disappeared in the post-test. We discuss the educational implications of the use of the video game as the main learning tool to enhance the reasoning process of Secondary Education students in Physical Education.


The present study investigates the debugging process of 526 children in preschool (4–6 aged) when programming a tangible robot. When a child is involved in programming, it is needed to identify and correct errors, or in other words, debug a program. Debugging is a high-level thinking skill and is an essential component closely related to developing Computational Thinking in early childhood education. Though the debugging process is a cognitive function in programming investigated by many researchers in recent decades, most studies are conducted either in primary, secondary education, or higher education concerning beginners or experts in programming. Very few reviews, and some focus on preschool education. Our study set out the following objectives: 1) How do children identify the existence of error and locate it? 2) What types of errors emerge when coding? 3) What type of error is complex for novice programmers? 4) What strategies are developed by novice programmers to debug effectively? and 5) What types of
knowledge do novice programmers construct by debugging the tangible robot Bee-Bot? The study follows an iterative model of a design-based research approach. It uses multiple case studies to collect qualitative and quantitative data. The programming intervention was implemented by 30 educators in their classrooms and was based on a scenario-based teaching design. The debugging process was analysed using Klahr & Craven’s framework (1988): 1) test and evaluate program, 2) identify bug, 3) represent program, 4) locate bug and 5) correct bug. The main finding is the construction and development of syntactic and semantic knowledge.


Data-driven learning (DDL) has been demonstrated to be an operative strategy for assisting learners to handle a range of writing-related problems. Several studies have been conducted to compare the pedagogical effectiveness of DDL in English as a foreign language (EFL) writing. However, only a few studies have identified key factors that may affect learning outcomes when designing DDL activities. To bridge this gap, the present study looked at the medium-term effects of DDL activities in EFL writing. A pre-post quasi-experimental research design and semi-structural interviews were arranged to collect data from 64 Arab EFL undergraduate students. The DDL was carried out with the aid of BNCweb and offered the assessment of the findings by contrasting the efficiency of BNCweb with that of Sketch Engine, which is employed as a reference tool by EFL learners. The quantitative results showed that the experimental group’s use of BNCweb inspired their writing to be more fluid and consistent in the posttest as compared to the control group, which employed the Sketch Engine tool. However, no significant difference was detected between the groups in writing intricacy. The qualitative results indicated that students had positive attitudes toward using BNCweb, despite the challenges of implementing corpora in the writing process. It was recommended that integrating corpora with other types of reference sources would be a viable solution to overcome any potential obstacles for EFL learners.


We know little to what extent peer feedback strategies can be applied on a large scale in higher education for complex tasks. This study aimed to design, implement, and evaluate an online-supported peer feedback module for large-scale use to enhance higher education students’ argumentative essay writing performance. To do this, 330 students from five different courses at bachelor and master levels followed the online supported peer feedback module. In this module, students were asked to write an argumentative essay about a controversial issue, provide peer feedback for two peers, and revise their original essays based on the received feedback. Three types of data including original essay (pre-test) data, peer feedback data, and revised essay (post-test) data collected. Students also filled out the learning satisfaction questionnaire at the end of the module. The findings showed that the suggested online-supported peer feedback module was effective in improving students’ argumentative essay quality in all courses at the bachelor and master levels. The findings also showed there is a difference
in the level of students’ satisfaction with the module among the courses and between
the education levels. The findings of this study provide insights into and add value to the
scalability of online peer feedback tools for argumentative essay writing in different
contexts. Based on the findings, recommendations for future studies and educational
practice are provided.

Ogundari, K. (2023). Student access to technology at home and learning hours during
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Studies have shown that the digital divide affects students’ educational achievement
across racial and ethnic groups. In light of this, the study investigates the effect of
technology access at home on student learning hours during the COVID-19 pandemic
and across racial and ethnic groups in the U.S. The Household Pulse Surveys (HPS),
conducted by the United States Census Bureau and administered from August 19, 2020,
to March 29, 2021, were used for the analysis. We compute a composite index of
technology access using the principal component analysis (PCA). And for the empirical
model, the study employed a Tobit regression model. The result shows that the estimated
index of technology access based on PCA for the whole sample is about 0.92, indicating
a higher level of access. However, the breakdown by race/ethnicity shows an average
of about 0.93, 0.89, 0.90, 0.94, and 0.89 for students representing White, Black, Hispanic,
Asia, and other races, respectively. This means the intensity at which households in the
sample have access to technology is higher among the Asian and White students,
followed by Hispanic, Black, and other races in that order. The estimated effect of
technology access on the student learning hours during COVID-19 based on the Tobit
regression model shows about a 3.1 unit points increase over the whole sample. And
further analysis reveals variation at which access to the technology impacts learning
hours across race and ethnicity groups. For example, we find that access to technology
significantly increased learning hours by about 3.5, 1.6, 2.2, and 3.4 unit points among
White, Black, Hispanic, and Asian students, respectively. The observed differing effect of
access to technology on learning hours further highlights the racial disparities in American
society’s digital divide, which reveal how access to technology disproportionately
impacts student learning hours during the COVID-19 pandemic across race and
ethnicity.

educational maths apps can enhance learning: A content analysis and qualitative
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Educational applications (apps) are ubiquitous within children’s learning environments
and emerging evidence has demonstrated their efficacy. However, it remains unclear
what the active ingredients (ie, mechanisms), or combination of ingredients, of successful
maths apps are. The current study developed a new, open-access, three-step framework
for assessing the educational value of maths apps, comprised of type of app,
mathematical content and app design features. When applied to a selection of
available maths apps previously evaluated with children in the first 3 years of school (the
final sample included 23 apps), results showed that practice-based apps were the most
common app type tested (n = 15). Basic number skills, such as number representation
and relationships, were the most common area of mathematics targeted by apps (n =
21). A follow-up qualitative comparative analysis showed observed learning outcomes
with maths apps were enhanced when apps combined the following: a scaffolded and personalised learning journey (programmatic levelling) and explanations of why answers were right or wrong (explanatory feedback), as well as praise, such as ‘Great job!’ (motivational feedback). This novel evidence stresses the significance of feedback and levelling design features that teaching practitioners and other stakeholders should consider when deciding which apps to use with young children. Directions for future research are discussed. Practitioner notes What is already known about this topic Educational apps have been shown to support maths attainment in the first 3 years of school. Several existing frameworks have attempted to assess the educational value of some of these maths apps. Emerging experimental evidence also demonstrates the benefits of specific app design features, including feedback and levelling. What this paper adds Practice-based maths apps are the most common type of app previously evaluated with young children. These evaluated maths apps have mostly focused on basic number skills. The combination of explanatory and motivational feedback, with programmatic levelling (either dynamic or static), was a necessary condition for enhancing learning outcomes with maths apps. Implications for practice and policy The inclusion of feedback and levelling in maths apps should be considered by app developers when designing apps, and by educational practitioners and parents when deciding which apps to use with their children. Further consideration is also needed for the development of educational apps that include a broad range of maths skills.


The current study explored the relationship between learner profiles and the nature of their interaction with content in massive, open, and online learning environments. The research was conducted on the Anadolu University Open Education System, and data from 597,164 learners enrolled in 86 different degree programs were analyzed by unsupervised machine learning methods. Cluster analysis was used to identify learner profile groups and association rules were applied to identify learner-content interaction patterns. As a result of the analyses, five clusters were obtained, and it was determined that the attribute with the highest discrimination in determining the clusters was the learners’ semester grade point average. The clusters were named according to learner-content interactions and the learners’ semester grade point average. Analysis of the association rules revealed that various learner-content interactions emerged in the context of profile groups.


The purpose of this study was to develop an invention instruction program based on the Theory of Inventive Problem Solving (TRIZ) for preservice invention teachers and test the effects of the program on teachers’ creativity beliefs, creativity, and invention teaching self-efficacy. The subjects of this study were preservice teachers who were enrolled in a four-week (eight sessions) TRIZ invention course at a university in South Korea. A quasi-experimental method was used to incorporate TRIZ instructional strategies into an invention course that taught invention principles and hands-on activities. Results showed that the TRIZ instructional method significantly increased creativity beliefs, creativity, and
invention teaching self-efficacy in preservice teachers. Interestingly, the TRIZ program had different effects on subdimensions of creativity. Results of the study suggest that TRIZ is an effective instructional method that can be used to increase teachers' creativity, change their beliefs about creativity, and boost confidence in their invention teaching ability. Limitations and suggestions for future study are also discussed.


Dès la rentrée, et parfois même avant, nombre de familles prévoient de remplir les soirées et les week-ends de leurs adolescents avec du soutien scolaire. Un marché à plusieurs milliards d’euros, dont le recours contribue à creuser les écarts sociaux, au sein d’un système éducatif français déjà parmi les plus inégalitaires d’Europe.


In this paper, we present a novel approach to defining, teaching, and assessing creativity by examining its origins and delineating the processes involved. The rationale for introducing this framework developed from studying existing thinking and questioning the current metrics for measuring creativity, which we posit are unfit for purpose. We reach this conclusion because rather than accepting the existing focus on outcomes, we perceive creativity as a process based on different types of logic. Drawing upon the earlier work of De Bono and Kolb, we explore the creative process through the lenses of humour and systems engineering to reveal and develop a range of demonstrable skills and key techniques that can be learned, taught and assessed. By using the identified system inputs of creative logic, dialectic conflicts (dualities), alternate narratives, and abstraction, we ultimately present a possible framework for evaluating creativity without relying on subjective assessment. This methodology and framework can be applied in all educational contexts, from cross-curricular mainstream learning to a focus on excluded and hard-to-reach learners.


We argue in this paper that there is currently no adequate theoretical framework or model that spans the twelve odd year trajectory from non-reader to proficient reader, nor addresses fine-grain skill acquisition, mastery and integration. The target construct itself, reading proficiency, as often operationalized as an endpoint of formal secondary schooling, is defined and measured in imprecise, fragmented terms. Consequently, schools (and empirical research) fall back on heuristics like the Simple View of Reading, or a few stages (learn to read, read to learn, read to do) to describe reading development. Those models, however, are too general to guide instructional decisions for adaptive learning systems. Progress in engineering an adequate learning system has been inhibited by a mismatch with curriculum standards and school organization that impose good-faith but not fully optimized developmental targets on the educational system. We propose the development of a learning and assessment framework to scaffold reading proficiency development while accounting for the diverse learning
trajectories of groups or individuals across development. We then identify some key problems, challenges and opportunities that AI technologies are poised to help us address in conceiving individualized, adaptive learning systems for reading proficiency across the developmental spectrum. We close with a selective review of examples of AI-enhanced research or products. Practitioner notes What is already known about this topic Reading proficiency is a vital component of education systems design. Theoretical and empirical studies across multiple disciplines have been published, but much of this research is framed in fragmented theories that do not seamlessly span the trajectory of life-long reading development. Current assessments are time-consuming, coarse-grained and fail to provide a roadmap for educators and designers of adaptive learning environments. There is a significant lack of knowledge of potentially non-linear growth in reading skills within or between years and how to design adaptive instruction for diverse subpopulations. What this paper adds We describe the initial steps towards a literacy learning and assessment framework that spans the trajectory from non-reader to proficient reader. We provide a landscape of exemplars of artificial intelligence and computational linguistics that reflect the possibilities of a more comprehensive, cohesive literacy development system. We reflect upon key problems, challenges and opportunities that AI technologies can help address in conceiving individualized, adaptive learning systems for reading proficiency across the developmental spectrum. Implications for practice and/or policy AI and computational linguistics can help fill in the gaps in understanding and enacting a longitudinal vision of reading development. Educators would ideally know what to expect of their students at particular points of development, identify deviations and have additional tools to intervene effectively to maximize progress. There is a need to develop adaptive instruction that spans the development of proficiency from preschool to college/career levels and adapts to address common barriers among diverse subpopulations.


This study discusses the role of teachers in improving students’ cognitive competency in Islamic education lessons


Learning analytics is a fast-growing discipline. Institutions and countries alike are racing to harness the power of using data to support students, teachers and stakeholders. Research in the field has proven that predicting and supporting underachieving students is worthwhile. Nonetheless, challenges remain unresolved, for example, lack of generalizability, portability and failure to advance our understanding of students’ behaviour. Recently, interest has grown in modelling individual or within-person behaviour, that is, understanding the person-specific changes. This study applies a novel method that combines within-person with between-person variance to better understand how changes unfolding at the individual level can explain students’ final grades. By modelling the within-person variance, we directly model where the process takes place, that is the student. Our study finds that combining within- and between-
person variance offers a better explanatory power and a better guidance of the variables that could be targeted for intervention at the personal and group levels. Furthermore, using within-person variance opens the door for person-specific idiographic models that work on individual student data and offer students support based on their own insights. Practitioner notes What is already known about this topic Predicting students’ performance has commonly been implemented using cross-sectional data at the group level. Predictive models help predict and explain student performance in individual courses but are hard to generalize. Heterogeneity has been a major factor in hindering cross-course or context generalization. What this paper adds Intra-individual (within-person) variations can be modelled using repeated measures data. Hybrid between–within-person models offer more explanatory and predictive power of students’ performance. Intra-individual variations do not mirror interindividual variations, and thus, generalization is not warranted. Regularity is a robust predictor of student performance at both the individual and the group levels. Implications for practice The study offers a method for teachers to better understand and predict students’ performance. The study offers a method of identifying what works on a group or personal level. Intervention at the personal level can be more effective when using within-person predictors and at the group level when using between-person predictors.


When the traditional « one size fits all » approach is used in designing educational games, the game context is usually arranged in a fixed sequence. However, the designated content may not effectively support the diversity of players. The player’s ability and characteristics should be considered and supported with an appropriate learning context embedded in the game to facilitate personalised experiences. Adapting game scenarios to a player’s characteristics can boost motivation and ultimately improve learning outcomes. This research applies a context-aware design approach and the Learner-Centered Design approach to establish a personalised adaptation framework for designing educational serious games and enhancing personalised knowledge delivery. The proposed framework decouples the game logic implementation and adaptation mechanism. It dynamically adapts the designed game objects and activities to personal learning objectives, learning levels and learning progress to achieve a non-linear learning sequence. Through synchronous real-time xAPI message exchange mechanisms, system components and learning content adaptation are enabled. The adaptation aims to fit personal learning objectives and provide a non-linear learning sequence in a game environment. The framework provides students with personalised learning experiences. A game named GhostCoder is implemented and used to evaluate the framework. Testing of the game in the lab environment has been performed. At the next stage, an evaluation will be conducted with the target groups of students.

In this work, we argue for expanding the scope of K-12 computational thinking (CT) integration contexts to include everyday scenarios involving moral reasoning. Epistemic overlap between computational thinking practices and moral reasoning suggest that these contexts are potentially rich sites to see “seeds of CT” in children’s reasoning and can provide rich educational pathways for children into CT. Taking a case-study approach, we examine the reasoning of a second-grader, Ollie, on a task involving fair allocation of resources to victims of a natural disaster. Our analysis finds that Ollie’s reasoning was rich with seeds of CT (e.g., problem formulation, abstraction, complex-systems thinking) and that empathy served as an important supporting role to the CT. This work has implications for curricular design, suggesting that fairness and resource allocation scenarios with built-in opportunities for empathy might provide rich sandboxes for CT integration.


Most early care and education (ECE) programs serve 3-5 year olds, but enrolling children at younger ages has the potential to multiply the benefits of ECE enrollment. This study examined characteristics of children and family who enrolled as toddlers (18-35 months; n=450) versus preschoolers (36-48 months; n=2,356), then tested the impact of toddler enrollment in high-quality ECE on fall and spring preschool outcomes for English-only and Spanish dual language learners (DLLs). Groups were balanced using propensity score weights. Toddler enrollment was related differentially to parent education, special needs status, food insecurity, and single-parent household status for DLLs and English-dominant peers. Toddler entry was related to better English language skills (fall E.S.=0.13-0.47; spring E.S.=0.10-0.43) and lower teacher-rated self-control skills (fall E.S.=0.12-0.15; spring E.S.=0.12-0.19) than same language peers. English-only children who entered as toddlers were rated as more independent at preschool entry (E.S.=0.15). Differences were not observed in Spanish-language skills, child-teacher attachment, or behavior problems in preschool.


This paper reports results of an experimental study that assessed the efficacy and teachers’ perception of feasibility of a set of structured games for promoting curriculum learning goals in 12 prekindergarten and kindergarten classrooms in Chile. We developed four structured games aligned with the Chilean curriculum learning goals, and that were adequate to the material and human conditions of low-income classrooms in Chile. Six classrooms implemented the games in the course of 6 months, and the other six received them at the end of the intervention. One-hundred-and-twenty-one children were evaluated in letter-word identification, math problem solving, phonological awareness, and science word knowledge at the beginning and end of the school year. Head teachers were interviewed about the games’ feasibility in their classrooms and their ability to engage the children. Multilevel regression results show that children in classrooms that implemented the games increased more than children in no-game classrooms in their letter-word identification, math problem-solving, and
phonological awareness scores, controlling for grade level, entry receptive vocabulary, and entry executive function. Head teachers found the games engaging and fun for the children. They reported few difficulties in implementing the games in authentic classroom conditions. Results are analyzed regarding contributions to extant literature on playful learning and games, as well as implications for the successful use of playful methodologies for the promotion of academic learning goals in preschool classrooms in low- and middle-income countries.


This study used online photovoice to study students’ perceptions of online/distance education during the COVID-19 pandemic. It aimed to (a) find the factors that facilitated and impeded online/distance education during the pandemic and (b) determine to which level of ecological systems theory participants attributed facilitators and barriers. We utilized community-based participatory research as the theoretical framework, based on the ecological systems theory. The participants consisted of 119 university students. We used online interpretative phenomenological analysis to analyze the data and found 12 facilitating themes in favor of online education (e.g., technology, 31%; home study comfort, 23%; with family, 17%). In terms of barriers to online education, 14 main themes emerged (e.g., lack of finance, 28%; Internet problems, 22%). Participants attributed facilitators and barriers respectively to the following levels of ecological systems theory: individual/intrapsychic (50%, 51%), microsystem (56%, 58%), exosystem (38%, 43%), and macrosystem (25%, 45%).


Purpose: The purposes of this study were to (1) meta-analyze the effects of teacher trust, and of each trust dimension on student learning in aggregate and in each of the six learning subjects; (2) meta-analyze the effect of school leadership, of each leadership domain, and of different leadership styles on teacher trust; and (3) examine whether school level, subjects, trust dimensions, and leadership styles moderate these abovementioned effects. Research Methods/Approach: Standard meta-analysis techniques were used to review 83 studies and examine the multiple relationships between school leadership, teacher trust, and student learning mentioned above. Heterogeneity analysis was conducted to identify moderators. Publication bias in these analysis results was also examined. Findings: The study shows that teacher trust had a moderate effect on student learning. School leadership had a large effect on teacher trust. Teacher trust in students and parents contributed to student learning more than the other dimensions of trust. All five domains of school leadership were related to teacher trust, with the effect sizes being large or moderate. Supportive, collegial types of school leadership had the largest effect on the teachers' trust. Implications for Research and Practice: To improve student learning, school leaders need to enlist all effective practices in order to build trust in schools and pay equal attention to improving teachers' trust as they do other efforts to improve instructional programs and teaching practices. More efforts are needed from principals to help build teachers' trust in parents and students.

Le Forum de coélaboration de connaissances (FCC) est un outil de communication asynchrone qui permet l’appropriation de connaissances par la lecture et l’écriture de notes exprimant la pensée (Catel, 2001). L’article présente les résultats de l’apport de ce dispositif d’écriture collaborative pour soutenir l’énonciation d’idées lors de la rédaction individuelle d’un récit en cinq temps chez des élèves du primaire. Ces résultats, obtenus dans le cadre d’une recherche-action, tendent à mettre en lumière le potentiel d’une écriture collaborative soutenue par le FCC pour fournir des idées aux élèves lorsqu’ils sont ensuite soumis à une tâche individuelle d’écriture.


Reading is a fundamental skill to acquire during children’s school career. The present meta-analysis examined research on the effectiveness of digital technologies to foster early reading skills during Tier-1 interventions (ie, high-quality core reading instruction which is intended to promote learning for all children). Unlike previous meta-analyses, this meta-analysis investigated the effectiveness in a broad way, taking into account cognitive versus non-cognitive learning outcomes, near versus far transfer outcomes and immediate versus delayed outcomes. Furthermore, different study characteristics were taken into account including participant characteristics, the targeted reading subskills, duration of intervention, type of technology and the level of integration. A total of 568 effect sizes from 72 studies encompassing 60,890 participants were analysed using a meta-analytic three-level model. A Hedges’g effect size of 0.37 was obtained, suggesting that using digital technologies generally have a positive, albeit small, effect compared to traditional teaching methods. Moderator analyses indicated that this effect was robust to cognitive and non-cognitive outcomes, near and far transfer outcomes, and immediate and delayed outcomes, but differed by participants’ age and study quality. Recommendations are formulated to push forward research on how digital interventions can be effectively implemented in the classroom. Practitioner notes What is already known about this topic Digital technologies can foster (early) reading skills. Meta-analyses to date focus only on the effect of digital reading interventions in terms of cognitive outcomes. Unclear how different factors moderate the effectiveness of digital reading interventions (eg, type of technology, trained content, level of integration). What this paper adds Results corroborate previous findings indicating a positive but small effect compared to traditional teaching methods. This study provides some evidence that this effect was robust to cognitive and non-cognitive outcomes, near and far transfer outcomes, and immediate and delayed outcomes. The effect differed by participants’ age and study quality. Game elements, adaptivity and whether the intervention was well integrated made little difference to the effectiveness of the intervention. Implications for practice and/or policy The results confirm that digital reading interventions are effective in fostering cognitive, non-cognitive and efficiency outcomes. Call for more intervention studies investigating how game characteristics and the level of integration of a digital tool moderate the effectiveness. There is a need for
reports of pilot studies investigating the effectiveness of recent digital technologies such as AR and VR.


Intervention fidelity is crucial in ensuring efficient and quality support for students in need. Some coaching strategies have evidenced positive impacts on intervention fidelity and virtual coaching has been emerging in recent years, especially during the COVID-19 pandemic. However, current literature is still limited in examining the effects of virtual coaching. After adapting an evidence-based set of in-person coaching materials and procedures into a virtual delivery format, this study used a multiple baseline design to evaluate the efficacy of the virtual coaching program in supporting interventionists who implemented a small-group reading intervention. Visual analysis and nonparametric analyses demonstrated considerable improvement in interventionists’ fidelity after receiving the virtual coaching program. Additionally, surveys from interventionists indicated positive perceptions toward the coaches and the virtual coaching process. Practical implications of virtual coaching and future research directions are discussed.


Although the performance of number comparison and number line estimation are correlated with symbolic approximate arithmetic ability, it is unclear whether they contribute differently to it. We conducted a training study with 96 preschoolers using pre- and post-tests measuring number comparison, number line estimation, and symbolic approximate arithmetic tasks. Participants were randomly divided into three groups (number comparison training, number line training, and control). The children in the training groups were trained using board games. The results showed that the number comparison training group showed a greater improvement in symbolic approximate arithmetic than did the other two groups. Further, improvement in number comparison was only found in the number comparison training group, whereas improvement in number line estimation was found in both training groups. These results indicate that symbolic approximate arithmetic relies on number comparison processing more than on number line estimation processing in preschoolers. Moreover, the cognitive mechanisms that number comparison and number line estimation abilities depend on are not exactly the same.


Self-regulation skills are an important predictor of school readiness and early school achievement. Research identifies that experiences of early stress in disadvantaged households can affect young children’s brain architecture, often manifested in poor self-regulatory functioning. While there are documented benefits of coordinated movement activities and music education to improve self-regulation, few interventions have focused exclusively on rhythmic movement activities within a universal preschool setting. This study
investigated the effectiveness of a preschool intervention, delivered across eight weeks by generalist preschool teachers, which focused on coordinated rhythmic movement with music to improve self-regulation and executive function. The program is known as Rhythm and Movement for Self-Regulation (RAMSR). The study involved 213 children across eight preschools in disadvantaged communities. The intervention group received 16 to 20 sessions of a rhythm and movement program over eight weeks, while the control group undertook the usual preschool program. Primary outcome measures were executive function and self-regulation with secondary outcomes being school readiness and visual motor integration. Children across the study had baseline measures demonstrating substantial self-regulation and executive function challenges when compared to norms on these measures. Post intervention, significant intervention effects were found for self-regulation and importantly, fidelity and teacher report measures show that it is feasible for educators without any music background to deliver the program. These findings are important given that children from low socioeconomic backgrounds are both more likely to need support for self-regulation to support school transition and have inequitable access to quality music and movement programs. This study confirms that universal access to this beneficial approach can be created through building capacity in early childhood educators. This trial was registered pre-recruitment with the Australian New Zealand Clinical Trials Registry, ACTRN12619001342101.


Quels gestes professionnels adopter en tant qu'enseignant ou enseignante pour favoriser les apprentissages de tous et toutes les élèves ? Le présent ouvrage entend contribuer à cette question en présentant une revue critique des recherches sur les gestes professionnels pour enseigner, en mettant en avant leurs fondements théoriques et leurs effets. Le regroupement des gestes professionnels d'enseignement proposés dans cet ouvrage est distingué selon cinq grandes familles : le premier chapitre examine les manières de prendre en compte l'hétérogénéité des élèves au sein d'une même classe par le biais de la différenciation pédagogique. Le deuxième chapitre s'intéresse aux compétences psychosociales des élèves. Le troisième chapitre porte sur les fonctions exécutives et les capacités attentionnelles des élèves. Le quatrième chapitre aborde la prise en compte et les manières de formuler des feed-back, focalisés sur les processus et l'autorégulation des apprentissages. Le cinquième chapitre explore les gestes professionnels d'enseignement qui favorisent les transferts d'apprentissage, comme le fait d'identifier les connaissances préalables des élèves, de miser sur des transferts analogiques ou d'avoir recours à des stratégies métacognitives.


MOOCs might be an important organization way to realize the online learning process. Online technology and sharing technology enable MOOCs to realize the adaptive scheduling of learning resources, as well as the independent construction of learning sequences. At the same time, it also generates a large number of complex learning behaviors. How to mine and predict the value and laws of MOOCs is a difficult problem in learning analytics applied to MOOCs. This study integrates the context information of
the learning process of MOOCs, designs a deep learning model based on multi-entity knowledge graph, in order to predict and track the interest propagation of learning behaviors, and realizes the learning trend guidance mechanism supported by multi features and complex relationships. Through sufficient experiments, the effectiveness and reliability of this model are verified, and based on the analysis results, the best path and implementable scheme for the interest propagation of learning behaviors are constructed. The whole research might provide more references for the study of learning behaviors described by multi-entity knowledge graph of MOOCs.


Social and emotional learning (SEL) has gradually implemented in Chinese schools and is considered as an effective way to improve students’ performance. This research aimed to study the influence of SEL on students’ bullying behavior, and the role that social and emotional competence (SEC) and peer relationship play in SEL and students’ bullying. The participants were 2049 students in primary and secondary schools in Beijing, China. SEM was used to examine the mediating role of SEC and peer relationship. The study found that SEL can significantly predict students’ bullying behavior. In addition, SEC and peer relationship sequentially mediate the relationship between SEL and students’ bullying behavior.


Cartoon images have been widely applied in children’s educational media. The study examined the effect of cartoon images in touchscreen media on young children’s recognition of time. With a 2 (clock type: cartoon clock, non-cartoon clock) × 2 (media type: touchscreen, video) between-subjects design, ninety-two children aged 4–6 were randomly assigned to one of four experimental conditions. Each group was exposed for 10 min to the media designed to teach children how to tell the time. We examined children’s learning to tell time by pre- and post-test clock tests. Results showed that: (1) In the condition of the cartoon clock, children in the touchscreen groups got significantly higher total clock learning scores than the video groups; (2) In the condition of touchscreen, children in the cartoon groups got significantly higher total clock learning scores than non-cartoon groups. Findings suggest that touchscreen interaction is more beneficial for children to learn to tell time than watching videos, and when using educational apps for touchscreen learning, cartoon images have a positive effect on children’s learning to tell time. However, cartoon images have no effect on children’s learning to tell time through videos.


Online collaborative learning is increasingly used in online courses in higher education, but assessing student online collaborative learning presents unique challenges as well as interesting opportunities. Thus, it is critical to gain a clear picture of online group collaboration assessment strategies, including group learning assessment methods and
examining the effectiveness, challenges, and opportunities in online education. The present study systematically reviewed 12 empirical studies on online collaborative learning assessment in higher education published in journals from 2011 to 2021. The results show that diverse strategies were used to facilitate group collaboration, including group agreements, project planning, role assignments, problem-based projects, and instructor feedback. The reviewed studies primarily evaluated learners through instructor evaluation, peer evaluation, and self-evaluation methods. The most common strategy was instructor assessment, while self-evaluations were used the least. The findings of this mapping review provide practical examples for future online group collaborative learning assessment research and practice.

Aspects économiques de l’éducation


Targeted instruction is one of the most effective educational interventions in low- and middle-income countries, yet reported impacts vary by an order of magnitude. We study this variation and use the results to inform a new randomised trial.


Previous literature on the effect of tenured and tenure-track vs. non-tenure-track professors on students’ performance at university finds contrasting results. Our paper is the first to test whether tenured/tenure-track and non-tenure-track teachers differently affect students’ performance at school. We use data on standardized test scores of a representative sample of primary and secondary school students in Italy and information on their Italian and mathematics teachers’ labor contracts. Controlling for class- and subject-fixed effects, we find that non-tenure-track teachers decrease students’ performance by 0.21 standard deviation. This detrimental effect is fully explained because non-tenure-track teachers are less experienced. In line with previous findings on the adverse effects of teachers’ absences, non-tenure-track teachers are also associated with 0.1 standard deviation worse student performance when their contracts last less than a year.

Multigrading represents the practice of mixing children of different ages in the same classroom. This paper examines the effect of attending a multigrade class in Grade 2 on students’ academic achievement in Grades 2, 5, and 8, respectively, considering Italy as a case study. To address the issue of endogeneity of multigrading (and class size), we adopt an IV identification strategy based on a law that disciplines class composition. We show that multigrading has a positive (16 percent of a standard deviation) short-term effect on academic achievements. However, this effect diminishes over time and becomes negative (-10 percent of a standard deviation) if students spend several years in a multigrade class. Mechanism analysis indicates the fundamental role of teachers and suggests that the negative long-term effect of multigrading is not statistically different from zero when multigrade classes are taught by more experienced teachers. These findings, based on longitudinal data, reconcile contrasting results in the literature, which are based on cross-sectional data and on the short-term effects of multigrading.


This paper investigates the effect of student loans on students’ (financial) behavior. For causal identification, we exploit quasi-experimental evidence using a nudge in the take-up of student loans in higher education in the Netherlands. We estimate an instrumental variable (IV) model with a first-stage Difference-in-Differences design. We find that a decline in the default student loan reduced monthly student borrowing by 141 euros. A one-euro decline in student loans reduced students’ expenditures by 61 cents, but also led to a substantial increase of parental financial contributions (43 cents). Especially expenditures on leisure activities were affected. There is no evidence for increased labor earnings among students, on average. Self-reported indicators of academic performance do not worsen in response to the reform; students’ GPA even improves.


Does religion affect the gender gap? Using data on inquisition trials to locate medieval Waldensian communities in the Italian municipalities of Piedmont and early 19th-century female literacy rates, we find that municipalities with a history of Waldensian presence display lower levels of the education gender gap, a pattern that persists to the present day. Moreover, women in these municipalities have higher levels of education, greater labor market participation, and increased political representation. Our results highlight the importance of cultural and social norms in shaping women’s empowerment and gender equality outcomes.


We study the effects of two dimensions of teacher quality, subject knowledge and didactic skills, on student learning in francophone Sub-Saharan Africa. We use data from an international large-scale assessment in 14 countries that include individual-level information on student achievement and country-level averages of teacher subject knowledge and teacher didactic skills in reading and math. Exploiting variation between subjects in a student fixed-effects model, we find that teacher subject knowledge has a
large positive effect on student achievement, whereas the effect of teacher didactic skills is comparatively small but imprecisely estimated. Differences in teacher subject knowledge account for 37 percent of the variation in average student achievement across countries.


We investigate the stages of childhood at which parental job loss is most consequential for their child’s education. Using Danish administrative data linking parents experiencing plant closures to their children, we compare end-of-school outcomes to matched peers and to closures hitting after school completion age. Parental job loss disproportionally reduces test taking, scores, and high school enrolment among children exposed during infancy (age 0-1). Effects are largest for low-income families and low-achieving children. The causal chain from job loss to education likely works through reduced family income. Maternal time investment partially offsets the effect of reduced income.


This paper considers the case of Italy to analyze the short- and medium-term effect of a longer school day in primary school on both students’ learning and mothers’ labor supply. We rely on unique application-to-primary-school data: first, we control for parental preferences, proxied by individual applications; second, we exploit variation in the probability of attending the full-time (FT) scheme that only stems from nonlinearities in the mix of FT and part-time (PT) applications received by the school and from class size limits set by the law. We show that attending the FT scheme increases Math test scores in grades 2 and 5 and Italian scores in grade 2 by around 4.5% of a standard deviation, but the effects fade away by grade 8. Conversely, there is a positive impact on maternal labor force participation and employment, which is long-lasting (approximately 2 p.p.). No effect is found on fathers’ employment. Finally, we find some evidence of negative selection on gains, as the groups of students and mothers for whom the effect seems to be larger are not those more likely to apply to the FT scheme or to attend it conditional on applying.


We study the distributional effects of remote learning. Our approach combines newly collected data on parental preferences with administrative data from Los Angeles. The preference data allow us to account for selection into remote learning while also studying selection patterns and treatment effect heterogeneity. We find a negative average effect of remote learning on reading (–0.14 SD) and math (–0.17 SD). Notably, we find evidence of positive learning effects for children whose parents have the strongest demand for remote learning. Our results suggest an important subset of
students who currently sort into post-pandemic remote learning benefit from expanded choice.


This paper estimates the effects of extending the school day during elementary school on students' educational outcomes later in life. The analysis takes place in the context of a large-scale program introduced in 2007 that extended the school day from 4.5 to 8 h in Mexico City’s metropolitan area. The identification strategy leverages cohort-by-cohort variation in full-time enrollment in elementary schools. The results indicate that full-time elementary schools have positive and long-lasting effects on students' performance, increasing high-stakes high school admission test scores by 4.8 percent of a standard deviation. The effects are larger for females than for males. The difference in the effects between males and females of 2.1 percent of a standard deviation represents 16% of the gender gap in the high school admission exam. Moreover, full-time schooling decreases the probability of delays in schooling completion.


This study employs Chilean administrative data to investigate the impact of School Starting Age (SSA) on the characteristics of students' initial enrolled schools. Employing minimum age requirements and an RD-design to mitigate endogeneity concerns, we identify benefits linked to commencing school at a later age. Our findings demonstrate that children starting school at an older age enroll in institutions with higher average scores in standardized tests and interact with older peers whose parents have higher education levels. Furthermore, they display a heightened likelihood of entering schools employing academic selection methods, a greater proportion of fulltime teachers, and a larger percentage of instructors with a 4-year college degree. The analysis by level of education of the parents and gender reveals that most of our results are driven by parents with lower levels of education and girls.


Does a school district that expands school choice provide better outcomes for students than a neighborhood-based assignment system? This paper studies the Zones of Choice (ZOC) program, a school choice initiative of the Los Angeles Unified School District (LAUSD) that created small high school markets in some neighborhoods but left attendance-zone boundaries in place throughout the rest of the district. We study market-level impacts of choice on student achievement and college enrollment using a differences-in-differences design. Student outcomes in ZOC markets increased markedly, narrowing achievement and college enrollment gaps between ZOC neighborhoods and the rest of the district. The effects of ZOC are larger for schools exposed to more competition, supporting the notion that competition is a key channel. Demand estimates suggest families place substantial weight on schools’ academic quality, providing schools with competition-induced incentives to improve their effectiveness. The
evidence demonstrates that public school choice programs have the potential to improve school quality and reduce neighborhood-based disparities in educational opportunity.


In light of the dramatic rise in mental health disorders amongst adolescents seen in the past decade across the world, there is an urgent need for robust evidence on what works to combat this trend. This paper provides the first robust evaluation of the impacts on school outcomes of 6-year funding programme (HeadStart) for area-level mental health interventions for adolescents. Exploiting educational administrative data on ten cohorts of state-educated secondary school students, we use the synthetic control method to construct counterfactual outcomes for areas that received the funding. We show that the funding did not affect students’ absenteeism or academic attainment, but it prevented around 800 students (c. 10% of students typically excluded yearly) from being excluded in its first year. The transient nature of this effect suggests that sustained funding for intervention may be a necessary but not sufficient condition to maintain programme effectiveness over time.


This paper empirically studies the impact of massive and sudden school closures following the 2011 nationwide student strike in Chile on teenage pregnancy. We observe a 2.7% average increase in teenage pregnancies in response to temporary high school shutdowns, equating to 1.9 additional pregnancies per school day lost. The effect diminishes three quarters after the strike’s onset. Effects are predominantly driven by first-time mothers and are aligned with higher school absenteeism periods, and are unrelated to typical teenage fertility seasonality or pregnancies of other age groups. The study also reveals a slight increase in the demand for emergency contraception and condoms due to strikes. This suggests that riskier behavior mainly drives effects due to reduced adult supervision. Additionally, we find persistent negative effects on students’ educational trajectories, evidenced by an increase in dropout rates and a reduction in college admission test take-up.


Increased education affects market and non-market outcomes. This paper investigates the causal impact of the extension of compulsory education from 6 to 9 years on females’ education, marriage, and fertility outcomes in Thailand. Using data from the Multiple Indicator Cluster Survey (MICS) and a donut-hole Regression Discontinuity (RD) design, we show that the new law increases lower secondary school completion in girls, leading to decreased probabilities of giving birth in the school-age years (14–17 years). The policy primarily affects the marginal child leading to the postponement of the timing of their fertility to after-school years. We also document heterogeneity and show that the fertility
effects are stronger for Muslim women. The policy leads to a consistent drop in the probability of marriage and cumulative births for Muslim women, which sustain beyond the completion of schooling years. The results hold with alternative empirical model specifications and falsification tests.


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Demography and structural transformation are interrelated, and depend critically on education. At the turn of the twentieth century, US parents began having fewer children while increasing educational investment per child. This quantity-quality tradeoff facilitated job reallocation from the low-skilled agricultural sector to the high-skilled nonagricultural sector. This transformation is examined in a heterogeneous agent model with a nondegenerate human capital distribution, focusing on how fertility and education decisions affect structural transformation. The result shows that the quantity-quality decisions account for up to approximately one-third of the decline in the agricultural employment share.


Education plays a central role in social mobility. Using data from the OECD's PISA program, this paper sheds light on: (i) the role of socioeconomic status on the cognitive performance and future plans of Greek high-school students, (ii) intertemporal trends in light of the recent economic crisis and, iii) differences with other countries on the effect of socioeconomic and other drivers on intergenerational educational mobility. We find large and significant associations between student outcomes and educational resources at home, cultural possession at home, parental emotional support and private school attendance. Parental education and occupation effects are also important but differ by
domain and between parents. The association between basic socioeconomic characteristics and adolescent educational performance is significant and rather stable before, during, and after the Greek economic crisis, which points to the need to produce a coherent strategy against educational disparities according to the socioeconomic status.


Despite being the poorest or second poorest participant, Vietnam outperformed all other developing countries, and many wealthier countries, on the 2012, 2015, and 2018 PISA assessments. We investigate Vietnam’s strong performance, evaluating several possible explanations for this apparent exemplary achievement. After correcting for potentially non-representative PISA samples, including bias from Vietnam’s large out-of-school population, Vietnam remains a large positive outlier conditional on its income. Possible higher motivation of, and coaching given to, Vietnamese students can at most only partly explain Vietnam’s performance. The child-, household- and school-level variables in the PISA data explain little of Vietnam’s strong PISA performance relative to its income level. At most, they explain about 30% of Vietnam’s exceptional performance in math and reading. Further research is needed to understand the exceptional performance of Vietnamese students.


Research into the causal impact of formal education on political beliefs and ultimate voting behavior arrives at contradictory results. While some early work, e.g. Dee (2004) finds education induces more socially-liberal views, more recent works suggest that education makes individuals more fiscally conservative. We use quasi-experimental variation in schooling created by compulsory schooling laws (CSLs) to reconcile these results. Following Marshall (2019), we first examine a pooled sample of voter and find that policy-induced increases in education lead to voters being more likely to identify as, and vote for, Republican candidates, largely due to concerns regarding taxes. Delving further into this result, however, we find highly heterogeneous impacts of education, which depend on the efficacy of CSLs. In particular, in states where CSLs significantly increased educational attainment, impacted individuals become more fiscally conservative, but also exhibit greater support for traditional Democratic social issues like abortion rights and environmental protection, creating so-called “Rockefeller” Republicans. By contrast, voters educated in states where CSLs have no measured impact on educational attainment exhibit generally more conservative attitudes toward non-economics and social issues, which are traits that are consistent with so-called “Goldwater” Republicans.


As a result of patchwork policies, early childhood education (ECE) providers combine funding from multiple sources, known as blended funding. However, little is known about the consequences of blended funding for policy goals. We use national ECE provider
data to identify the prevalence of blended funding models, and detailed state quality rating data to describe the relation between funding and quality through the lens of organizational theory. We operationalize blended funding as the total number of revenue sources, which reflects participation in multiple ECE institutions. Results emphasize that combining funding from distinct ECE policies within programs is a typical practice for ECE providers, and reveal a positive association between a provider’s number of funding sources and program quality.


Our study focuses on the gender gap in college aspirations and enrolment among high school students in Germany. We build on socialisation theory, rational choice theory, and formal restrictions to college access to explain gender differences in idealistic college aspirations, realistic college expectations, and the disparities between the two. Specifically, we examine the prevalence of « pessimistic » college expectations, where college aspirations are higher than expectations, which we expect to be more likely among young women than young men. By analysing survey data from 1,766 upper secondary students in Germany, we find that women are equally interested in pursuing higher education as their male counterparts. They even express higher aspirations for college enrolment. However, women are more pessimistic than men about realising their aspirations. While factors such as the subjective probability of success and perceived costs impact both genders, young women are also affected by formal restrictions limiting entry to their preferred fields of study.


Student attendance at school is a necessary condition for learning and for other schooling benefits, yet absenteeism is a significant issue for students in many countries. Policies, programs, and research seeking to reduce absenteeism need to measure it accurately. This article describes seven different methods to measure student absenteeism, all used in at least one of 27 recently published studies in low- and middle-income countries. It also synthesizes evidence on the advantages and disadvantages of different methods, drawing on 17 studies that compare methods. We find that official school attendance records—a relatively cheap, nonintrusive method—often result in similar statistics as unannounced spot checks, but there are enough exceptions that policymakers and researchers may initially need to complement school records with spot checks. Student reports often understate absenteeism, and caregiver reports even more so. We discuss implications for researchers and for policymakers to improve measurement in education systems.


We evaluate the education and labour impact of vocational education and training (VET). Identification draws on a reform to reduce early school leaving, which involved a
large-scale, staggered introduction of VET courses. Drawing on comprehensive student-school matched panel data, we find that VET increased upper secondary graduation rates considerably: our LATE estimates are as large as 50 percentage points. These effects are even stronger for low-achieving students and welfare recipients; and also hold when exploiting the large gender differences of VET, with many courses selected almost only by either boys or girls. Moreover, we find evidence of regional youth employment growth and VET wage premiums following VET expansion.


Students in low-income contexts often lack guidance in their career decisions which can lead to a misallocation of educational investments. We report on a randomized field experiment conducted with 1715 students in rural Cambodia and show that a half-day workshop designed to support adolescents in developing occupational aspirations increased educational investments. We document substantial heterogeneity in treatment effects by baseline student performance. While the workshop increased schooling efforts of high-performing students, treated low-performing students reduced their educational investments. We develop a simple model that explains why an information intervention can affect educational aspirations and investments in opposing directions.


Becoming HOPEless in the 2-year sector addresses the question: what happens when a state-wide policy removes merit-based financial aid from low-income students making satisfactory academic progress? To assess the magnitude of this HOPEless effect, we compared credits attempted, attained, and persistence and graduation indicators of HOPEless students against the outcomes of their not targeted/affected peers. Relying on multiple quasi-experimental analytic techniques (difference in differences [DD], DD in differences, Fuzzy regression discontinuity, and multi-treatment propensity score weighting), two mutually exclusive analytic samples (one longitudinal and one cross-sectional), and over one million observations across four academic years (2009–2010 to 2012–2013), we consistently found that HOPEless students realized worse outcomes and even persisted fewer terms/semesters than students on academic probation. The State saved about $150 million in lottery money (largely funded by lower-income households) but did so at the expense of 665,192 credit hours that would have been attained by HOPEless (low-income) students.


This paper presents an analysis of the extent to which poor pupils in England are clustered in schools with others like them. It is based on a segregation index of pupils eligible for free school meals for every year for which official national data is available. The trend over time has been published before up to 2019, and this paper extends the analysis to 2021, covering both the Covid-19 era so far and the beginning of transitional arrangements for Universal Credit, which have led to a substantial increase in the number
of pupils eligible for free school meals. Results show that the segregation of poor pupils between secondary schools has continued to decline annually – a decline that started with the onset of Pupil Premium funding. This decline in segregation has not occurred for other possible indicators of disadvantage, such as pupils having a special educational need or disability, which are not addressed by Pupil Premium funding. Clustering disadvantaged pupils together in parts of a national school system has been linked to worse pupil outcomes overall, lower aspirations, less ethnic cohesion, and reduced trust in society by students. So, this ongoing reduction is encouraging, and is likely to lead to a lower poverty attainment gap in academic outcomes. However, the reduction in 2020 and 2021 is “false” to some extent, based mostly on a sudden increase in the number of pupils officially classed as poor, rather than an improvement in their distribution or evenness. It is, therefore, important to retain Pupil Premium funding or something like it for the time being to see what happens to the attainment gap. And the apparent success of this funding scheme could have implications for school systems worldwide that value fairness in the provision of national opportunities for education.


There is debate over whether Asian American students are admitted to selective colleges and universities at lower rates than white students with similar academic qualifications. However, there have been few empirical investigations of this issue, in large part due to a dearth of data. Here we present the results from analyzing 685,709 applications from Asian American and white students to a subset of selective U.S. institutions over five application cycles, beginning with the 2015–2016 cycle. The dataset does not include admissions decisions, and so we construct a proxy based in part on enrollment choices. Based on this proxy, we estimate the odds that Asian American applicants were admitted to at least one of the schools we consider were 28% lower than the odds for white students with similar test scores, grade-point averages, and extracurricular activities. The gap was particularly pronounced for students of South Asian descent (49% lower odds). We trace this pattern in part to two factors. First, many selective colleges openly give preference to the children of alumni, and we find that white applicants were substantially more likely to have such legacy status than Asian applicants, especially South Asian applicants. Second, after adjusting for observed student characteristics, the institutions we consider appear less likely to admit students from geographic regions with relatively high shares of applicants who are Asian. We hope these results inform ongoing discussions on the equity of college admissions policies.


Skills shortage in the fields of Sciences, Technology, Engineering, and Mathematics (STEM) poses a significant challenge for industries globally. This study examines the interrelationship between high school students’ gender, their proficiency in Information and Communication Technology (ICT), and their career preferences in the STEM domain. Based on representative data for German teenagers, our study shows that female
adolescents are less likely to choose a career in STEM unless they have strong ICT skills in secondary school. The relationship does not hold for male students. Our findings can be explained with evidence that teenagers sort into occupations they believe to be good at and that female teenagers rather underestimate their true potential. Using different empirical approaches, we also show that ICT skills act as a moderator and not as a mediator in the gender-specific choice of training upon graduating from secondary school.


We use detailed survey data to study the influence of automation technology on workers' training participation. We find that workers who are exposed to substitution by automation are 15 percentage points less likely to participate in training than those who are not exposed to it. However, workers who leave occupations that are highly exposed to automation increase their training participation, while those who enter them train consistently less. The automation training gap is particularly pronounced for medium-skilled and male workers, and is largely driven by the lack of ICT training and training for soft skills. Moreover, workers in exposed occupations receive less financial and nonfinancial training support from their firms, and the training gap is almost entirely related to a gap in firm-financed training courses.


By using extensive Hungarian administrative data, this study aims to provide empirical evidence that former university ties strongly influence the labour market outcomes of individuals, even early in their careers. The estimates focus on the early career paths of graduates who obtained a master’s degree between 2010 and 2017. As direct information on social contacts is not available in the dataset, we proxy university peers as students who started and finished the same university programmes (bachelor’s or master’s) in the same semester. Our results suggest that individuals are more likely to get hired by given firms if their former peers work there. The measured effects are considered significant and quite robust, even after controlling for the important sources of potential bias. Although we cannot present exact proof of the direct help of contacts, we provide suggestive evidence that seems to confirm the existence of such assistance. Our findings also revealed that the measured benefits are mainly attributable to connections from bachelor’s studies. The effect of master’s peers is mostly driven by the selection of individuals alongside prevalent study track-firm pathways. By comparing entries into new firms with and without peers, we also show that graduates with links have better labor market outcomes after hiring: they earn higher wages, obtain better and more prestigious positions, and stay longer at their new firm. The results draw attention to the importance of university peers in the labour market and contribute to the discussions about the determinants of early labour market success.

The empirical evidence on how industrial robots affect employment and wages is very mixed. Our meta-study helps to uncover the potentially true effect of industrial robots on labor market outcomes and to identify drivers of the heterogeneous empirical results. By means of a systematic literature research, we collected 53 papers containing 2143 estimations for the impact of robot adoption on wages. We observe only limited evidence for a publication bias in favor of negative results. The genuine overall effect of industrial robots on wages is close to zero and both statistically and economically insignificant. With regard to the drivers of heterogeneity, we find that more positive results are obtained if primary estimations a) include more countries in their sample, b) control for ICT capital, demographic developments, or tenure, c) focus on employees that remain employed in the same sector, d) consider only non-manufacturing industries, e) are specified in long differences, and f) come from a peer-reviewed journal article. More negative effects, in turn, are reported for primary estimations that are i) weighted, ii) aggregated at country level, iii) control for trade exposure, iv) and consider only manufacturing industries. We also find some evidence for skill-biased technological change. The magnitude of that effect is albeit small and less robust than one might expect in view of skill-biased technological change. We find little evidence for data dependence.


Using a large-scale school readiness survey in Thailand, this paper presents empirical evidence of learning losses from school closure due to the COVID-19 pandemic for kindergartners. Overall results indicate that school closure during the outbreak of COVID-19 causes significant learning losses in cognitive skills, especially in mathematics and working memory. The negative impact is heterogeneous across several dimensions, including child gender, special needs, wealth, private tutoring, caregiver education, and parental absence. This paper also estimates daily learning gains, of which significant results confirm that going to school has significantly benefited young children, especially in receptive language, mathematics, and working memory.


We use comparable, survey-based literacy tests for repeated cross-sections of men and women born between 1950 and 2000 to study education outcomes across cohorts in 87 countries. We find that education quality, defined as literacy conditional on completing five years of schooling, stagnated across the developing world over half a century, including absolute declines in both South Asia and sub-Saharan Africa. Shifts in student composition clearly explain part of the downward trend we observe, but the decline pre-dates the abolition of school fees in most countries, and anthropometric data suggest students in later decades were healthier and wealthier than those in earlier cohorts. Globally, increases in schooling outpaced the decline in education quality, leading to a large increase in unconditional literacy.
Delivery of vocational education in schools is a controversial issue around the world and attempts to improve it have been tried for decades. A substantive innovation in vocational education provision came about in 2010 in England when a new form of hybrid schools was introduced that combine general and vocational education: University Technical Colleges (UTCs). This paper adopts an instrumental variable approach to evaluate the causal effect of attending a UTC on academic and vocational education, and on student short-term workforce outcomes. The research design takes advantage of geographic and cross-cohort variation in exposure to UTCs, and of different enrolment ages. For pupils entering UTCs at the unconventional age 14, enrolment in these schools dramatically reduces academic achievement on national exams at age 16. By contrast, for students who enter at the conventional age of 16, UTCs boost vocational achievement without harming academic achievement. UTCs also improve achievement in STEM qualifications, enrolment in apprenticeships, employment prospects (by age 19) and probability of going on to study STEM at university. The paper concludes that there has been both promise and disappointment in what the technical education offered by these new forms of hybrid schools has delivered to date. These mixed conclusions are important for refining the design of school based vocational education around the world.

This paper provides the first estimates of the contemporaneous effect of drinking water quality violations on students’ academic achievement. Using student-level test score data with residential addresses, geographic information on water systems, and drinking water violations from North Carolina, I estimate the within-student impacts of poor water quality on student test scores. Exposure to a bacteria violation during the school year decreases math scores by about 0.037 standard deviations when the public is uninformed. Results suggest that poor water quality may impact retention or comprehension of material throughout the school year.

The paper examines the impact of a rural roads construction program in India on women’s outcomes. While spatial integration can provide women with increased education and employment opportunities, the extent of benefits might be limited by underlying gender norms. We identify the impact of the policy by exploiting the program rule that assigned roads based on the village population. Using a two-way fixed effect methodology, we find that increase in rural roads construction lowers mobility restrictions faced by women and improves norms around domestic violence. However, the result are mixed with respect to participation in other decision making and financial autonomy.
Additionally, while we find positive impact on education, there is no impact on employment outcomes for females. We argue that a possible reason for a partial improvement in women outcomes could be gendered impact of the policy - men benefit more in terms of employment than women.


Few studies on developing countries have investigated the alignment of research output to a country’s development agenda and economic productivity. Using evidence from Kenya, this study sought to empirically determine whether the country’s research output is aligned to its development agenda in the first instance and to establish the output’s relationship to economic productivity. Journal publications were used to measure research output. From the analysis, 86% of the publications fell within one or more of the national development priority areas, though 60% were in only 6 of the 35 areas. Several areas had no publications at all during the period under investigation. Furthermore, excluding the health and education sectors, a strong positive relationship was established between the number of publications in different priority areas and those areas’ contribution to Gross Domestic Product. The Government, therefore, needs to avail research funding to research institutions, which, in turn, need to focus their research effort on all identified national development priority areas if Kenya’s development aspirations are to be achieved and the desired economic growth attained.


In view of school closures due to the COVID-19 pandemic, this paper examines how a Home-Based Learning program affects learning outcomes of children in under-resourced communities. To overcome limited internet connectivity, the program provides remote instructions via phone calls and simple text messages along with automated voice calls to engage children enrolled in grades one to five in activity-based learning content. This intervention was conducted in three districts in the state of Odisha in India. Using a difference-in-differences framework, we find that the intervention led to a statistically significant improvement in basic number recognition and arithmetic operations, and language learning scores of children by 4.69 percentage points and 5.52 percentage points, respectively. Our results are robust to alternative methods of estimation and application of Lee bounds, thus indicating that well-designed low-cost interventions could be a useful supplement for continued learning in the face of sudden shocks in low income countries. With a rise in hybrid format of teaching and learning, such interventions have the capability to cushion the decline in learning levels and provide a safety net in the event of school closures.


Education is one of the most important public goods provided by modern governments. Yet governments worldwide seldom perform well in the sector. This raises the question: Why do governments preside over poor education quality? This paper answers this
question with evidence from Tanzania. Using data from surveys, administrative reports, and policy documents, it analyzes changing goals of education policy and associated impacts on access and learning over time. The main finding is that learning has not always been the goal of schooling in Tanzania. Furthermore, for decades the government rationed access to both primary and secondary schooling for ideological reasons. These past policy choices partially explain contemporary poor outcomes in education. This paper increases our understanding of the politics of education in low-income states. It also provides a corrective against the common assumption that governments always seek to maximize the provision of public goods and services for political gain.


This paper provides evidence on how having violence-exposed peers who migrated to nonviolent areas affects students’ educational trajectories in receiving schools. To recover our estimates, we exploit the variation in local violence across different municipalities in the context of Mexico’s war on drugs and linked administrative records on students’ educational trajectories. We find that peer exposure to violence in elementary school imposes persistent negative effects on students in nonviolent areas. Having elementary school violence-exposed peers has detrimental effects on students’ academic performance in a high school admission exam and grade progression. For every ten students previously exposed to local violence who migrated to Mexico City’s metro area, approximately five incumbent students in safe municipalities are placed in lower-ranked and less-preferred schools.


How do men and women differ in their persistence after experiencing failure in a competitive environment? We tackle this question by combining a large online experiment (N=2,086) with machine learning. We find that when losing is unequivocally due to merit, both men and women exhibit a significant decrease in subsequent tournament entry. However, when the prior tournament is unfair, i.e., a loss is no longer necessarily based on merit, women are more discouraged than men. These results suggest that transparent meritocratic criteria may play a key role in preventing women from falling behind after experiencing a loss.


Financial aid decreases the cost of acquiring additional education. By using Italian administrative and survey data on financial aid recipients and exploiting sharp discontinuities in the amount of aid received, this paper identifies the causal effect of aid generosity on college performance and labor market outcomes. The results show that students facing a higher cost of college earn more credits each year than those receiving higher financial aid. This gap generates a significant difference in the overall
graduation time. No differences emerge in the GPA level or the probability of graduating from college.

Dès la rentrée, et parfois même avant, nombre de familles prévoient de remplir les soirées et les week-ends de leurs adolescents avec du soutien scolaire. Un marché à plusieurs milliards d’euros, dont le recours contribue à creuser les écarts sociaux, au sein d’un système éducatif français déjà parmi les plus inégalitaires d’Europe.

Teacher education/training often incorporates observable examples of focal teaching practices - models. Yet, there is little causal evidence on the benefits of models or how best to design them. We used a classroom simulator experiment to test the effects of video models on trainee teachers’ skills, knowledge, and self-efficacy in relation to using retrieval practice at the end of a primary school science unit. Results showed that models improved participants’ skills, but not their knowledge or self-efficacy. Adding annotations to the models had no additional benefit. Incorporating models in initial teacher training can help new teachers make better use of evidence-based teaching practices.

This paper studies a large-scale educational expansion to assess whether shocks to educational inputs affect the academic achievement of adult education students. I analyze the effects of a Swedish program that rapidly doubled enrollment in adult education, thus straining school resources. The program targeted low-educated, unemployed adults aged 25 and older. Therefore, my analysis focuses on students under age 25 to reduce the risk that changes in the characteristics of the study sample drive my findings. First, I show that students in regions subject to stronger enrollment expansions experienced stronger negative shocks to educational inputs, including teacher credentials, per-pupil expenditure, and peer quality. Second, I show that the stronger negative shocks to these inputs coincided with larger increases in course dropout. Taken together, the two sets of results suggest a causal link between educational inputs and students’ academic progress in adult education.

This study investigates the impact of slum upgrading programs on elementary school attendance, a strong predictor of dropout and adult outcomes. Slum upgrading programs are interventions in impoverished areas that involve building housing, roads, sewerage systems, and installing public lighting. Using administrative data on Uruguayan
students, we examine the effects of slum upgrading programs on school attendance. The study employs a regression discontinuity design based on the eligibility rule that considers a slum eligible for the program when it has 40 or more dwelling units. The results show that students exposed to slum upgrading programs had 28 fewer absences (16 percent of the school year or 70 percent of the total missed days that qualify a student as having insufficient attendance), and lower probability of being recurrent absentee. This study provides insights into the impact of slum upgrading programs on human capital accumulation among low-income children.


This paper studies the long-term relationship between parental and child education in Germany, where children are tracked into academic and non-academic track schools at the age of 10. On average, children are more likely to attend an academic track school if their parents attended one. Estimating marginal treatment effect curves, we find that there is no effect for disadvantaged individuals, suggesting that educational policies attempting to improve the educational prospects of disadvantaged individuals may fail to reduce inequalities in the long run. Low labor market returns despite better education is the main explanation for the null effect for these individuals.

**Aspects psychologiques de l’éducation**


Pediatric cancer is the second leading cause of death among children ages 1–14 (Whitehead et al., 2016). Approximately 10,500 children ages 1–14 and 5090 adolescents ages 15–19 have been diagnosed with cancer in 2021 (American Cancer Society, 2021). An estimated 28% of childhood cases and 13% of adolescent patients will be diagnosed explicitly with Leukemia (American Cancer Society, 2021). Leukemia is a broad term that encompasses the malignant disease of bone marrow and other structures responsible for blood production (Olin et al., 2018). Children and adolescents experiencing pediatric leukemia often undergo treatment that produces biological, psychosocial, and cognitive impacts. Due to the occurrence of this disease in school-aged children and the wide-ranging consequences they face, school psychologists may be called upon to work with students and their families while they go through treatment during school-aged years. This article will discuss pediatric leukemia, treatment options, long-term impacts of treatment for patients, and considerations for working with children in the school system.


Systematic direct observations (SDOs) and behavior rating scales are integral to multimethod behavioral assessment approaches. The present study investigated the convergent validity of the Behavior Observation of Students in Schools (BOSS) form, a
widely utilized SDO system, with the most frequently used teacher rating scales in schools, the Behavioral Assessment System for Children, Third Edition (BASC-3) and the Behavioral and Emotional Screening System, third edition (BESS-3). Specifically, the present study compared independent observer data collection of student on-task and disruptive behaviors on the BOSS with teachers’ ratings of behavioral problems on the BASC-3 and BESS-3. Data come from a sample of 136 teachers and 349 students with or at risk of disruptive behavior disorders (DBDs). Pearson correlations were computed between BOSS and teacher ratings on the BASC-3 and BESS-3. Findings demonstrated significant, small to moderate correlations. Results indicate evidence of convergent validity for the BOSS and BASC3 assessments and highlight multimethod behavioral assessment’s utility in supporting students with or at risk of DBDs.


Amid the COVID-19 lockdown many countries have replaced traditional learning with remote or mobile one. It was noted that students’ motivation has become much less with the transition to distance learning. This study analyzes how motivational processes influence mobile learning quality and aimed to analyze the factors boosted the motivation of students to learn in modern conditions of isolation and identify the major demotivating factors affecting the quality of mobile learning. Motivation is considered a key factor in improving students’ involvement in distance learning. The author surveyed 200 students and 46 teachers of The University of Jordan and Jordan University of Science and Technology regarding the factors that influenced their motivation in terms of mobile learning. The results revealed that 178 out of 200 participants agreed that intrinsic motivation impacted their interest in mobile learning. Some 78% of the students approved of mobile learning, while the remaining 22% believe it is necessary to return to the traditional face-to-face education format. The importance of feedback and communication with teachers and its impact on the process of mobile learning is considered. The role of built-in mechanisms in information systems and the positive role of gamification is equally important. Plug-ins compatible with the convenient WordPress system, i.e. applications that help organize the educational process were examined in the scientific work. The specific recommendations for raising the motivation of students in the learning process, which can be used by relevant institutions worldwide presented.


Cyberbullying has generated interest for researchers in the field of psychology and education in recent years. While most studies have focused on samples of adolescents, the university environment also deserves special attention due to its serious consequences on students. It is therefore very important to prevent cyberbullying in the context of university. The objectives of this study were to identify different profiles regarding cyberbullying and cybervictimization behaviors and examine the relationship between cyberbullying, social anxiety, and aggressiveness. A total of 1,368 university students participated in the study by completing the European Bullying Intervention Project Questionnaire (EBIPQ), the Social Anxiety Questionnaire for Adults (CASO-A30), and the Aggression Questionnaire (AQ). The latent profile analysis identified three
cyberbullying profiles: a first group with low scores in cyberaggression and cybervictimization (not involved; 87.6%), a second group with moderately high scores in cyberaggression and cybervictimization (victimized cyberbullies; 10%), and a third group with high scores in cybervictimization and very high scores in cyberaggression (cyberbullies; 2.4%). The profile of “victimized cyberbullies” students presents higher scores in physical, verbal, anger, and hostility than the group of “not involved” students, while no differences in social anxiety were found between the groups analysed. Cyberbullying preventive programs should focus on the management of aggressive behaviors for those who have moderate scores in cybervictimization and cyberbullying behaviors, and social anxiety may not be differentiated between cyberbullying groups at this academic stage.


Academic stereotype threat of Chinese adolescents in vocational education is underexamined. The present study aimed to gain an understanding of the effects of academic stereotype threat on academic engagement by examining the potential mediating role of academic self-efficacy and moderating role of perceived social support. A total of 1152 Chinese adolescents (448 boys; mean age = 18.26, SD = 1.20) in higher vocational schools completed a survey questionnaire assessing academic stereotype threat, academic engagement (i.e., vigor, dedication and absorption), academic self-efficacy, and social support (i.e., family support, friend support and teacher support). Findings supported the mediating effect of academic self-efficacy, indicating that academic stereotype threat decreased academic engagement by undermining academic self-efficacy. Furthermore, the relationship between academic stereotype threat and academic self-efficacy was moderated by teacher support. Specifically, the negative effects of academic stereotype threat on self-efficacy was weaker for adolescents who perceived high levels of teacher support. This study contributes to the educational/psychological research on academic engagement by providing evidence for the adverse effects, potential mechanism and protective factor of academic stereotype threat in Chinese adolescents of higher vocational education. Implications for further investigations and intervention development are discussed.


Behavioural self-regulation is a key developmental task that improves, on average, across early childhood. Yet there is variation in the early developmental trajectories of behavioural self-regulation. The current study examines (1) heterogeneity in the trajectories of behavioural self-regulation across preschool and kindergarten, (2) peer relations in preschool (acceptance, sociability, victimization, conflict) as predictors of these trajectories, and (3) trajectories of behavioural self-regulation as predictors of peer relations in kindergarten. Data come from a two-year longitudinal study that followed a sample of 443 children (47.9% girls, Mage = 4.08 years) across preschool and
kindergarten. Growth mixture modeling identified five distinct latent class trajectories: strong starters with minimal growth, strong starters with steady growth, moderate starters with steady growth, weak starters with rapid growth, and weak starters with minimal growth. Early peer acceptance, victimization and conflict differentiated between the behavioural self-regulation trajectories. These trajectories in turn predicted peer acceptance, sociability, victimization and conflict in kindergarten. Children who evidenced more peer acceptance and less peer conflict at entry to preschool were more likely to show consistently strong than weak behavioural self-regulation. Children who experienced more peer victimization in preschool were more likely to show slowly rather than rapidly improving behavioural self-regulation. By the spring of kindergarten, children who improved in their behavioural self-regulation were more accepted by peers, children who showed consistently strong or improving behavioural self-regulation were more sociable, and children with consistently weak behavioural self-regulation experienced more peer victimization and conflict. These findings have implications for supporting children’s emerging behavioural self-regulation and peer relations in the early school years.


Today, learning no longer takes place on a definite place or time; rather, it has an ongoing and interactive nature, lasting throughout one’s life. Relatedly, reading is usually considered to enhance learning, communication and the exchange of ideas. Given the importance of becoming a lifelong learner, this study focuses on the influence of reading habits on lifelong learning tendencies of university students as mediated by their enthusiasm for reading. A predictive correlational research model was employed to test the proposed hypotheses. A total of 376 undergraduates with diverse backgrounds were surveyed in a central city of Turkey. The mediated-path analysis demonstrated that belief in the impact of reading is a prominent predictor of university students’ lifelong learning tendencies. Further, enthusiasm for reading was explored to mediate the link between beliefs in the impact of reading and lifelong learning tendencies. This study contributes to the debate and research on lifelong learning by using a national case which is relatively understudied and underrepresented international higher education research. It also adds to the theme by revealing direct and indirect paths between university students’ beliefs in reading and lifelong learning tendencies as mediated by their enthusiasm for reading.


Executive functions (EFs) are an umbrella term that includes various cognitive abilities (such as inhibition, planning, goal-setting, monitoring, and shifting). There is common agreement that there are three main EFs: inhibitory control, cognitive flexibility, and working memory. Further studies have reported that compared to typically developing peers, children with cerebral palsy (CP) show deficits in EF skills. This study aims to evaluate children with CP’s inhibitory control and cognitive flexibility skills. Forty children with CP between the ages of 7–13 were included in the present study. EF scores of the CP group were compared with scores of typically developing peers matched one-to-one by age and sex. The EF skills were evaluated with Wisconsin card sorting test (WCST), Stroop color–
word test (SCWT) TBAG Form, and executive function behavior rating scale parent form (BRIEF-P). It was determined that there was a significant difference in the WCST total trials, total errors, categories completed, and percent conceptual level responses scores (p < .05); SCWT-TBAG scores (p < .05), and BRIEF-P all scores (p ≤ .01) of children with CP. The results of this study suggest that children with CP are disadvantaged with EF skills in terms of inhibitory control and cognitive flexibility.


Few studies holistically examine how students experience the multiple dimensions of school climate and resilience promoting characteristics, or how these two constructs may be interrelated. This study utilised a sample of 78,550 7th, 9th, and 11th grade students in California. Roughly half of the participants were female (52%), and roughly half (49%) were Latino. Latent Class Analysis was used to identify a 6-profile model for school climate and a 2-profile model for resilience promoting characteristics. Students experiencing overall positive climate, those experiencing supportive adult relationships, and those who engage meaningfully in their work at schools were more likely to report higher resilience promoting characteristics. These findings highlight the importance of fostering positive and protective school climate. In addition, findings support a social-ecological theory of resilience, indicating that schools are contexts that may play an important role in developing resilience promoting characteristics for secondary students.


Face aux difficultés des élèves en langues, ne faut-il pas trouver des moyens de les enseigner autrement ? À l’occasion de la Journée européenne des langues, présentation d’un dispositif en vogue.


The closure of schools, social hubs, and extracurricular activities due to lockdown measures imposed to curb the spread of SARS-CoV-2, has increased the risk factors for students’ mental health. This cross-sectional study, conducted from March 2020 to March 2021, aimed to estimate socio-emotional, cognitive, and affective disorders and substance use in a sample of first- and second-grade high school students in Northern Italy. This study compared data from 284 Italian students’ self-perceptions along with the perceptions of their parents and teachers through a web-based survey. The differences in the perceptions of the three groups (students, parents, and teachers) were analyzed using an analysis of variance test, applying a Bonferroni correction. The χ2 test was used to assess the comparison between students, parents, and teachers in the substance use questions. The results showed statistically significant differences among the three groups. The most important outcomes were sociality, scholastic performance, extracurricular activity, emotional symptoms, affective disorders (depression and anxiety), and
substance use. These findings could be interesting for the promotion of mental health and prevention of psychopathological risks in students.


The current study aims to examine the mediational effects of explicit weight stigma and moral disengagement (MD) and moderating effects of empathy on the relationship between implicit weight stigma and bullying perpetration. Two hundred and twenty-eight college students (112 men, mean age of 19.89 ± 1.82 years) completed implicit (the Single Category Implicit Association Test) and explicit (the development of the weight stigma scale) measures of weight stigma, and responded to questionnaires regarding MD, empathy, and bullying perpetration. Structural equation modeling was conducted and mediating effects were tested using AMOS 17.0 software. The results indicated that implicit weight stigma significantly predicted bullying perpetration. After controlling for gender, this association was jointly mediated by explicit weight stigma and MD. Furthermore, empathy moderated the relationship between implicit weight stigma and bullying perpetration. Specifically, college students who have high levels of implicit weight stigma and low levels of empathy would score higher on the bully questionnaire. These findings may provide a possible explanation for when and how implicit weight stigma relates to bullying perpetration.


This study examines university faculty members’ successful behaviours and the factors influencing these behaviours, when dealing with the issues posed by emergency remote teaching during the COVID-19 pandemic. Data was gathered through interviews with 12 carefully chosen instructors who competently prepared and implemented their first online classes despite various challenges encountered during the crisis. Interview transcripts were analysed by applying the theoretical concepts of the positive deviance approach to identify exemplary behaviours in the face of crisis. The results revealed that the participants performed three unique but effective behaviours, called ‘positive deviance behaviours’, in their online teaching: philosophy-driven decision making informed planning and ongoing performance monitoring. These behaviours were affected by individual factors (e.g., community engagement and emotion management during different phases of emergency remote teaching) and organisational factors (e.g., networks/hardware and training/support). By examining the positive deviance behaviours of instructors who delivered effective classes, this study offers online teaching and faculty development strategies in both crisis and non-crisis situations.


This study investigates how individual-level factors contribute to classroom engagement variations of boys and girls across the elementary school years. Classroom engagement
was assessed four times between the ages of 7 and 12 years in a large, representative population-based sample (N = 877) using latent growth modeling. Predictors included the sex of the child, the family income, and the mother’s educational attainment when the child was 5 months old, along with the child’s early receptive vocabulary, numeracy, motor and attentional skills, motivation to learn, and internalizing and externalizing behaviors measured at age 6 years. On average, classroom engagement progressively improved over time. Child vocabulary skills, attention, intrinsic motivation, and externalizing behaviors predicted initial levels of classroom engagement. Child classroom engagement also showed slower progression over time when receptive vocabulary and attentional skills were high. This trend was slightly different when the analyses were conducted separately for boys and girls. Girls with higher attentional skills and fewer externalizing behaviors at age 6 showed slower improvement in classroom engagement throughout elementary school, while boys did not significantly improve in their classroom engagement. Overall, these results suggest that several individual-level factors contribute to classroom engagement. Children with lower levels of receptive vocabulary, attentional skills, and motivation to learn, and those displaying externalizing behavior may benefit from additional help to boost their classroom engagement.


We extended research on social skills training to determine if the activities first-grade students were engaged in while Tootling would influence their performance of two recently trained social skills: complimenting and encouraging peers. After receiving social skills training, students engaged in two experimental small-group activities, a cooperative activity and a parallel-play activity. During both activities, a Tootling intervention was applied and interdependent group rewards (e.g., every student in the class receives the reward) were delivered contingent upon the number of peer reports of classmates providing compliments and encouragements meeting an unknown, randomly selected criterion. Students also engaged in their typical classroom activity, an individual competition, without Tootling. Statistical analysis indicated that during the cooperative-play activity there were significantly higher levels of complimenting and encouraging than during the parallel-play and individual competition activities. More compliments were delivered during the parallel-play activity than during the individual competition, but there was no significant difference in encouragements across the two conditions. Also, during the parallel-play activity, compliments where higher than encouragements. These findings suggest that after social skills training, Tootling can enhance social skill performance when educators schedule activities that provide opportunities to engage in these recently trained skills. Discussion focuses on task and goal structures associated with activities and applied implications for enhancing social skill development.


Universal screening has emerged as one strategy within schools for identifying students who demonstrate social emotional and behavioral (SEB) concerns to provide
appropriate support. However, research has demonstrated little evidence of equity around diagnostic accuracy; that is, how students might be differentially identified as at-risk for SEB concerns based on race/ethnicity. The current study examined the diagnostic accuracy of the Social, Academic, and Emotional Behavior Risk Screener (SAEBRS) teacher screening measure as affected by student race/ethnicity, drawing from a sample of 730 students and 54 teachers from four urban, Midwestern elementary schools. Data were analyzed using nonparametric receiver operating characteristic (ROC) curve analyses, as well as ROC regression tests incorporating student race/ethnicity status as a covariate. Results indicated the SAEBRS (1) demonstrated borderline to optimal sensitivity and specificity across student racial/ethnic subgroups in predicting student SEB risk status, and (2) diagnostic accuracy did not vary across racial/ethnic subgroups to a statistically significant degree. Results highlight the need for further research on this topic.


Previous studies have shown that peer victimization causes a great variety of severe adverse effects on children’s development, and it is necessary to explore the influential factors and mechanisms of peer victimization. This study examined the associations between teacher–student relationships and peer victimization, as well as the roles of peer status and gender in China. The participants were 734 primary school students from Grades 5 6. Structural equation models were conducted to test the roles of peer status in the associations between teacher–student relationships and peer victimization, as well as the gender differences in the above associations. The findings showed that teacher–student closeness negatively predicted peer victimization, and teacher–student conflict positively predicted peer victimization. It was also found that teacher–student conflict but not closeness could negatively predict peer status, which was in turn negatively associated with peer victimization. The above associations did not vary across genders. The findings indicated that both teacher–student closeness and conflict were directly associated with children’s peer victimization, and teacher–student conflict was indirectly associated with peer victimization via peer status. This implies that interventions for decreasing children’s peer victimization should not only focus on improving teacher–student relationships but also target peer status.


Flipped classroom (FC) has recently attracted researchers' interest in teacher education thanks to its potential for promoting pre-service teachers' (PTs) professional development. However, some of major issues are the lack of interactivity, disengagement, and amotivation of PTs for pre-class activities due to poor online instruction design. This explanatory sequential mixed study explores the effects of the microlearning-supported FC on PTs’ learning performance for professional development, motivation, and engagement. A total of 128 PTs participated in this study from a university in Turkey. In the quantitative phase, a quasi-experimental pretest-posttest design was conducted and the treatment lasted for 14 weeks. The PTs were divided into two experimental groups and one control groups using random sampling technique. In first experimental group (m-FC, n = 43), the participants learned with microlearning-
supported (by using a-bit sized learning chunks outside the classroom) FC model. In the second experimental group (t-FC, n=39), the participants learned with traditional FC model. A control group (non-FC, n=46) was not taught using FC model and teacher-centered approach was adopted in this group. The findings indicated that FC model (in both experimental groups) increased learning performance, intrinsic motivation, emotional, and behavioral engagement compared to a group that was not used to FC. Moreover, m-FC group had better intrinsic motivation and engagement than both t-FC and non-FC groups. Semi-structured interviews showed that two major themes emerged regarding benefits and challenges of microlearning-supported FC. Most of PTs had positive perceptions that it enhances the willingness to participate in pre-class activities. The implications for teacher education, recommendations and directions for further studies were also discussed.


Teacher stress, burnout, and attrition are well-documented problems that have been amplified as a result of the COVID-19 pandemic. Recent efforts to study and improve teacher well-being in response to such high levels of burnout are promising. However, the field continues to lack a unified definition of teacher well-being and consistent use of tools with which to measure teacher well-being. These inconsistencies may limit the ability to compare interventions and improve teacher well-being over time. Clarifying how teacher well-being is defined and operationalized can enable others to understand what a particular intervention or study does or does not improve. This systematic review explored 97 studies of teacher well-being and documented tools used to measure the construct. The studies reviewed relied on a wide variety of instruments, ranging from mental health tools to subjective well-being and teacher efficacy measures, with few using specific Teacher Well-Being Scales. Findings suggest the need for more uniform approaches to measurement and the need for a clearly articulated definition of teacher well-being that is distinct from stress or burnout. Researchers recommend the use of a multifactor scale that includes elements of teacher efficacy, school support, workload and time pressure, and job satisfaction.


Digital advances in the learning space have changed the contours of student engagement as well as how it is measured. Learning management systems and other learning technologies now provide information about student behaviors with course materials in the form of learning analytics. In the context of a large, integrated and interdisciplinary Core curriculum course in a graduate school of public health, this study undertook a pilot randomized controlled trial testing the effect of providing a “behavioral nudge” in the form of digital images containing specific information derived from learning analytics about past student behaviors and performance. The study found that student engagement varied significantly from week to week, but nudges linking coursework completion to assessment grade performance did not significantly change student engagement. While the a priori hypotheses of this pilot trial were not upheld, this study yielded significant findings that can guide future efforts to increase student
engagement. Future work should include a robust qualitative assessment of student motivations, testing of nudges that tap into these motivations and a richer examination of student learning behaviors over time using stochastic analyses of data from the learning management system.


SES- and ethnicity-related disparities in teacher-child relationships are prevalent. An important cause may be that children of color and children from low-SES backgrounds are often perceived by their teachers to have lower social-emotional behavioral (SEB) competence. Besides the impact of poverty on SEB development, likely explanations for such gaps are cultural mismatch theory and teacher bias theory. Both frameworks point to a divergence between teachers' and students' expectations of classroom norms as well as their practice of them. Such incongruence can manifest in the extent to which teachers and parents (dis)agree on children's SEB skills. The greater the divergence between parents and teachers, the larger the discontinuity in socialization experiences a child may encounter during kindergarten transition. Using the Early Childhood Longitudinal Study data, the current study investigates the relationship between socialization discontinuity and children's demographic backgrounds, and whether disparities in teacher-child relationships can be predicted by the degree of socialization discontinuity. The results show higher divergence between teachers' and parents' assessment of children's SEB skills for children from low-SES backgrounds, non-English speaking households, and those who are identified as Black or Hispanic. Higher socialization discontinuity predicts both a more conflictual and a less close teacher-child relationship in general. Meanwhile, children from a non-English household tend to have less conflict with their teachers. Other factors that may affect teacher-child relationships, future research directions, and implications for policymakers and education practitioners are discussed.


This study examines the mediating role of personal growth initiative in the relationship between academic self-efficacy and engagement by examining gender differences. The novelty of this study lies in its focus on the mediating role of personal growth initiative and its examination of gender differences in the relationship between academic self-efficacy and engagement. By examining if there are any differences in the links between the variables based on gender, this research gives important insight into how these factors influence academic life for different student groups. The data was collected from 607 (333 female and 274 male) full-time undergraduate students. LISREL was used to test the structural model. We tested the hypotheses that academic self-efficacy is positively associated with student engagement, personal growth initiative mediates the relationship between academic self-efficacy and student engagement, and whether there is a gender difference in this mediation model. The findings show that personal growth initiative has a partial mediating role in the relationship between academic self-efficacy and engagement. In addition, there is no difference between gender-based groups, and the bootstrap analyses support these findings. Gender does not make a
difference in the model because college students may evaluate higher education as increasing their future employment opportunities.


This study critically examined the impact of a crisis context (COVID-19 pandemic) on K-12 teachers by placing emphasis on the mentor-mentee dyad through the perspective of the mentee in a large United States public school system. A phenomenological case study was undertaken that used semi-structured interviews to examine 14 early career teachers (mentees) participating in a formal mentoring program during the 2020–2021 school year. The study focused on mentor-mentee relationships by accounting for the single most traumatic and transformative event of the modern era of K-12 public education. The analysis yielded three findings highlighting the impact of COVID-19 on the mentor-mentee dyadic experiences of first- and second-year teachers engaged in a mentoring relationship. The findings indicate that (a) e-mentoring allowed for avoidant behaviors from mentors (b) successful mentoring involves the development of personal relationships between a mentor and mentee, and (c) peer and reverse mentoring became commonplace during the COVID-19 pandemic. Public school systems can use these findings to help develop positive mentor and mentee relationships that go beyond the traditional dyadic roles and help reduce stress in a crisis context, while developing a culture where superiority bias is improved. Research implications offer mentoring literature a view to pay more attention to temporal influences during environments of high stress, which may provide more explanatory power on mentorship roles, cultural influences, and social interactions in the course of mentor-mentee practices.


Self-determination theory emphasizes the crucial role of need-supportive teaching in facilitating student motivation and engagement. However, much of the research on need-supportive teaching focuses on its effects on students. An equally important but less explored topic is what facilitates teachers’ need-supportive teaching. This two-part cross-sectional study examined the associations between perceived need-supportive leadership, teacher autonomous motivation, and need-supportive teaching (Study 1) and the association between perceived need-supportive teaching, student autonomous motivation, and student engagement (Study 2). The participants were 581 teachers and 2283 students from 14 high schools in the Philippines. Study 1 findings indicated that perceived need-supportive leadership had a positive indirect association with need-supportive teaching via autonomous motivation. Study 2 results suggested that perceived need-supportive teaching positively and significantly predicted student engagement partially via students’ autonomous motivation. The positive associations found across the two studies demonstrate the importance of perceived need-supportive leadership for teachers and perceived need-supportive teaching for students. Implications for school leaders and teachers regarding need supportive practices are discussed.

In the context of family homelessness, children experience acute adversities related to loss of housing and residential mobility compounded with more chronic, poverty-related adversities and stressors. Among children in families experiencing homelessness, variability in experiences and outcomes warrant person-centered approaches to better delineate patterns of risk and resilience. Using latent profile analysis as a person-centered approach, we identified five distinct profiles of neurodevelopmental functioning within a sample of 231 children (ages 3–5 years old) staying in emergency homeless shelters with their families. Latent profiles were informed by indicators from parent-reported items for ten different domains of neurodevelopmental functioning. We examined whether demographic and ecological factors including age, ethnicity, adverse childhood experiences, parent mental health, and overreactive parenting would predict profile membership. Overall, half of the children in the sample demonstrated a profile of resilient functioning across developmental domains. Profiles of maladaptive functioning differed in areas of strength and challenge, with a small percentage of children showing poor functioning across all domains. Children whose parents had more mental health problems or overreactive parenting were significantly more likely to show profiles of poor functioning than to show resilient functioning. Implications for future research, practice, and policy are discussed.


Sense of success and self-efficacy regarding technology integration in teaching are among the most important factors that influence teachers’ well-being and professional development, and may have a substantial impact on student learning. In this quantitative study (N = 735 K-12 teachers in Israel), we explored the factors contributing to sense of success in emergency remote teaching and self-efficacy for integrating technology in teaching following the experience of teaching during COVID-19 days. We use decision-tree models to look at nuanced relations. Overall, our findings highlight the crucial—albeit not surprising—role of experience in teaching with technology as an important factor that promotes sense of success and self-efficacy. Going beyond this factor, we emphasize that emotional difficulties in times of emergency may serve as an important risk factor, and that taking a leading role in school may serve as an important protective factor. We also found an advantage to STEM and Language teachers, compared with Social Sciences and Humanities teachers. Following our findings, we conclude with a set of recommendations that could enhance school-based teaching and learning at large.


Capturing evidence for dynamic changes in self-regulated learning (SRL) behaviours resulting from interventions is challenging for researchers. In the current study, we
identified students who were likely to do poorly in a biology course and those who were likely to do well. Then, we randomly assigned a portion of the students predicted to perform poorly to a science of learning to learn intervention where they were taught SRL study strategies. Learning outcome and log data (257 K events) were collected from n = 226 students. We used a complex systems framework to model the differences in SRL including the amount, interrelatedness, density and regularity of engagement captured in digital trace data (ie, logs). Differences were compared between students who were predicted to (1) perform poorly (control, n = 48), (2) perform poorly and received intervention (treatment, n = 95) and (3) perform well (not flagged, n = 83). Results indicated that the regularity of students’ engagement was predictive of course grade, and that the intervention group exhibited increased regularity in engagement over the control group immediately after the intervention and maintained that increase over the course of the semester. We discuss the implications of these findings in relation to the future of artificial intelligence and potential uses for monitoring student learning in online environments. Practitioner notes: What is already known about this topic? Self-regulated learning (SRL) knowledge and skills are strong predictors of postsecondary STEM student success. SRL is a dynamic, temporal process that leads to purposeful student engagement. Methods and metrics for measuring dynamic SRL behaviours in learning contexts are needed. What this paper adds: A Markov process for measuring dynamic SRL processes using log data. Evidence that dynamic, interaction-dominant aspects of SRL predict student achievement. Evidence that SRL processes can be meaningfully impacted through educational intervention. Implications for theory and practice: Complexity approaches inform theory and measurement of dynamic SRL processes. Static representations of dynamic SRL processes are promising learning analytics metrics. Engineered features of LMS usage are valuable contributions to AI models.


This study investigated the peer-reviewed journal publication outlets and impact of school psychology faculty research from the years 2016 through 2020. The National Association of School Psychologists website was used to identify 972 faculty from 195 doctoral and non-doctoral school psychology programs. Faculty publications were identified through a Google Scholar search and using published faculty curriculum vitae. Journal h-index impact factors and 2-year citation rates were collected through SCImago. There were a total of 4354 articles published across 1125 journals during the 5-year span. The journals Psychology in the Schools, Contemporary School Psychology, and School Psychology were where school psychology faculty published the most and accounted for 13% of the total publications. The average 2-year citation rate for all journals was 2.83 and the average h-index for all journals was 69.62. Discussion focuses on the historical and recent trend of school psychology faculty publications and the expanding range of nonschool psychology journals in which faculty publish.

The pursuit of overall well-being has become increasingly vital in our fast-paced and demanding world. Understanding the complex interplay between the mind and body is essential for realizing our full potential and living a healthy and satisfying life. Physical activity is one effective way to foster this relationship. Regular exercise has a plethora of benefits that extend beyond physical health, immediately benefiting our mental and emotional well-being. Students will feel competent in their performance if they have the freedom to engage in activities based on their sense of autonomy, competence, and relatedness. This article looks at the synergy effect of self-determination and Maslow’s theory in creating a link between physical activity and student academic achievement. Students can develop strong social connections with their peers and professors through effective discipline and incentive, leading to more engagement in learning and better study habits.


Many Black women, especially those at historically White institutions (HWI), experience racial microaggressions on a regular basis. Although thought to have minimal impact in isolation, microaggressions can have severe consequences when experienced consistently over time. Among these consequences are anxiety, depression, and suicidal ideation. Students also struggle with Racial Battle Fatigue, alcohol abuse, and negative self-esteem. Using Critical Race Theory (CRT) and counterstorytelling, this paper shares the experiences of Black women with racial microaggressions at an HWI. Data from this study suggest that while students respond in various ways, the most common response is to remain silent. Implications are discussed and recommendations are provided.

Jones, T. M., Williford, A., Malorni, A., McCowan, K., Becker, K., Halac, T., ... Spencer, M. S. (2023). The role of colorblind racism and white fragility in maintaining racist bullying in middle school. *Psychology in the Schools, 60*(10), 3858-3877. [https://doi.org/10.1002/pits.22954](https://doi.org/10.1002/pits.22954)

The present study sought to understand how colorblind racism (CBR) and white fragility (WF) influence the presence and perpetration of racist bullying in a middle school setting. Five focus groups and one interview (n = 20) were conducted with school administrators, teachers, and racially and ethnically diverse students to elicit their experiences and perspectives concerning racist bullying. Focus groups were analyzed using template analysis. Racist bullying was a common experience among racial and ethnic minoritized students. CBR and WF were evident as white students and teachers claimed students had similar experiences regardless of race, they minimized the impact of racist bullying, and silenced discussions of race and racism. CBR and WF were critical drivers of the maintenance of racist bullying in this middle school, and thus important to address in efforts to prevent racist bullying.


Teachers’ classroom management practices are an essential aspect of supporting student engagement, yet they often vary in response to changing conditions in the
classroom. This study explored the variability within middle school teachers’ observed practice and their students’ engagement as a function of contextual factors. Observers visited teachers (n = 278) on three occasions, typically over the course of two consecutive school days using two consecutively-administered observational tools (n = 1582 total observations). Multilevel regression models and multiple comparison adjustments suggested teachers’ emotional support and student cooperation declined over time during the morning hours. Small group work, individual seat work, and “other” instructional groupings were often associated with less desirable outcomes than whole group instruction. Finally, most teacher practice and student engagement outcomes were rated more favorably when observers perceived a larger proportion of the students in the classroom to be White. Implications are discussed for observational measures in research and practice and for improvements in teachers’ classroom management practices, particularly when working with students of color.


Mindset is a key factor affecting personality and learning for adolescents, especially those living in countries focusing heavily on human resources, such as Korea, Singapore, and Hong Kong. We examined associations of fixed intelligence mindset, fixed creative mindset, students’ gender and school type via a structural equation modeling. The sample included 301 Korean adolescents: students in their second year at a gifted high school, general high school students, and vocational high school students. To confirm construct validity and examine the associations of gender and school type with both fixed intelligent and creative mindsets, we fit a two-factor model within the structural equation model. We found significant associations of school type and gender with students’ fixed intelligence mindset and fixed creative mindset. Three paths—gender → fixed intelligence mindset, school type → fixed intelligence mindset, and school type → fixed creative mindset—were significant. In Western countries where mindset research originated and developed, there have already been efforts to manage students’ mindsets with policies. However, Asian countries still lack understanding of and basic research on mindset management. Therefore, these countries should pay closer attention to policies regarding students’ mindset management. Simultaneously, a practical school-level program is required to address the associations of school type and gender with student’s mindsets revealed through this study.


Given the still existing restrictions of COVID-19, blended learning is undoubtedly becoming a better-fitting strategy for higher education institutions in underprivileged countries. Acknowledging the current changes in higher education, this study aims to investigate the elements that influence students’ satisfaction and their future preferences regarding blended learning in Algeria. A total of 782 questionnaires were collected from different Algerian universities. A structural Equation Modeling (SEM) analysis was conducted to investigate the relationship among the latent variables of the proposed theoretical model. Moreover, an unsupervised sentiment analysis approach was applied to analyze the qualitative data received in the form of feedback from the participants. The results show that students’ perceived ease of use and perceived usefulness of
blended learning had a significant positive impact on their satisfaction. Similarly, satisfaction had a positive influence on students’ future preferences regarding blended learning. In turn, students’ perceived ease of use and usefulness had an indirect effect on their future preferences, mediated by satisfaction. Additionally, qualitative data echoed students’ eagerness to adopt more advanced learning technologies and what obstacles currently stand in their way. The contribution of this study is to reflect the current situation of blended learning adoption in developing countries and to support future curriculum planning and development. It can also help teachers, students, and policymakers to make better decisions and recommendations for an improved and more sustainable learning and teaching environment in the future.


Using three waves of data from the Panel Study of Korean Children (family N = 1,723), this study investigated whether and how the longitudinal effects of marital relationships on children’s social-emotional development are mediated through parenting and the moderating role of social support in the mediating processes. Results showed that fathers’ coparenting and warmth and mothers’ parenting stress mediated the effects of marital relationships on children’s externalizing and internalizing problems. Notably, some of the mediating processes were moderated by social support from extended family, friends, and neighbors. Our findings highlight the importance of considering both the proximal and broader family environment (e.g., social support from people outside the family) in understanding children’s early social-emotional development.


The adoption of online learning for adolescent students accelerated with the outbreak of the COVID-19 pandemic. However, few studies have investigated the mechanisms influencing adolescent students’ online learning engagement systematically and comprehensively. This study applied the Presage-Process-Product (3P) model of learning to investigate the direct effects of presage factors (i.e., information literacy and self-directed learning skills) and process factors (i.e., academic emotions) on high school students’ online learning engagement; and the mediating role of process factors. Data from 1993 high school students in China (49.3% males and 50.7% females) were analyzed using structural equation modeling. The result showed that students’ information literacy, self-directed learning skills, and positive academic emotions positively predicted their online learning engagement. Moreover, the positive impact of self-directed learning skills on students’ online learning engagement was significantly and largely enhanced through the mediation effects of positive academic emotions ($\beta = 0.606, 95\% CI = [0.544, 0.674]$). Based on these results, to enhance adolescent students’ online learning engagement, it is important for school administrators, teachers, and parents to improve students’ information literacy, self-directed learning skills, and positive academic emotions.

Empirical studies have demonstrated the importance of emotion regulation for teachers’ professional development. We adopted a person-centered approach to explore primary school teachers’ emotion regulation and its impact on occupational well-being, job burnout, and resilience. To understand the potential types of emotion regulation, we conducted a survey in different primary schools. Both antecedent- and response-focused emotion regulation are important strategies; previous studies revealed that the former is superior to the latter. However, there is a lack of person-centered research on the pros and cons of such emotion regulation. 366 primary school teachers (333 female teachers; Mage = 37.30, SDage = 9.46) participated in this survey. The emotion regulation patterns were clarified based on latent profile analysis (LPA). The results revealed associations among these patterns and job burnout, occupational well-being and resilience. LPA revealed the following: (1) three typical emotion regulation types: the low antecedent- and low response-focused emotion regulation group (12%), the high antecedent- and low response-focused emotion regulation group (63%), and the low antecedent- and high response-focused emotion regulation group (25%). (2) The teachers in the high antecedent- and low response-focused emotion regulation group had the lowest level of job burnout and the highest level of occupational well-being. Those in the low antecedent- and low response-focused emotion regulation group had the strongest psychological resilience.


This study explored the relationships among regulated learning, teaching presence and student engagement in blended learning. A two-level model was designed based on contextual factors (teaching presence) and individual factors (regulated learning), and experience sampling method was employed to collect intensive longitudinal data on 139 participants across three universities over 13 weeks in a blended course. Furthermore, multilevel regression analysis were conducted to examine the effects of teaching presence, self-regulated learning (SRL), co-regulated learning (CoRL) on intra- and interindividual variance in student engagement. The findings were as follows. 1) Perceived teacher support and instructional design fit had a significant positive effect on cognitive and emotional engagement and were crucial contextual factors that influenced intraindividual variance in learning engagement. 2) SRL and CoRL were copredictors of student engagement in blended learning. CoRL was more related to emotional engagement, while SRL was more related to cognitive engagement. 3) Modality had a significant effect on cognitive engagement but not on emotional engagement. 4) SRL and CoRL positively moderated the relationship between perceived teaching presence and cognitive engagement, while they negatively moderated the relationship between teacher support and emotional engagement, i.e., the relation between teacher support and emotional engagement was stronger in situations of low SRL or CoRL. Implications for teaching practice on blended learning were also discussed.

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This study attempts to: (a) investigate whether positive and negative emotions mediate the pathways linking self-efficacy for learning programming with effort and persistence in undergraduates’ learning Scratch programming combining with a programmable hardware platform (i.e., Arduino), and (b) assess the effect of academic major (i.e., information technology-related majors vs non-information technology-related majors) on self-efficacy for learning programming and emotions. With the use of responses collected from a sample of 156 undergraduate students, the research model is empirically validated using partial least squares structural equation modeling (PLS-SEM). The findings reveal that undergraduates’ effort and persistence while learning programming were significantly predicted by positive emotions, but not by negative emotions. Self-efficacy for learning programming significantly and positively influenced positive emotions and negatively influenced negative emotions. Finally, variations in predicting positive emotions were found between different academic majors: students in information technology-related majors experienced less negative emotional experiences than those in non-information technology-related majors.


In this article we explore pláticas as a method of refusal for educational practice that embodies a type of Indigenous cosmopolitics that undergird communities we come from. Such an understanding of pláticas generates working towards praxis informed by a refusal that avoids recognition by the university, much like we learn through pláticas the intimate ways our caretakers resist sovereign state power. Such an understanding of pláticas demands a realist practice where we recognize the limits of the work in the university, our capacity as faculty to affect change in a racial capitalist, settler colonial nation. Consequently, pláticas as a method specifically require refusal of the modes of the academy and the neoliberal model of productivity that captures minoritized experiences for the benefit of white, settler society and the university. We describe how these actions inform our academic practice, demonstrating how our research and teaching are not in isolation from the humble communities that birthed us.


Higher perceived digital literacy (DL) led to higher occupational self-efficacy (OSE).


There is a growing interest on the role of noncognitive factors such as personality traits and implicit beliefs in accounting for individual differences in academic performance. Autonomy support from primary socializing agents too is an important tool for enhancing student motivation and other learning outcomes. In this study, we tested a model hypothesizing that the broad personality traits of conscientiousness and openness,
growth mindset, and perceived teacher and parent autonomy support would be distal predictors of academic performance, with self-determined motivation proximally accounting for performance outcomes. Middle school students (N = 234) completed an online Qualtrics survey. Students’ year-end grade point averages for all subjects were used as an indicator of their academic performance. We found that conscientiousness had direct and indirect effects (through autonomous motivation) on academic performance. Openness, growth mindset, and parent autonomy support were indirectly associated with academic performance through their effects on autonomous motivation. The effect of teacher autonomy support on academic performance was mediated by both controlled motivation and autonomous motivation.


Although previous research suggests the use of classroom management strategies can support student engagement and learning, gaps in the literature still exist including the frequency of classroom management strategies in small-group instruction. The purpose of this descriptive study was to measure the frequency of paraprofessionals’ (n = 94) classroom management strategies within the context of a small-group intervention for kindergarteners at-risk of reading difficulties. This study contributes to the field by finding that trends described in previous studies continue to be demonstrated in this targeted instructional setting, in particular, regarding the infrequent use of praise with students at-risk of academic failure. The results of paired-sample sign tests suggest that when providing corrective feedback, paraprofessionals were more likely to specifically label the behavior being reprimanded. However, paraprofessionals infrequently labeled the specific behavior being reinforced when praising students.


Many studies have assessed students’ motivation through surveys, but only a few studies systematically investigated through students’ own words the reasons and aims of their achievement striving. In the present study, we rely on the Goal Complex Perspective (Sommet and Elliot in J Educ Psychol 109(8):1141–1162, 2017. https://doi.org/10.1037/edu0000199; Vansteenkiste et al. in Educ Psychol 49(3):153–174, 2014. https://doi.org/10.1080/00461520.2014.928598) to uncover qualitative differences in achievement motivation. Content analysis of 1303 statements made by 597 Greek secondary students revealed (i) more autonomous motivation than controlled motivation statements, (ii) spontaneously generated statements of mastery-learning and outcome goals but rarely of performance-normative goals, (iii) mastery-learning goals being coupled with both autonomous and controlled motivation, providing ecological support for the conceptualization of mastery goal complexes. Logistic regression analyses verified our classification, as students’ statements were predicted by corresponding types of motivation assessed by close, Likert-type questions. These
findings, which align with the Goal Complex Perspective, are discussed in terms of the operational definition of autonomous and controlled motivation and achievement goals.


The burnout syndrome is a public health problem and is considered a subjective experience, which depends on the interpretation and evaluation individuals make of their work. In the educational context, the causes and consequences of burnout in teachers are multiple. The aim of this study is to explore the profiles of teachers with burnout and teachers without burnout in terms of (i) cognitive appraisal, (ii) perceived organizational justice, (iii) perception of administrative tasks, (iv) perception of students' misbehavior, and (v) perceived impact of parents' role on teachers' well-being. A total of 1878 Portuguese teachers from primary to secondary education, 81% women and 19% men, aged between 23 and 66 years (M = 48; SD = 7.67) participated in this study. The results indicate statistically significant differences between teachers with and without burnout, although the two groups show an identical response pattern (i.e., parallel). The results also suggest that administrative tasks, distributive justice of rewards, students' misbehavior, and parents, negatively impact the teachers' well-being, regardless of whether they are burned out or not. The threat and challenge perceptions are the variables with the most accentuated average differences between teachers of the two groups.


Young children are exposed to new digital technologies, such as social robots. Limited research exists on how children engage with social robots and their role in the preschool classroom. This study observed 35 English-speaking children (M age = 4.60 years) participating in two tasks (Simon Says and iPad drawing) under the guidance of a social robot or human instructor. Children’s engagement was measured across behavioural, emotional, and verbal domains. Results showed higher behavioural and positive emotional engagement with a human instructor than a social robot instructor across both tasks. Children uttered more words with the human instructor than the social robot instructor for the iPad drawing task, although there were no differences for the Simon Says task. Children’s engagement and utterances were positively correlated during the social robot and human instructor conditions. The findings suggest that child engagement was overall higher with a human than with a social robot and such differences may be important for teachers to consider when using social robots in the preschool classroom.


The unanticipated switch from face-to-face learning to online education caused by the Covid-19 pandemic has led to a lack of familiarization preparation for students,
potentially hampering their learning processes in several ways. The success of online learning is primarily based on the quality of the information systems, self-regulated learning, and intrinsic learning motivation. The severe stress amid epidemic lockdowns might trigger negative impacts on students’ learning motivation and self-regulated learning. Nevertheless, studies examining the relationship between information system success, self-regulated learning, perceived stress, and intrinsic learning motivation in the context of developing countries are still scarce. The current research aims to address this gap in the literature. Participants were 303 university students. The results of second-order structural equation modelling revealed the positive direct and indirect relationships between information system success, intrinsic learning motivation, and online self-regulated learning. Besides, despite the insignificant relationships between perceived stress, intrinsic learning motivation, and online self-regulated learning, most participants in this study were found to have moderate to high stress levels. Hence, the potential adverse effect of stress on students’ learning process should not be ignored. The results provide implications for educators and researchers studying online learning environments and educational psychology.


Research has demonstrated that racialized students experience additional stressors during post-secondary education compared to their white counterparts. These barriers can include added institutional barriers, lower representation among faculty, additional stress associated with cultural differences and stigmatization, discrimination, and racism. According to self-determination theory, students who experience an unsupportive or controlling environment are more likely to have lower basic psychological need satisfaction, lower academic motivation, and lower well-being. The current study aimed to examine whether white and racialized students would differ in their perceptions of need satisfaction and need frustration in their learning environment. Participants were undergraduate students (N = 712) from a large Canadian university. A one-way MANCOVA was performed comparing racialized and white students on basic psychological need satisfaction and frustration with gender as a covariate. Results suggested that racialized students perceived lower autonomy satisfaction, lower competence satisfaction, and higher relatedness frustration in their learning environment. These findings present important implications for higher education institutions. Institutions should recognize the diverse needs of their student population and ensure that learning environments are supportive of these needs, as they can have significant detrimental impacts on the overall well-being and academic success of these students.


This study drew on Chilean teacher survey responses from TALIS 2018 data on teacher motivation in order to examine the extent to which these data reveal different motivational profiles among Chilean teachers. Also, it explores the influence of those profiles on quality teachers’ instruction. As a conceptual scaffold, this article uses Agency Theory and Public Service Motivation theory to conceptualize and explore the data.
Using latent classes analysis, multivariate regressions with survey methods, results showed three different motivational profiles: utility-laden, modal, and socially-laden. From these profiles, modal teachers seem to produce better teaching quality compared with the others profiles. These results suggest that the teachers’ profiles are more diverse when it comes to work motivation and teaching quality than what it is described in the literature. These findings give interesting insights for policymakers and school leaders to better understand the teaching workforce and think in diverse governance and teacher management tools. It also opens a set of interesting questions about how to motivate the teacher workforce in Chile.


This study examined the relationships between first-year university students’ academic motivation, retrospective evaluation of school experiences, subjective well-being, engagement and intention to drop out. Self-determination theory, the SiNAPSi model of academic engagement, the hedonic approach, and the retrospective judgment process were used to frame the study. A final sample of 565 first-year Italian students enrolled in Science-Technology-Engineering-Mathematics (STEM) courses (Biology, Biotechnologies, Chemistry, Computer Science, Physics, Mathematics) was included. Three mediation models based on structural equations were tested to analyse the relationships between the proposed variables: motivation as an antecedent of dropout intention with only commitment as a mediator (model 1); model 1 + subjective well-being as a second mediator (model 2); model 2 + retrospective judgement as an antecedent (model 3). The results showed that in all models the more autonomous motivational styles predicted students’ engagement, which in turn directly and indirectly influenced their intention to drop out. In model 2, subjective well-being acted as a mediator of the relationships between motivation, engagement and dropout intentions. In model 3, we found that subjective well-being also fully mediated the relationships between retrospective judgement and engagement. Overall, our findings provide new insights into the mechanisms underlying student engagement and dropout at university and may inform university policy.


How do men and women differ in their persistence after experiencing failure in a competitive environment? We tackle this question by combining a large online experiment (N=2,086) with machine learning. We find that when losing is unequivocally due to merit, both men and women exhibit a significant decrease in subsequent tournament entry. However, when the prior tournament is unfair, i.e., a loss is no longer necessarily based on merit, women are more discouraged than men. These results suggest that transparent meritocratic criteria may play a key role in preventing women from falling behind after experiencing a loss.

School discontinuation in Finland is more common among the Finnish Roma than among the population as a whole. We lack knowledge of the perspective of those of the Roma, representing a minority inside a minority, who have left compulsory school without a leaving certificate. Within a study about school experiences of imprisoned early school leavers in Finland we had six participants with a Finnish Roma background, whose experiences of relatedness, and frustration of it, we examine in this paper. We conducted narrative interviews with the participants, applying a co-operative narrative interpretation to the meanings of what was told. After the field process, we interpreted the narrative accounts focusing on experiences of relatedness, and how relationships with people in the school environment affected the participants' sense of belonging together with the people in the school environment. Frustration of relatedness was identified at three levels. Firstly, at a general, life condition level, cultural prejudice manifested itself as a sense of not being accepted and respected as an equal with other people, the situation creating a constant need to cope with outspoken prejudices. Secondly, at a contextual-specific level in the school environment, we identified experiences of being rejected by peers and their parents, as well as some of the teachers. This was linked with a sense of loneliness and detachment from other people in the school environment. Thirdly, at a situational level, the participants described both positive relationships, such as momentary friendships, and negative experiences of being excluded from the peer group. Pathways for further inquiries are discussed.


This study explored how self-control and eudaimonic orientation are associated with learning burnout and internet addiction risk (IAR). Our results demonstrate that learning burnout has a significant and positive impact on IAR. The impulse system and control system play parallel mediating roles in the relationship between learning burnout and IAR. The relationship between learning burnout and IAR is moderated by eudaimonic orientation. Finally, the mediating role of the impulse system on learning burnout and IAR is moderated by eudaimonic orientation. With these findings, our study clarifies the mediating roles of the impulse system and control system in learning burnout and IAR and the moderating effects of hedonic orientation and eudaimonic orientation. Our study not only offers a new perspective for IAR research but also has practical implications for intervening in middle school students' IAR.


The present study investigated whether the socioeconomic achievement gap in academically at-risk students varied as a function of students' perceived classroom goal structures. We hypothesized that low socioeconomic status (SES) students would be more susceptible to the various classroom goal structures. Specifically, we hypothesized that high levels of perceived mastery classroom goal structure would mitigate, while high levels of perceived performance goal structures would exacerbate, the negative effects.
of low family SES on achievement development. To test these hypotheses, we analyzed a secondary dataset from a sample of 784 (53% male) low-achieving students who were assessed annually from grades 4 to 9. The patterns of adaptive learning scale was used to assess perceived classroom goal structures. Woodcock Johnson III tests of achievement or Bateria III (for students who primarily spoke Spanish) were used to examine academic achievement. Socioeconomic status was determined by highest education and occupation in household and child qualification for free/reduced lunch. We conducted latent growth models to examine the predictive effects of the interactions between family SES and classroom goal structures on achievement growth trajectories. Overall, our findings did not support our main hypotheses. Specifically, perceived classroom mastery goal structure was positively associated with academic growth among all students regardless of their SES backgrounds. Perceived classroom performance goal structures negatively predicted academic growth more strongly in higher SES students than in lower SES students, stressing the negative effects of performance classroom goal structures on achievement development for low-achieving high SES students.


Manifestations of educational inequity in diversifying societies have led to a wide acknowledgement of the need to develop all teachers’ competencies to work in the context of diversity. The domain of beliefs and attitudes is generally included as one key component of teachers’ intercultural competence, but there is little consensus over what the core beliefs shaping teachers’ intercultural competencies are. This mixed methods study draws from social psychological research on inter-group relations and explores the role of polyculturalist beliefs and group malleability beliefs in shaping teachers’ orientation to teaching for diversity and social justice. A hypothesized model was tested on survey data from Finnish comprehensive school teachers (N=231) with structural equation modeling. Findings indicate that polyculturalism, in particular, strongly explains teachers’ teaching for social justice beliefs and enthusiasm for teaching in the context of diversity. Furthermore, we present a case analysis, based on classroom observations and stimulated recall interviews, of how polyculturalism actualizes in one Finnish elementary school teacher’s pedagogical thinking and practice, and discuss the implications of our findings for teacher education and further research.


The goal of the present study was to examine factors associated with academic self-handicapping in Black students attending a predominantly white university. Factors examined included sociodemographic factors (gender, first-generation college student status); psychological factors (family support, perceived discrimination, Black identity); and academic goal orientation. Participants were 240 Black/African American students who were part of a deidentified dataset from a larger study examining undergraduate student’s personal experiences and psychosocial correlates of academic self-handicapping (mean age 19.20, 107 first-generation students, 96 men, 144 women). First-generation status and gender were not related to academic self-handicapping. Lower
family support, higher Black identity positive regard, and higher perceived discrimination were associated with higher academic self-handicapping. Higher self-handicapping was also related to lower mastery orientation, but higher approach and avoidance orientation. In regression models, family support, Black identity positive regard, and approach/avoidance motivation remained unique predictors of academic self-handicapping. Results suggest that higher education stakeholders focus on strategies and systems of supports to minimize self-handicapping. Stakeholders may also consider interventions focused on enhancing racial identity or directly addressing academic self-handicapping tendencies.


Depression, anxiety, and sleep disturbance are common among school-age children and can impair functioning. Schools are in a unique position to assess and refer these children for intervention services, but standardized screening is underutilized. One challenge with screening is the lack of psychometrically strong mental health screening tools that can be efficiently and effectively administered in school settings. The Behavioral Health Works program provides a web-based platform and a multidimensional screening tool (the Behavioral Health Screen [BHS]) that can help overcome implementation barriers. Because parents have unique, valuable perspectives on reporting the mental health concerns of their children, a parent report version for younger children was developed. This study examines the psychometric properties of the internalizing and sleep scales of the BHS parent report version for assessing children (BHS-PRC). Participants included 420 parents of children ages 6–12, who completed the BHS-PRC. Results supported evidence of good internal structure, partial measurement equivalence (across race, gender, age, and education groups), discrimination in item response theory analysis, classification accuracy, and convergent and discriminant validity. Overall, the BHS-PRC demonstrates strong psychometric characteristics and has the potential to assist schools’ mental health screening as part of a multitiered system of support.


The high attrition and turnover rates of qualified special education teachers (SETs) is a significant concern exacerbated by COVID-19. Unfortunately, there are limited studies available on research-based interventions to decrease burnout. The purpose of this study was to describe our processes and results for adaptations and modifications of BREATHE, a burnout intervention originally developed for community mental health workers, into Burnout Reduction: Enhanced Awareness, Tools, Handouts, and Education: Evidence-based Activities for Stress for Educators (BREATHE-EASE) for special educators with guidance from the Framework for Reporting Adaptation and Modifications to Evidence-Based Interventions (FRAME). We applied the FRAME within a hybrid Type 1 trial for characterizing our approach. Four focus groups (N = 30; 83% female) were conducted separately according to job title (SETs; school administrators), with semi-structured questions tailored to each group. Emergent thematic analysis was used to identify core themes related to adaptations, and results were presented to a subset of focus group
members. Modifications involved content, context, and implementation changes for the adapted intervention, with most changes identified for content. FRAME was helpful for providing a systematic approach to integrate stakeholder-informed adaptations of a burnout intervention, addressing significant concerns of SET stress, burnout, and attrition.


Qualitative researchers in school psychology are asked to reflect on how their identities, goals, and backgrounds influence their research studies, and to disclose these influences in their manuscripts. Given that reflexivity is a process and not an event, it can be challenging to decide what and how much about oneself, or selves, to disclose in a qualitative research manuscript. We, therefore, wanted to understand how school psychology researchers have communicated reflexivity in their published journal articles. We analyzed all qualitative articles published in seven school psychology journals between 2006 and 2021, focusing on the authors’ written descriptions meeting the criteria of reflexive disclosure. We found an increase in the inclusion of reflexive disclosure over the years. We also found five types of disclosure researchers used to communicate reflexivity. We end with some critiques of the existing disclosure practices and make recommendations for strengthening reflexivity.


Math anxiety has become an alarming social justice concern, as it results in negative academic consequences, contributes to disinterest and lack of persistence in STEM programs for underrepresented students, and limits their opportunities in STEM careers. According to research, this fear of math occurs long before students begin working on math problems. When high-math anxious students encounter math situations, anticipation anxiety consumes working memory capacity, inhibits learning, and causes them to severely underperform on mathematical tasks. However, very few studies have been conducted to embed psychological interventions in the classroom in an effort to mitigate both anticipation and execution anxiety. Findings from preliminary research suggest that a combined mindfulness and growth mindset intervention, designed to address both anticipation and execution anxiety, was effective in reducing math anxiety in students in a semester-long statistics course. The current research, a replication of the successful pilot study, investigated the generalizability of the mindfulness and growth mindset approach (MAGMA) in decreasing math anxiety in students in various STEM-related courses, and with different instructors. Results indicate that overall, students’ self-perceived math anxiety decreased significantly compared to their control counterparts. Furthermore, considerable anxiety reduction was found for female students. However, no differences were found for final exam scores between the intervention and control group. Nevertheless, the MAGMA intervention appears to be an effective, inexpensive approach in alleviating math anxiety, and increasing mathematical resilience in community college students as they take STEM-related courses.

Reading fluency (RF) involves the automaticity of many distinct reading skills (e.g., pacing, word recognition, phonological awareness) and allows cognitive resources to be allocated to higher-order reading skills (e.g., comprehension, synthesis). Early identification of students at-risk for RF deficits is critical, but many screeners require a level of basic proficiency with foundational reading skills. This review examines the longitudinal relationships between neurocognitive precursors of RF with special consideration of cognitive processing demands of measurement tasks. Eighteen articles yielded 80 unique correlations between 6 neurocognitive constructs (phonological processing, rapid automatic naming, working memory, nonverbal reasoning, orthographic processing, and visual-spatial processing) measured through 35 unique subtests/tasks and 2 primary RF outcomes (word RF and text RF) measured through 11 unique subtests/tasks. Phonological processing was the most frequently assessed neurocognitive predictor (41.3% of total correlations), followed by rapid automatic naming (32.5%). Nearly all correlation coefficients were significant (83.75%); 28.75% of correlations suggested a strong predictive relationship between a neurocognitive predictor and an RF outcome. The strength of correlation largely varied as a function of the task demands as evidenced through the supplemental process analyses, suggesting future consideration should be given to the specificity of task selection to improve ecologically valid conclusions. Evidence from this review supports the need to consider specific neurocognitive functions, specifically rapid automatic naming and orthographic processing, as critical components of dynamic and comprehensive assessments of reading to help identify students at-risk for future RF challenges.


This study explored relations between teachers’ perceptions of sharing educational goals and values with their colleagues (shared values), job satisfaction, and motivation to leave the teaching profession. The extent to which these associations were mediated through indicators of psychological need satisfaction (belonging, autonomy, and competence) was also examined. Participants were 1145 Norwegian teachers. SEM analyses showed that shared values were positively associated with all indicators of psychological need satisfaction (belonging, autonomy, and competence). In turn, job satisfaction was strongly and negatively associated with motivation to leave. Shared values were also indirectly associated with general job satisfaction, mediated through perceived belonging and competence.


In this work, we argue for expanding the scope of K-12 computational thinking (CT) integration contexts to include everyday scenarios involving moral reasoning. Epistemic overlap between computational thinking practices and moral reasoning suggest that these contexts are potentially rich sites to see “seeds of CT” in children’s reasoning and can provide rich educational pathways for children into CT. Taking a case-study approach, we examine the reasoning of a second-grader, Ollie, on a task involving fair
allocation of resources to victims of a natural disaster. Our analysis finds that Ollie’s reasoning was rich with seeds of CT (e.g., problem formulation, abstraction, complex-systems thinking) and that empathy served as an important supporting role to the CT. This work has implications for curricular design, suggesting that fairness and resource allocation scenarios with built-in opportunities for empathy might provide rich sandboxes for CT integration.


Children’s social-emotional and cognitive development is enhanced when early childhood educators display positive affect and respond appropriately to children’s needs. However, there is little research on factors that influence teachers’ positive affect in the classroom, such as past adversity exposure and promoting teachers’ well-being. The current study examined the interactive effect of teacher participation in a well-being program (Be Well Care Well; BWCW) and their exposure to adverse childhood experiences (ACEs) on changes in observed teacher affect over time within the classroom setting. Participants included 95 early childhood teachers who completed the ACEs measure, a live classroom observation before participation in activities, and a post-intervention observation. Multilevel modeling estimated the interactive effects of teacher ACEs, participation in BWCW activities, and time on the dependent variable (i.e., teacher affect). Results from the three-level random intercept model showed a significant three-way interaction. Individuals with a higher number of ACEs and lower participation in the well-being program showed a decrease in positive affect over time. This effect was not significant for teachers who reported fewer ACEs. Results indicate that the degree of participation in the well-being program was particularly salient for teachers with higher exposure to past ACEs. Findings suggest that fostering teachers’ physical health and well-being can enhance their affect and enthusiasm in the classroom setting, particularly for those with higher levels of past adversity exposure.


Purpose: The purposes of this study were to (1) meta-analyze the effects of teacher trust, and of each trust dimension on student learning in aggregate and in each of the six learning subjects; (2) meta-analyze the effect of school leadership, of each leadership domain, and of different leadership styles on teacher trust; and (3) examine whether school level, subjects, trust dimensions, and leadership styles moderate these abovementioned effects. Research Methods/Approach: Standard meta-analysis techniques were used to review 83 studies and examine the multiple relationships between school leadership, teacher trust, and student learning mentioned above. Heterogeneity analysis was conducted to identify moderators. Publication bias in these analysis results was also examined. Findings: The study shows that teacher trust had a moderate effect on student learning. School leadership had a large effect on teacher trust. Teacher trust in students and parents contributed to student learning more than the other dimensions of trust. All five domains of school leadership were related to teacher trust, with the effect sizes being large or moderate. Supportive, collegial types of school
leadership had the largest effect on the teachers' trust. Implications for Research and Practice: To improve student learning, school leaders need to enlist all effective practices in order to build trust in schools and pay equal attention to improving teachers' trust as they do other efforts to improve instructional programs and teaching practices. More efforts are needed from principals to help build teachers' trust in parents and students.


La responsabilité implique notamment une cohérence du sujet entre son dire et son agir. Elle prend racine dans le lien entre l’Homme et la nature, l’Homme dans sa communauté, la communauté avec la nature. Ces « relations rétroactives et dynamiques » (Sauvé, 2000) nécessitent une éducation qui incite l’enfant à prendre sa part de responsabilité envers lui-même, l’environnement humain et non humain, particulièrement dans l’éducation familiale. Notre étude interroge donc la mise en place de cette éducation par les parents à travers leurs pratiques d’autorité auto-rapportées. Précisément, nous mettons l’accent sur le rapport entre les formes d’autorité parentale et les systèmes de motivation de l’enfant ainsi que sur l’acquisition des compétences indicatrices de la responsabilité qui permettent à l’enfant de répondre à ses besoins et à ses désirs en respectant ceux des autres et son milieu de vie. Par l’approche des systèmes de motivation de Daniel Favre (2007), et l’approche des cinq compétences (émotionnelles, épistémiques, attentionnelles, relationnelles et axiologiques) proposées par Hélène Hagège (2018), nous avons construit des outils de recherche dont la méthode centrale est quantitative avec des tests de comparaison appariée : parents-enfant ; parents (phrase d’attente) -parents (phrase d’observation). Des questions ouvertes, objet d’une analyse qualitative ont aussi été posées. L’enquête par questionnaire a été réalisée auprès 38 parents et 55 enfants âgés de 8 à 11 ans afin d’apporter des réponses à la problématique relevée. Les résultats obtenus ont montré que des formes d’autorité-autonomisation favorisent l’émergence de la motivation d’innovation (plaisir de découverte, prise des initiatives) de l’enfant tandis que des formes d’autorité-domination soulèvent chez lui un sentiment de découragement et la soumission. De plus, les données indiquent que l’enfant a besoin du soutien, de l’orientation des parents afin de développer ses compétences émotionnelles, épistémiques, attentionnelles, relationnelles, axiologiques, notamment, la maîtrise des émotions, l’esprit critique, l’attention à l’utilisation langagière, les comportements envers l’environnement, la prise de conscience des conséquences de ses choix.


The mental health of students learning online is a critical task for many countries around the globe. The research purpose was to analyse the factors affecting the quality of mental health of young individuals who learnt under conditions of not total lockdowns but adaptive quarantine restrictions. The research involved 186 volunteers from Zhengzhou University of Technology, 94 were first-year students, and 92 were fourth-year students. The experimental group involved first-year students, and the control group involved fourth-year students. An average age of the participants in the experimental group was 18.3 years, and in the control group, the average age was 22.4 years. The
scholars conducted the research after four months of distance learning under the adaptive quarantine. The students could be involved in their usual entertainment activities and interpersonal communication outside the home. The Behavioural Health Measure, better known as BHM-20, was the core psychometric tool. The research finds that distance learning is less effective for first-year students than for fourth-year students because the former cannot effectively adapt and communicate in a new social environment, and develop trusting interpersonal relationships with fellow students and teachers. The research results coincide with other research on this issue and demonstrate a low degree of mental resilience during and after the pandemic. Previous research is not suitable for the analysis of the mental health of students under adaptive quarantine, including the freshmen, considered the most vulnerable group. The article will be useful for professionals interested in distance education in higher educational institutions, workers of socio-psychological services at universities or individuals involved in adapting curriculum materials for distance learning.


First-generation (FG) college students (students for whom neither parent earned a bachelor’s degree) are typically less likely to interact with their instructors and communicate with them by email or in person, compared to continuing-generation (CG) students. Qualitative research suggests FG students are less likely to seek help when they need it, and when they do seek help they are more likely to engage in passive help-seeking (e.g., waiting quietly for assistance) as opposed to active help-seeking (e.g., promptly requesting assistance through multiple methods), compared to CG students. The current laboratory study provided students with an opportunity to seek academic and non-academic help and measured whether students engaged in active help-seeking behavior. We also tested whether having a shared identity with a help-provider could increase active help-seeking behavior among FG students. Results showed that FG students were less likely to seek academic help. Among FG and CG students who sought academic help, the intervention had no significant impact on active help-seeking. However, among students seeking non-academic help, active help-seeking behaviors were significantly higher for FG college students assigned a help-provider who signaled a FG identity. In other words, having a shared identity with a help-provider led to more active help-seeking among FG college students seeking non-academic assistance. FG faculty, staff, and student workers who provide non-academic assistance may want to consider self-identifying as FG to increase help-seeking behaviors among FG students struggling to navigate the college environment.


As a result of the COVID-19 pandemic, many college students have been isolated at home and unable to walk into class as usual. This series of protective measures to avoid the spread of the disease may have an additional psychological impact on the lives of college students. The purpose of this study was to propose a strategy for using an intelligent online learning system based on content recommendations and electronic questionnaires in the educational domain. We invited 3000 isolated university students (47.6% male and 52.4% female) to an online trial. It proved to be effective in helping us
intervene in students' psychological problems quickly, objectively, efficiently, and in real-time. In addition, our analysis of the data collected from the intelligent online learning system showed that the degree to which college students' psychological problems were affected by isolation was closely related to students' grade level, family background, major category, and computer proficiency. The current study suggests that the mental health of college students should be well monitored during segregation. Targeted psychological counseling is more necessary for students in upper grades, low-income families, liberal arts majors, and those with weak computer proficiency to reduce the emotional impact of segregation on students.


The current investigation examined models of homework interest according to the data from middle school students in China. Homework interest was positively related to homework favorability, feedback quality, deep approach, monitoring motivation, peer interest, self-concept, teacher control, and family homework help. Additionally, homework interest was negatively associated with the surface approach. At the class level, homework interest was related positively to feedback quality, yet negatively to parent education. Thus, the current study extended prior research on homework, by indicating that student interest in homework was further associated with peer interest and homework approaches. Implications for further investigation and practice are discussed based on these findings.


This study explored the interaction between cognition and emotion in blended collaborative learning. The participants (n = 30) of this study were undergraduate students enrolled in a 16-week course on information technology teaching. These students were divided into six groups of five people each. The behavior modes of the participants were analyzed using a heuristic mining algorithm and inductive miner algorithm. Compared with the groups with low task scores, the high-scoring groups exhibited more reflection phases and cycles in the interaction process and thus more frequent self-evaluation and regulation behavior for forethought and performance. Moreover, the frequency of emotion events unrelated with cognition was higher for the high-scoring groups than for the low-scoring groups. On the basis of the research results, this paper presents suggestions for developing online and offline blended courses.


This retrospective study investigated transitions in patterns of caregiver involvement before and during COVID-19 and their antecedents and consequences. A total of 504 young children (age: M ± SD = 49.92 ± 4.30 months) and their primary caregivers were recruited from the junior classes of 10 preschools in Zhengzhou City, Henan Province, China. Latent profile analysis identified three profiles characterized by (1) high levels of caregiver involvement (HCI), (2) average levels of caregiver involvement (ACI), and (3)
low levels of caregiver involvement (LCI). Latent transition analysis showed that caregivers who belonged to the HCI or LCI latent status before COVID-19 tended to transition to the ACI latent status during COVID-19. Higher levels of caregiver depression contributed to a higher probability of transitioning from the HCI to the ACI latent status, while higher levels of household chaos predicted a higher probability of transitioning from the HCI to the ACI latent status and a lower probability of transitioning from the LCI to the ACI latent status. Finally, the transitions in patterns of caregiver involvement were associated with young children’s approaches to learning during the pandemic.


Social and emotional learning (SEL) has gradually implemented in Chinese schools and is considered as an effective way to improve students’ performance. This research aimed to study the influence of SEL on students’ bullying behavior, and the role that social and emotional competence (SEC) and peer relationship play in SEL and students’ bullying. The participants were 2049 students in primary and secondary schools in Beijing, China. SEM was used to examine the mediating role of SEC and peer relationship. The study found that SEL can significantly predict students’ bullying behavior. In addition, SEC and peer relationship sequentially mediate the relationship between SEL and students’ bullying behavior.


The present study investigated how students’ attitudes toward bullying were influenced simultaneously by personal and contextual factors in Mainland China, Hong Kong, and Taipei. Participants included 25,338 students (15-year-olds, from grade 7 to 12) and 663 schools from Mainland China, Hong Kong, and Taipei drawn from the Program for International Student Assessment 2018. Multilevel structural equation modeling with Bayesian estimation was conducted for data analysis. The results showed that, for personal factors, girls had stronger anti-bullying attitudes than boys in each sample. Resilience and self-efficacy predicted students’ anti-bullying attitudes positively and significantly in all three regions. For family contextual factors, parents’ emotional support had positive effects on students’ attitudes toward bullying in three regions. For school contextual factors, there was no consistent result among the three regions. School location and school belonging were positive predictors of students’ anti-bullying attitudes in Mainland China. By contrast, class size and student behavior hindering learning negatively correlated with students’ anti-bullying attitudes in Hong Kong. In Taipei, students in public schools were more likely to form anti-bullying attitudes, and a positive association was found between the student-teacher ratio and students’ attitudes toward bullying. Distinguishing the commonalities and differences in the factors influencing students’ attitudes toward bullying in Mainland China, Hong Kong, and Taipei provides empirical evidence to understand school bullying prevention and control mechanism.

Zhang, S., Che, S., Nan, D., Li, Y., & Kim, J. H. (2023). I know my teammates: the role of Group Member Familiarity in Computer-Supported and face-to-face collaborative
Considering the importance of group member familiarity in collaborative learning in classroom learning environments, this study examined the impact of group member familiarity on CSCL (computer-supported collaborative learning) in a networked setting. Also, the differences between CSCL in the online environments and FTF (face-to-face) collaborative learning were also compared. An analysis using structural equation modeling revealed that group member familiarity increased teamwork satisfaction, which in turn increased student engagement and perceived knowledge construction. A multi-group analysis revealed that while FTF collaborative learning exhibits higher levels of group member familiarity, teamwork satisfaction, student engagement, and perceived knowledge construction, the mediating effect of teamwork satisfaction was more pronounced in online settings. The study findings provided insights for teachers to improve collaborative learning experiences and adapt different teaching strategies.


Cartoon images have been widely applied in children’s educational media. The study examined the effect of cartoon images in touchscreen media on young children’s recognition of time. With a 2 (clock type: cartoon clock, non-cartoon clock) × 2 (media type: touchscreen, video) between-subjects design, ninety-two children aged 4–6 were randomly assigned to one of four experimental conditions. Each group was exposed for 10 min to the media designed to teach children how to tell the time. We examined children’s learning to tell time by pre- and post-test clock tests. Results showed that: (1) In the condition of the cartoon clock, children in the touchscreen groups got significantly higher total clock learning scores than the video groups; (2) In the condition of touchscreen, children in the cartoon groups got significantly higher total clock learning scores than non-cartoon groups. Findings suggest that touchscreen interaction is more beneficial for children to learn to tell time than watching videos, and when using educational apps for touchscreen learning, cartoon images have a positive effect on children’s learning to tell time. However, cartoon images have no effect on children’s learning to tell time through videos.


With or without pandemics, successful knowledge transfers and instilment of critical thinking in learners are strategic to teaching delivery. To revolutionize teaching practice and profession, the specific needs of every group of learners (such as gifted and talented, depressed, attention deficit hyperactivity disorder students, minority ethnic pupils, and low attaining) must be met. Therefore, a new paradigm that employs the right teaching styles for the right student at the right time should be adopted. A plethora of research has shown that enhanced understanding, retention, and critical thinking are better promoted in active learning strategies as compared to conventional passive learning. On the other hand, students’ critical thinking is most effectively enhanced by instructional approaches that incorporate constructivist, active-learning, and student-
centered philosophies, in addition to other concepts like biosocial, psychological, psychosocial, emotional, motivational, and sociocultural perspectives. The execution of such a holistic perspective would inevitably require concerted efforts from all relevant key players and stakeholders.


Young children in the United States, particularly Black boys, are being suspended and expelled from early childhood education programs and primary schools at alarming rates. Teachers describe children’s “disruptive” or “challenging” behavior as the most common reason for suspending or expelling a child. For this reason, common efforts to reduce exclusionary discipline target teacher behavior to change child behavior (e.g., improve use of evidence-based practices) or child behavior directly (e.g., learn self-regulation skills). In this paper, we argue that improving the quality of the teacher-child relationship is an alternative mechanism for addressing exclusionary discipline and mitigating racial disparities in the early childhood years. We propose and provide support for a transactional, relational model to account for exclusionary discipline. The proposed conceptual model intentionally names how teachers’ racial bias and children’s stereotype threat, resulting from racialized classroom experiences, exacerbate coercive teacher-child interaction cycles for Black children. We apply this model to review and evaluate select teacher-child relationship interventions to identify opportunities and challenges these interventions present to reduce exclusionary discipline and mitigate racial discipline disparities. We end the paper with recommendations for future research to advance relationship-based solutions to the exclusion crisis in early childhood education.


The aim of this paper is to highlight the benefits brought about by a learning-through-the-arts project aimed at creating links between the cultural heritage of students from diverse backgrounds and the fundamental aims of school instruction. Guided by a naturalistic research strategy and the principles of teacher action research, the data was collected during the implementation of a training project for preservice teachers at a highly complex school setting. The results provide an interdisciplinary and inclusive methodology for learning through the arts that promotes the development of cognitive and socio-affective competences, which are essential for lifelong learning. The project was carried out in a multicultural primary school, where a disadvantaged social composition prevails as a result of school segregation. Evidence of learning and the schoolchildren’s artistic creations provide examples of good inclusive practices that foster collaborative interactions, widen participation, and improve academic achievement in various school subjects. Ideas for future research are also discussed.

While the health risks of Covid-19 for young people are low, they have borne a heavy cost of the pandemic through intense disruption to their education and social lives. These effects have not been experienced equally across social and demographic groups. Using data from a nationally representative survey of 4,000 young people in England linked to their education records, we study inequalities in late adolescents’ experiences of the Covid-19 pandemic. We find particularly stark inequalities by socio-economic status, with those from poorer families facing disadvantage on multiple fronts, particularly in their experiences of home learning, returning to school, and exam cancellations compared to their more advantaged peers. Gender and ethnic inequalities were more mixed, though young females reported significantly lower wellbeing scores than males. This evidence suggests that the pandemic has exacerbated existing inequalities, meaning policymakers concerned with increasing equity and social mobility now face an even bigger task than before.


This article utilizes anthropological theory to examine the existing body of ethnographic research in colleges and universities, which remains underdeveloped compared to K-12 ethnographies. I identify two parallel developments in this field: a micro-level ethnography of college and university sub-cultures and a macro-level ethnography of structural transformations in higher education. What has largely been missing is a meso-level or institutional ethnography of colleges and universities that centers institutional relations as objects of ethnographic inquiry. After surveying relevant ethnographic traditions that might inform this meso-level approach, I offer an illustrative example from an ethnography of diversity policy and practice at a public research university attempting to transform itself into a more diverse institution. The article highlights the benefits and possibilities of an ethnography of colleges and universities rather than ethnography in colleges and universities.


Using the stereotype logistic model, this study examines the determinants of doctoral graduate’s satisfaction with their overall doctoral programme experience in Italian universities. The dataset used (Istat 2019) covers a representative sample of national and international graduates for the graduation years 2012 and 2014 including more than 80 academic institutions and 14 disciplinary areas. The detailed questionnaire allows investigation of various aspects of satisfaction with the doctoral experience, framed by the two broader constructs of the role of the supervisor and that of the department. Regression results show that the dominant factors are related to the support for career development beyond the doctorate and to certain aspects of the supervisor’s role. Of less importance are research facilities.

In this ethnographic study, Becca Spindel Bassett investigates why low-income and first-generation students access fewer resources and gain fewer benefits from their university campuses than do their higher-income, continuing-generation peers. Building on sociological theories that emphasize the relational and political dynamics of resource acquisition, the article explores the disadvantages that these students face in making persuasive claims on university resources and the role that faculty and staff can play in mitigating these disadvantages. Drawing on a year-long ethnographic study of two universities that serve and graduate large numbers of low-income, first-generation students, Bassett finds that faculty and staff drew on three common, proactive strategies to empower students to make effective claims on university resources, which directed them toward valuable resources and elevated their local social status. These findings challenge foundational theories in higher education that attribute equity gaps to individual-level differences, as well as reveal the importance of claims-making processes in determining who succeeds and who struggles on campus and underscore the critical role that faculty and staff can play in fostering more structurally and culturally supportive campuses.


When we started the Anzaldúing It podcast in 2017, we were trying to find a healing space outside of academia to process our everyday experiences as first-generation queer Latina/xs in graduate school. We chose the medium of podcasting as our platform because of our shared experience of pláticas being transformative spaces of knowledge sharing, consciousness-raising, and connection. Drawing on the tenets of Chicana/Latina Feminista Pláticas and coupling it with jotería identity and consciousness, and literature on academic counterspaces we conceptualize five tenets that make up what we refer to as digital jotería counterspaces. As co-creators and co-hosts, we engage in digital pláticas to enact self and community care through co-learning and co-construction of knowledge, this digital presence affirms our commitment to centering queer and trans Latinx identity and consciousness. We share our pláticas with the public through the digital and host them on an online repository, and as a result, create opportunities for multiple pláticas and consciousness-raising to occur.


This study seeks to critically examine perceptions of urban school climate from a predominantly white teacher workforce and discuss the role that white identity, as the Dominant culture, plays in maintaining the status quo of racialized school climate. Participants included 145 teachers from a large southwestern urban setting. Teachers’ perceptions were measured by the Teacher Perceptions of Urban School Climate survey that includes six dimensions that are important aspects of urban school climate: (1) Leadership, Relationality, and Care, (2) Perceptions of Security and Safety, (3) Student Belonging, (4) Constructivist Teacher Practice, (5) Diversity, Equity, and Inclusion, and (6)
Educator Retention. Results indicate that elementary school teachers had more positive perceptions of urban school climate and beginning teachers were less positive about aspects of urban school climate. Implications stemming from the results are discussed including the role whiteness and racism play in teacher perceptions of urban school climate and teacher education.


Does religion affect the gender gap? Using data on inquisition trials to locate medieval Waldensian communities in the Italian municipalities of Piedmont and early 19th-century female literacy rates, we find that municipalities with a history of Waldensian presence display lower levels of the education gender gap, a pattern that persists to the present day. Moreover, women in these municipalities have higher levels of education, greater labor market participation, and increased political representation. Our results highlight the importance of cultural and social norms in shaping women’s empowerment and gender equality outcomes.


Children from underserved, minoritized, and immigrant families have less access to early out-of-school STEM learning opportunities. Playful Learning Landscapes increase the accessibility of early STEM learning in everyday public spaces (e.g., bus stops, grocery stores) by merging principles of guided play and STEM learning goals with local community’s values. We used community-based design research to (1) identify Latine families' funds of knowledge related to play, science, and math learning, and (2) create designs for playful environments merging families’ values and practices with guided play and STEM learning principles. Our design partners were 32 parents, primarily Spanish-speaking immigrant mothers from Mexico, and two directors of a local community organization. The design process consisted of co-design sessions, interviews, inductive thematic analysis, elaboration, playtest and feedback, and iteration. Our findings showed that familismo, heritage representation, and the meaning of community spaces influenced the ways families engaged in STEM learning and the learning environments they desired in their community. Moreover, families' STEM practices were rooted in everyday experiences of playing cultural games, family food routines, and outdoor activities. Incorporating Latine parents in the design process and leveraging their funds of knowledge resulted in culturally situated designs aligned with playful and STEM learning principles. This study contributes to knowledge of Latine families' values and practices that can help create home-community connections to strengthen children’s learning.


We investigate the stages of childhood at which parental job loss is most consequential for their child’s education. Using Danish administrative data linking parents experiencing
plant closures to their children, we compare end-of-school outcomes to matched peers and to closures hitting after school completion age. Parental job loss disproportionately reduces test taking, scores, and high school enrolment among children exposed during infancy (age 0-1). Effects are largest for low-income families and low-achieving children. The causal chain from job loss to education likely works through reduced family income. Maternal time investment partially offsets the effect of reduced income.


This paper considers the case of Italy to analyze the short- and medium-term effect of a longer school day in primary school on both students’ learning and mothers’ labor supply. we rely on unique application-to-primary-school data: first, we control for parental preferences, proxied by individual applications; second, we exploit variation in the probability of attending the full-time (FT) scheme that only stems from nonlinearities in the mix of FT and part-time (PT) applications received by the school and from class size limits set by the law. We show that attending the FT scheme increases Math test scores in grades 2 and 5 and Italian scores in grade 2 by around 4.5% of a standard deviation, but the effects fade away by grade 8. Conversely, there is a positive impact on maternal labor force participation and employment, which is long-lasting (approximately 2 p.p.). No effect is found on fathers’ employment. Finally, we find some evidence of negative selection on gains, as the groups of students and mothers for whom the effect seems to be larger are not those more likely to apply to the FT scheme or to attend it conditional on applying.


Les jeunes cadres originaires des quartiers populaires et issus de l’immigration affrontent encore des comportements discriminatoires liés à leurs origines sur leur lieu de travail. Une épreuve qui s’ajoute à celles déjà vécues pendant leurs études.


Research shows student success in advanced-level science, technology, engineering, and mathematics (STEM) programs is connected to future educational and economic opportunities. Yet, Black students have been excluded from participating in rigorous mathematics courses that prepare them to engage in STEM majors and careers. This article reviews research on Black student mathematics participation at the pre-college, post-secondary, and professional levels. Three systemic barriers to Black student participation are limited access, limiting mindsets and beliefs, and lack of support.
Eliminating these barriers can result in an increase in Black students’ enrollment, persistence, and achievement in advanced mathematics courses. The article provides strategies proven successful in urban contexts to ensure equitable learning environments that maximize the full potential of Black students. Educational leaders must address systemic inequities rooted in racism, purposefully engage Black students in rigorous and extended learning opportunities, and provide them with peer and faculty support.


This paper empirically studies the impact of massive and sudden school closures following the 2011 nationwide student strike in Chile on teenage pregnancy. We observe a 2.7% average increase in teenage pregnancies in response to temporary high school shutdowns, equating to 1.9 additional pregnancies per school day lost. The effect diminishes three quarters after the strike’s onset. Effects are predominantly driven by first-time mothers and are aligned with higher school absenteeism periods, and are unrelated to typical teenage fertility seasonality or pregnancies of other age groups. The study also reveals a slight increase in the demand for emergency contraception and condoms due to strikes. This suggests that riskier behavior mainly drives effects due to reduced adult supervision. Additionally, we find persistent negative effects on students’ educational trajectories, evidenced by an increase in dropout rates and a reduction in college admission test take-up.


The closure of schools, social hubs, and extracurricular activities due to lockdown measures imposed to curb the spread of SARS-CoV-2, has increased the risk factors for students’ mental health. This cross-sectional study, conducted from March 2020 to March 2021, aimed to estimate socio-emotional, cognitive, and affective disorders and substance use in a sample of first- and second-grade high school students in Northern Italy. This study compared data from 284 Italian students’ self-perceptions along with the perceptions of their parents and teachers through a web-based survey. The differences in the perceptions of the three groups (students, parents, and teachers) were analyzed using an analysis of variance test, applying a Bonferroni correction. The χ² test was used to assess the comparison between students, parents, and teachers in the substance use questions. The results showed statistically significant differences among the three groups. The most important outcomes were sociality, scholastic performance, extracurricular activity, emotional symptoms, affective disorders (depression and anxiety), and substance use. These findings could be interesting for the promotion of mental health and prevention of psychopathological risks in students.

Increased education affects market and non-market outcomes. This paper investigates the causal impact of the extension of compulsory education from 6 to 9 years on females’ education, marriage, and fertility outcomes in Thailand. Using data from the Multiple Indicator Cluster Survey (MICS) and a donut-hole Regression Discontinuity (RD) design, we show that the new law increases lower secondary school completion in girls, leading to decreased probabilities of giving birth in the school-age years (14–17 years). The policy primarily affects the marginal child leading to the postponement of the timing of their fertility to after-school years. We also document heterogeneity and show that the fertility effects are stronger for Muslim women. The policy leads to a consistent drop in the probability of marriage and cumulative births for Muslim women, which sustain beyond the completion of schooling years. The results hold with alternative empirical model specifications and falsification tests.


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Many existing home numeracy models focus only on the roles of home activities in children’s numeracy abilities. Parents’ beliefs, teaching strategies, and children’s numeracy interest are seldom considered. As such, this study investigated the relations between parents’ epistemological beliefs about mathematics, how often children engaged with numeracy activities at home, parents’ use of indirect teaching strategies, children’s early interest and ability in numeracy. Three hundred twenty-seven Hong Kong kindergarteners and their parents participated in the study. After controlling for the children’s gender, age, non-verbal intelligence and language abilities, results showed that parents’ dynamic beliefs about the nature of mathematics were associated with their use of indirect teaching strategies. The frequency of home numeracy activities and parents’ use of indirect teaching strategies were linked with children’s numeracy abilities through numeracy interest. Our findings demonstrate the importance of helping parents to appreciate the dynamic nature of mathematics, and of coaching parents how to guide children’s numeracy learning.

Purpose: This study examines the direct and indirect effects of distributed leadership on teacher self-efficacy in multicultural classrooms (TSMC) through school capacity building, specifically teacher team innovativeness and a feedback network. Research Design: Using data from the Teaching and Learning International Survey 2018, this study employs a 2-2-1 multilevel structural equation modeling to account for the nested data structure (teachers nested within schools). Latent variables are constructed, and their validity is tested, followed by an analysis of the relationships among distributed leadership, teacher team innovativeness, a feedback network, and TSMC. Findings: This study finds that distributed leadership has an indirect-only mediation effect on TSMC via a feedback network but not via teacher team innovativeness. The effect of distributed leadership on TSMC is fully mediated by a feedback network. In addition, the study shows that distributed leadership is positively associated with a feedback network and teacher team innovativeness. Conclusions: This study contributes to our understanding of the role of distributed leadership in fostering school capacity building and promoting TSMC. Given the increasing diversity in schools, it is crucial for school leaders to prepare teachers to teach students in multicultural classrooms. The findings suggest that school leaders can enhance teachers’ efficacy in teaching students from diverse backgrounds by facilitating their participation in school improvement processes and establishing a collective feedback network where teachers receive feedback from various sources. These results emphasize the importance of distributed leadership in equipping teachers for culturally responsive teaching in multicultural classrooms.


Cette thèse étudie les effets de la territorialisation des politiques culturelles sur le travail des enseignants des établissements d’enseignements artistiques (EEA) au prisme d’un instrument d’action publique : le schéma des enseignements artistiques de la métropole de Lyon. Elle analyse les interactions entre le processus d’instrumentation de l’action publique territoriale, les traductions locales de ces instruments par les directions de ces établissements ainsi que leurs financeurs locaux et, enfin, leur appropriation par les enseignants et les effets des mesures mises en œuvre sur leur travail. Elle souligne ainsi l’importance des processus organisant la gouvernance culturelle territoriale et plus particulièrement la production, la mise en œuvre et la réception de « bonnes pratiques » devant rendre l’accès aux EEA plus démocratique. L’instrumentation de l’action publique territoriale en faveur des EEA installe des nouvelles modalités de financement en partie fondées sur la capacité de ces derniers à créer des dispositifs visant démocratiser leur accès. En l’absence d’égalité de moyens, de relations et d’information entre eux, l’enquête souligne l’aptitude inégale des EEA à se saisir des incitations accompagnant cet instrument. Il en va de même au sein des établissements où cet instrument, très diversement présenté aux équipes pédagogiques, est progressivement rendu invisible du fait de son déplacement dans des objets d’ordre administratif. La mise en œuvre de nouveaux dispositifs pédagogiques est ainsi fréquemment perçue par les enseignants comme une injonction descendante aux objectifs flous. Ces dispositifs
varient fortement d’un EEA à l’autre, tout comme leurs réceptions et appropriations par les enseignants, allant de la recomposition de certains aspects du métier à des situations de souffrance professionnelle.


In this paper, Indigenous and local understandings of the role of storytelling for children (*nthanu*) are contrasted with the didactic understandings of children’s stories that permeate the formal education frameworks of Malawi; frameworks which are deeply entangled in a colonial and (post)colonial history. For Chitonga speakers, the majority of whom live in rural communities along the northern lakeshore of Malawi, *nthanu* form a crucial part of what might be considered ‘education’ – as core components in the construction of the social-self, these oral stories play a critical role in the onto-epistemological formation of the young person. This storytelling is seen as marginalised by formal school systems. Through thick ethnographic material, the paper shows how people who are part of the ethno-linguistic group of the Tonga understand the role of story-telling for children as creating ontological notions of what it means to be human, to live in this world, and the sociality of being human that is seen as necessary for living a good life. In an examination of villagers’ fears about the disappearance of their stories, the paper locates the tensions between the literacy-oriented use of stories in formal schooling and the socio-ontological importance ascribed to stories in local learning modalities.


Research has been widely conducted to understand international student mobility, particularly from Global South to North. However, there is little attention paid to international doctoral students’ research and learning experiences in non-traditional destinations, particularly in the Chinese context. Drawing upon the concept of Communities of Practice, we administered semi-structured interviews with six international doctoral students and their supervisors at a prestigious Chinese university to understand how they experienced intercultural research and supervision in ‘shi men’, a culturally and pedagogically informed collective and semi-closed learning community. Our research findings help elucidate how the different social and academic practices have created various types of ‘shi men’. Each of these academic families reflects the unique features of doctoral learning in China and has implications for international doctoral students’ overall learning experience. This timely study offers distinct insights into cross-cultural learning, research, and supervision practices in China.

Education plays a central role in social mobility. Using data from the OECD’s PISA program, this paper sheds light on: (i) the role of socioeconomic status on the cognitive performance and future plans of Greek high-school students, (ii) intertemporal trends in light of the recent economic crisis and, iii) differences with other countries on the effect of socioeconomic and other drivers on intergenerational educational mobility. We find large and significant associations between student outcomes and educational resources at home, cultural possession at home, parental emotional support and private school attendance. Parental education and occupation effects are also important but differ by domain and between parents. The association between basic socioeconomic characteristics and adolescent educational performance is significant and rather stable before, during, and after the Greek economic crisis, which points to the need to produce a coherent strategy against educational disparities according to the socioeconomic status.


This study asks, “How do instructors successfully engage students in learning about controversial issues of race without hitting the common tripwires of low trust, stereotyping or racial microaggressions?” To address this question, I conducted a study of two courses on race that were focussed on difficult issues, yet were consistently highly rated by students in evaluations. What I found led me to an emerging theory about how instructors can foster classroom cultures in which learning about race is challenging but edifying and empowering for students. Drawing from data from one course, I show that the instructor does this by establishing and sustaining what I call academic grounding, a mix of academic content and academic culture. This grounding, in turn, allows students to become braver and more empathetic in their learning. I named this process Brave Community to highlight that this dynamic tension between bravery and empathy is integral to meaningful learning about racism in racist societies.

Desmond, C., Watt, K., Naicker, S., Behrman, J., & Richter, L. (s. d.). Girls’ schooling is important but insufficient to promote equality for boys and girls in childhood and across the life-course. Development Policy Review, n/a(n/a), e12738. https://doi.org/10.1111/dpr.12738

Motivation Investing in girls' schooling in low- and middle-income countries (LMICs) is seen as central to improving gender equity. It is argued that interventions to promote girls' enrolment are appropriate as girls face gendered barriers to school enrolment and completion and investing in girls' schooling has high economic and human-development returns. But is this fair to boys and enough for girls? Purpose We ask how appropriate it is to direct development assistance towards improving girls' school enrolment, compared to prioritizing schooling for both girls and boys, and addressing barriers to gender equality throughout the life-course. Methods and approach We frame the enquiry through a human development framework with three distinct but interdependent domains: protection of human development potential; realization of human development potential; and use of human development potential. Using publicly available data, we identify indicators likely to be correlated with the degree to which
human development potential is protected, realized, and utilized in LMICs. We compare male and female outcomes on each of these indicators to assess gender parity at different life stages. Findings In most regions, girls are ahead of boys in both school enrolment and completion. Girls have better outcomes than boys in several other indicators in early life and childhood. In adolescence and adulthood girls and women fall behind boys and men. This is especially apparent in workforce participation, in unemployment, in pay, and in share of unpaid care work and political participation where women have less favourable outcomes than men. The bias against women is most marked in South Asia and sub-Saharan Africa. Policy implications A focus on girls' schooling should be tempered by ensuring quality pre-primary, primary, and secondary schooling for both boys and girls. Simultaneously we must address causes of gender inequality, including labour market discrimination and social norms which justify the exclusion and exploitation of women and girls.


Emerging data suggests the COVID-19 crisis exacerbated preexisting, long-documented gender inequities among U.S. faculty in higher education. During the initial Spring 2020 ‘lockdown’ in the U.S., 80 students conveyed their experiences with faculty across 362 courses. We evaluated whether students’ reports of faculty supportiveness, accommodations granted, and pandemic-impacted, anticipated grade outcomes differed according to faculty gender via mixed linear models (data on 362 courses were nested within 80 student reporters). Students perceived their women instructors as more supportive, accommodating, and anticipated lesser course grade decreases across the semester than in courses taught by men. Accordingly, we interpret that amidst the ‘lockdown’ crisis, women faculty earned higher perceived supportiveness and positive student outcomes than their male counterparts. Further, the data likely reflects women faculty’s greater conscription into demonstrated care work, despite the coding of such labor as “feminine,” thereby rendering such work devalued. To reframe, to the degree that students expect more ‘intensive pedagogies,’ which invites faculty and administrators to gender disparate demands, such pressures likely translate to ‘hidden service’ burdens, and correspondingly, less time for career-advancing activities (such as research). Broader implications are discussed, alongside women faculty’s documented experiences of acceleration in career and work/family pressures in pandemic-times, which combine to exacerbate long-standing, yet now-amplified penalties, potentially driving a widening, gendered chasm in academic career outcomes. We conclude by offering constructive suggestions to mitigate any discriminatory impacts imposed by students’ gendered assessment inputs and expectations.


Universal screening has emerged as one strategy within schools for identifying students who demonstrate social emotional and behavioral (SEB) concerns to provide appropriate support. However, research has demonstrated little evidence of equity around diagnostic accuracy; that is, how students might be differentially identified as at-
risk for SEB concerns based on race/ethnicity. The current study examined the diagnostic accuracy of the Social, Academic, and Emotional Behavior Risk Screener (SAEBRS) teacher screening measure as affected by student race/ethnicity, drawing from a sample of 730 students and 54 teachers from four urban, Midwestern elementary schools. Data were analyzed using nonparametric receiver operating characteristic (ROC) curve analyses, as well as ROC regression tests incorporating student race/ethnicity status as a covariate. Results indicated the SAEBRS (1) demonstrated borderline to optimal sensitivity and specificity across student racial/ethnic subgroups in predicting student SEB risk status, and (2) diagnostic accuracy did not vary across racial/ethnic subgroups to a statistically significant degree. Results highlight the need for further research on this topic.


La sociologue Dominique Epiphane, coauteure d’un article s’appuyant sur une enquête de 30 000 témoignages, détaille, dans un entretien au « Monde », les discriminations de genre subies par celles qui s’insèrent sur le marché du travail.


Our study focuses on the gender gap in college aspirations and enrolment among high school students in Germany. We build on socialisation theory, rational choice theory, and formal restrictions to college access to explain gender differences in idealistic college aspirations, realistic college expectations, and the disparities between the two. Specifically, we examine the prevalence of « pessimistic » college expectations, where college aspirations are higher than expectations, which we expect to be more likely among young women than young men. By analysing survey data from 1,766 upper secondary students in Germany, we find that women are equally interested in pursuing higher education as their male counterparts. They even express higher aspirations for college enrolment. However, women are more pessimistic than men about realising their aspirations. While factors such as the subjective probability of success and perceived costs impact both genders, young women are also affected by formal restrictions limiting entry to their preferred fields of study.


In the last four years, with the implementation of the policy of integration of the Syrian refugee students into the public schools in Turkey, there has been a significant rise in the number of Syrian students in mainstream classrooms. Based on the analysis of the discourses of Turkish teachers and students about Syrian students, this study examines the ways in which attitudes towards the Syrians in the Turkish community are reflected into the classroom context and also the ways that such attitudes shape intergroup communication as well as contribute to the construction of collective identities within the multilingual classrooms in Turkish schools. Using linguistic ethnography as a
methodological approach, data were collected through classroom recordings of natural interactions, teacher interviews, informal conversations and ethnographic classroom observations. Analysis of teacher and student discourses reveals how negative portrayals of the Syrian students as guests, outsiders, deprived, incompetent, cheaters and liars are being constructed and how those adversely affect communication and teaching practices within the classrooms. The authors argue for the need of the development and implementation of holistic educational policies in the country taking multiculturalism and multilingualism as pivotal points and focusing not only on language instruction but social integration as well.


A Netflix original six-episode series, The Chair, examines the experiences of a woman faculty of color department chair at the fictional Pembroke College. One of the many stressors she must navigate is a response to an incompetent white male faculty (who is also her love interest) after he makes a Nazi salute during a lecture in class. By watching this series, many viewers learned about how higher education administrators may respond to situations where a faculty member engages in questionable speech. The ensuing drama that occurs on campus in response to the Nazi salute and the students’ perceptions that the administration will and can do nothing of consequence to the professor showcases the messiness and intricacies of what has been termed “cancel culture.” In this paper, I use intersectional analysis to examine The Chair and the messages it sends about race, privilege, and cancel culture in higher education.


Student attendance at school is a necessary condition for learning and for other schooling benefits, yet absenteeism is a significant issue for students in many countries. Policies, programs, and research seeking to reduce absenteeism need to measure it accurately. This article describes seven different methods to measure student absenteeism, all used in at least one of 27 recently published studies in low- and middle-income countries. It also synthesizes evidence on the advantages and disadvantages of different methods, drawing on 17 studies that compare methods. We find that official school attendance records—a relatively cheap, nonintrusive method—often result in similar statistics as unannounced spot checks, but there are enough exceptions that policymakers and researchers may initially need to complement school records with spot checks. Student reports often understate absenteeism, and caregiver reports even more so. We discuss implications for researchers and for policymakers to improve measurement in education systems.


Previous studies have shown that peer victimization causes a great variety of severe adverse effects on children’s development, and it is necessary to explore the influential factors and mechanisms of peer victimization. This study examined the associations between teacher–student relationships and peer victimization, as well as the roles of peer...
status and gender in China. The participants were 734 primary school students from Grades 5 & 6. Structural equation models were conducted to test the roles of peer status in the associations between teacher–student relationships and peer victimization, as well as the gender differences in the above associations. The findings showed that teacher–student closeness negatively predicted peer victimization, and teacher–student conflict positively predicted peer victimization. It was also found that teacher–student conflict but not closeness could negatively predict peer status, which was in turn negatively associated with peer victimization. The above associations did not vary across genders. The findings indicated that both teacher–student closeness and conflict were directly associated with children’s peer victimization, and teacher–student conflict was indirectly associated with peer victimization via peer status. This implies that interventions for decreasing children’s peer victimization should not only focus on improving teacher–student relationships but also target peer status.


This paper is the result of an inter-university educational innovation project developed between the University of La Laguna (Spain) and the Autonomous University of Baja California (Mexico). Students from both institutions, studying at the equivalent level to become future primary education teachers, analysed the way in which primary school textbooks approach the topic of heritage in the Canary Islands and in Mexico. Flipped classrooms and project-based learning were the main teaching methodologies, culminating in a final assignment: a written report by students. The results enable us to re-evaluate the knowledge transmitted through textbooks in the light of this history, and their facilitation in teaching and learning processes, with attention to their epistemological biases. Several topics were highlighted as core concerns in the use of textbooks for teaching heritage: the need to question the role of the textbook in the teaching process, and the importance of Indigenous heritage when teaching and holistic concept of heritage. In outlining the inter-university teaching project, the article also shows how the analysis of textbooks in both contexts, and their subsequent comparison, has made possible a reformulation of how students of education in the Canary Islands and Mexico are taught to teach history.


Collective impact is an organizational model that is often used as a tool for solving complex social problems through cross-sector collaboration. Traditional applications of this model require a separate backbone organization to oversee the organizational partnership. Using qualitative data from a larger mixed methods study, we examined STEMSUCCESS, a STEM access program for K-12 girls, through the lenses of both collective impact and feminist matrix organizational theory. Our research questions focused on how participants characterized the organizational behaviors within and between the partnership as well as how the partnership accomplished the goals a backbone organization normally would. Although STEMSUCCESS exhibits characteristics of collective impact partnerships between universities and community organizations, we show how the partnership’s design calls into question the necessity of backbone organizations
through centering women and promoting a non-hierarchical structure. Rather than a centralized backbone, we recommend reimagining the collective impact model as a quilt—a living project that is flexible, communally sourced, and rooted in feminism and social change.


Drawing on life history interviews, this paper seeks to explore the lives of a group of eight teachers, all with working experience in England, who self-identify as committed to a more socially just education system. Drawing on Levitas’ Utopia as method, this article examines these teachers’ perspectives on and practices around social justice in education, such as aiming to eradicate exclusion policies and processes, and organising with like-minded colleagues. We also explore the significant professional and emotional labour that goes into such kinds of work towards a socially just education system, and the satisfaction that comes from ‘making a difference’. Their perspectives also provide insight into what a vision of socially just education might look like for those in the teaching profession.


Following the tradition of Chicana/Latina feminist nuevas teorias and methodologies, I offer walking pláticas as a qualitative research methodology that honors the brown body and facultad to examine our relationship to the spaces we traverse, live within and mutually shape. Walking pláticas is a reclamation of research methodologies that dismantle the white colonial gaze through a recentering of the brown body as a critical corporeal, political, and geographic site of analysis. In this article, I propose to move beyond the understandings of space as the neutral and apolitical backdrop on which life occurs. The strengths of walking pláticas include the consideration of spatiality as key to exploring how people make sense of, are influenced by, and shape space—a great methodological tool for critical educational researchers seeking to understand the role of geography and the physical and social places and spaces on Communities of Color.


L’article est issu d’une ingénierie coopérative impliquant trois professeur·e·s des écoles et une chercheuse, menée dans le cadre d’une recherche doctorale visant à concrétiser l’égalité des sexes au CP dans et par des situations d’écriture. Il tente de mettre en évidence le lien entre égalité et temps didactique. Il s’agit de montrer que la mise en œuvre de l’égalité filles-garçons dans les situations d’écriture suppose de repenser la temporalité de celles-ci au regard d’un temps didactique déplié en un temps long du brouillon. Pour explorer cette proposition, le texte présente deux situations en contraste au CP : une situation ordinaire d’écriture inscrite dans un temps didactique classique, et une coécriture en binôme mixte via la bande-brouillon ancrée dans le temps long du brouillon en particulier celui de « l’arrêt ».

In this essay Tatiana Geron argues that classroom “crowdedness”—the spatial, temporal, and group dynamics of many students interacting in a shared space—shapes teachers’ everyday ethical decision-making and should be essential to an ethical theory of teaching. Drawing from Philip K. Jackson’s ethnographic work and her own teaching experience, Geron identifies features of the classroom that contribute to its ethical complexity—size, compulsory closeness, diversity, temporal pressures, and group dynamics—and lead to three types of challenges for teachers: linear challenges, or ethical difficulties that scale up with classroom size; second-order challenges that arise from the unintended consequences of teacher decisions; and integral challenges that arise from the group dynamic as teachers and students interact as ethical agents. Geron uses a case study of teacher decision-making to explore these features and the potential they create for novel resolutions to ethical dilemmas in the classroom.


SES- and ethnicity-related disparities in teacher-child relationships are prevalent. An important cause may be that children of color and children from low-SES backgrounds are often perceived by their teachers to have lower social-emotional behavioral (SEB) competence. Besides the impact of poverty on SEB development, likely explanations for such gaps are cultural mismatch theory and teacher bias theory. Both frameworks point to a divergence between teachers’ and students’ expectations of classroom norms as well as their practice of them. Such incongruence can manifest in the extent to which teachers and parents (dis)agree on children’s SEB skills. The greater the divergence between parents and teachers, the larger the discontinuity in socialization experiences a child may encounter during kindergarten transition. Using the Early Childhood Longitudinal Study data, the current study investigates the relationship between socialization discontinuity and children’s demographic backgrounds, and whether disparities in teacher-child relationships can be predicted by the degree of socialization discontinuity. The results show higher divergence between teachers’ and parents’ assessment of children’s SEB skills for children from low-SES backgrounds, non-English speaking households, and those who are identified as Black or Hispanic. Higher socialization discontinuity predicts both a more conflictual and a less close teacher-child relationship in general. Meanwhile, children from a non-English household tend to have less conflict with their teachers. Other factors that may affect teacher-child relationships, future research directions, and implications for policymakers and education practitioners are discussed.


In the past ten years radical educators have developed several theories around the notions of reproduction and resistance. In this article, Henry Giroux critically analyzes the major positions of these theories, finding them inadequate as a foundation for a critical science of schooling. He concludes by outlining the directions for a new theory of resistance and schooling which contains an understanding of how power, resistance,
and human agency can become central elements in the struggle for social justice in schools and in society.


The article discusses Indigenous caring relations in everyday practices involving children, in which co-learning approaches, as well as peer-to-peer learning processes, are grounded in territory. We revisit a set of learning encounters that unfolded as part of the Intercultural Training Programme for Indigenous Educators in Southeast Brazil. The course is part of the Minas Gerais Federal University’s (UFMG) Faculty of Education where, since 2006, it has trained and qualified Indigenous teachers to deliver Primary and Secondary education. In the text we argue in favour of the ‘school for many’, highlighting the pedagogical possibilities that emerge from the course’s ethnographic focus and, more specifically, from two care-taking learning scenarios with and among children. The records of these activities allow us to envision an educational agenda that includes such topics, respecting and dialoguing with Indigenous cosmologies and traditions; one that assumes this dialogue to be a fundamental part of Indigenous peoples’ resistance and respect for life.


The increasing scholarship on queer Latinx/a/o people in higher education research demands scholars to propound epistemologies and methodologies throughout the inquiry process that centers such communities. Methodologies, such as feminista pláticas disrupt epistemological boundaries to traditional ways of knowing and thus offer an opportunity to engage its application for queer and/or trans Latinx/a/o people. In this article, we foreground this opportunity through conexiones across the literature that highlight how feminista pláticas are employed for queer and/or trans Latinx/a/o communities in higher education research. As joto scholars, we conceptualize what this expansion can look like and build on the original contours of feminista pláticas to theorize queer pláticas through five contours: (1) jotx/a/o identity and consciousness, (2) space for querencia (care), (3) queer chisme, (4) conocimiento to jotería identity consciousness, and (5) mundo zurdo as queer futurity. We offer examples from our own research and provide reflexiones for future scholarship.


This paper presents an analysis of the extent to which poor pupils in England are clustered in schools with others like them. It is based on a segregation index of pupils eligible for free school meals for every year for which official national data is available. The trend over time has been published before up to 2019, and this paper extends the analysis to 2021, covering both the Covid-19 era so far and the beginning of transitional arrangements for Universal Credit, which have led to a substantial increase in the number of pupils eligible for free school meals. Results show that the segregation of poor pupils
between secondary schools has continued to decline annually – a decline that started with the onset of Pupil Premium funding. This decline in segregation has not occurred for other possible indicators of disadvantage, such as pupils having a special educational need or disability, which are not addressed by Pupil Premium funding. Clustering disadvantaged pupils together in parts of a national school system has been linked to worse pupil outcomes overall, lower aspirations, less ethnic cohesion, and reduced trust in society by students. So, this ongoing reduction is encouraging, and is likely to lead to a lower poverty attainment gap in academic outcomes. However, the reduction in 2020 and 2021 is “false” to some extent, based mostly on a sudden increase in the number of pupils officially classed as poor, rather than an improvement in their distribution or evenness. It is, therefore, important to retain Pupil Premium funding or something like it for the time being to see what happens to the attainment gap. And the apparent success of this funding scheme could have implications for school systems worldwide that value fairness in the provision of national opportunities for education.


This study examines the mediating role of personal growth initiative in the relationship between academic self-efficacy and engagement by examining gender differences. The novelty of this study lies in its focus on the mediating role of personal growth initiative and its examination of gender differences in the relationship between academic self-efficacy and engagement. By examining if there are any differences in the links between the variables based on gender, this research gives important insight into how these factors influence academic life for different student groups. The data was collected from 607 (333 female and 274 male) full-time undergraduate students. LISREL was used to test the structural model. We tested the hypotheses that academic self-efficacy is positively associated with student engagement, personal growth initiative mediates the relationship between academic self-efficacy and student engagement, and whether there is a gender difference in this mediation model. The findings show that personal growth initiative has a partial mediating role in the relationship between academic self-efficacy and engagement. In addition, there is no difference between gender-based groups, and the bootstrap analyses support these findings. Gender does not make a difference in the model because college students may evaluate higher education as increasing their future employment opportunities.


Nathalie Sayac est Professeure des universités en didactique des mathématiques et directrice de l’Inspe de Normandie Rouen-Le Havre. Pour le Café pédagogique, elle revient sur un stéréotype qui a la vie dure : les garçons réussissent mieux que les filles en mathématiques. Et si les résultats des évaluations viennent confirmer cette affirmation, c’est justement à…

Hampton, L., & Mendoza Aviña, S. (2023). Chicana/Latina feminista plática methodology as a praxis of solidarity for Black women and women of color contingent faculty at a

Rooted in the history of women of color feminisms along with the everyday pedagogical practices that occur in Chicanx/Latinx communities, CLF plática methodology stems from the recognition that Chicanx/Latinx communities are experts of their lives who engage in knowledge production and theory every day. In this conceptual essay, we explore how utilizing a CLF plática methodology while working as contingent faculty at a PWI in north Texas helped us to craft a praxis of solidarity that: developed community; provided a relationship and the space to strategize on how to respond to white supremacist violence; presented opportunities to discharge and heal; as well as opportunities to celebrate and engage in collaborative mentorship and now, collaborative research with each other.


In this paper, I explore how pláticas allowed for my former high school students and I to conceptualize love. This work is a response to overwhelming statistics regarding child trauma and literature that named loving relationships as a pivotal but under-conceptualized intervention. Specifically, we participated in three different iterations of pláticas: communal, peer, and individual. Through our plática structures and commitments to safety, accountability, and joy, we were able to conceptualize love and ultimately argue that based on the similarities between the five tenets of Chicana Feminist pláticas and our definition of love, that pláticas can not only serve as a methodological praxis that challenges centuries of epistemological and methodological harm but also serve to foster the type of love that is integral to the well-being of our communities.


Gendered washrooms and changerooms are sites of tension for many transgender and/or gender non-conforming users. However, these are not the only groups impacted by the exclusive provision of gendered spaces. As gender-neutral facilities become increasingly standardized across multiple sectors, we consider how the rising trend of universal design can be realistically adapted within post-secondary institutions. This article proposes the concept of inclusive design and provides specific recommendations to improve user experience in gendered and gender-neutral facilities alike on campus.


As critical posthumanist and (new) materialist scholarship become more established in educational research, a reconsideration of methodological approaches suited to a radical relational onto-epistemology is required. A popular figuration adopted by researchers to help think and do such research is the Deleuze-Guattarian “rhizome.” Coming to terms with how rhizomic styled research (rhizo research) is undertaken and what it can yield however, can be challenging. In this paper, a study involving a Zombie
Apocalypse Survival Course run at a human pathology museum becomes an animated example of rhizo research. Through it we demonstrate how infusing this research with an "analytic of lines" (derived from Deleuze-Guattarian rhizomatics) provides for a practice of research that has the power to shift the ontological and epistemological positions that continue to define qualitative research in education and bring understudied, ethico-political dimensions of it into view.


Nous nous trouvons dans une classe d’école enfantine. Une élève est un peu désémparée car, comprenant l’activité proposée par son enseignant comme un jeu, le « jeu de la marchande », elle ne sait pas qu’il faut mettre un biscuit dans chaque ramequin à sa disposition, c’est-à-dire les appairer. Il est trop tard pour elle, le « jeu » s’achève sur un constat d’échec : « Elle n’est pas invitée à recommencer, elle a essayé, elle a perdu. […] La fillette ne dit rien et regarde son quatrième biscuit qu’elle tient entre ses deux mains. » Cette scène, décrite dans l’ouvrage, constitue, avec d’autres, un point de départ des réflexions des auteurs sur les inégalités d’apprentissage et sur les moyens d’y remédier. Souvent conçues au niveau macrosociologique et associées à des indicateurs comme la profession des parents, ces disparités semblent fatales, hors de portée des enseignant·e·s, qui seraient alors réduite·e·s à les reproduire ou à les accompagner. Or, si l’on prête attention aux gestes pédagogiques du quotidien, on s’aperçoit qu’il existe de nombreuses possibilités pour les contrer. L’ouvrage, réunissant les contributions d’une quinzaine de spécialistes, porte à la fois sur la sensibilisation et la formation des enseignant·e·s aux inégalités sociales d’apprentissage et sur les moyens d’agir concrètement dans les classes et les établissements scolaires.


In the context of family homelessness, children experience acute adversities related to loss of housing and residential mobility compounded with more chronic, poverty-related adversities and stressors. Among children in families experiencing homelessness, variability in experiences and outcomes warrant person-centered approaches to better delineate patterns of risk and resilience. Using latent profile analysis as a person-centered approach, we identified five distinct profiles of neurodevelopmental functioning within a sample of 231 children (ages 3–5 years old) staying in emergency homeless shelters with their families. Latent profiles were informed by indicators from parent-reported items for ten different domains of neurodevelopmental functioning. We examined whether demographic and ecological factors including age, ethnicity, adverse childhood experiences, parent mental health, and overreactive parenting would predict profile membership. Overall, half of the children in the sample demonstrated a profile of resilient functioning across developmental domains. Profiles of maladaptive functioning differed in areas of strength and challenge, with a small percentage of children showing poor functioning across all domains. Children whose parents had more mental health problems or overreactive parenting were significantly more likely to show profiles of poor functioning than to show resilient functioning. Implications for future research, practice, and policy are discussed.

Skills shortage in the fields of Sciences, Technology, Engineering, and Mathematics (STEM) poses a significant challenge for industries globally. This study examines the interrelationship between high school students’ gender, their proficiency in Information and Communication Technology (ICT), and their career preferences in the STEM domain. Based on representative data for German teenagers, our study shows that female adolescents are less likely to choose a career in STEM unless they have strong ICT skills in secondary school. The relationship does not hold for male students. Our findings can be explained with evidence that teenagers sort into occupations they believe to be good at and that female teenagers rather underestimate their true potential. Using different empirical approaches, we also show that ICT skills act as a moderator and not as a mediator in the gender-specific choice of training upon graduating from secondary school.


Bullying victimization remains to be a public health concern in the United States, especially among sexual and ethnic minority youth. However, few studies have examined how school outcomes might be associated with bullying victimization among heterosexual and sexual minority African American youth and the factors that may attenuate that relationship. To address this gap, this study surveyed 462 heterosexual and 102 sexual minority African American youth residing in Chicago’s Southside neighborhoods, who participated in the Resiliency Project. Study variables included bullying victimization, school outcomes (i.e., school connectedness, and academic grades), and future orientation. Bullying victimization was associated with a significant increase in feeling disconnected from school among both heterosexual and sexual minority adolescents; however, there was no significant association observed between bullying victimization and receiving low grades among either group. Future orientation did not moderate the association between bullying victimization and school outcomes among heterosexual adolescents; however, positive future orientation did attenuate the association between bullying victimization and feeling disconnected from school among sexual minority adolescents.


Entre la cohorte des élèves scolarisés en troisième en 2019 ou 2020 et celle des élèves scolarisés dans cette même classe en 2010 ou 2011, la part d’élèves qui reçoivent une décision d’orientation en seconde générale et technologique (GT) a sensiblement
progressé : à l’issue de la troisième, 69 % des élèves obtenentiennent une orientation en seconde GT contre 61 % neuf ans auparavant.


Many Black women, especially those at historically White institutions (HWI), experience racial microaggressions on a regular basis. Although thought to have minimal impact in isolation, microaggressions can have severe consequences when experienced consistently over time. Among these consequences are anxiety, depression, and suicidal ideation. Students also struggle with Racial Battle Fatigue, alcohol abuse, and negative self-esteem. Using Critical Race Theory (CRT) and counterstorytelling, this paper shares the experiences of Black women with racial microaggressions at an HWI. Data from this study suggest that while students respond in various ways, the most common response is to remain silent. Implications are discussed and recommendations are provided.


The present study sought to understand how colorblind racism (CBR) and white fragility (WF) influence the presence and perpetration of racist bullying in a middle school setting. Five focus groups and one interview (n = 20) were conducted with school administrators, teachers, and racially and ethnically diverse students to elicit their experiences and perspectives concerning racist bullying. Focus groups were analyzed using template analysis. Racist bullying was a common experience among racial and ethnic minoritized students. CBR and WF were evident as white students and teachers claimed students had similar experiences regardless of race, they minimized the impact of racist bullying, and silenced discussions of race and racism. CBR and WF were critical drivers of the maintenance of racist bullying in this middle school, and thus important to address in efforts to prevent racist bullying.


In the context of heightened worldwide migration, emotion-based discourses portraying migrants as fearsome and dangerous continue to regulate nation-state boundaries. This paper reports on a critical visual research study in which migrant youth living in New York City were given digital cameras and asked to take pictures of places they thought were important in their school, neighborhood, and family. The study’s research methodology was designed to explore the role of emotion in how migrant youth enacted citizenship and used photography to construct visual counternarratives. In order to challenge emotion-based discourse that excluded migrants, the youth in this study mobilized feelings of care and cultivated transnational affective ties to assert their right to belong in public spaces. Implications for participatory qualitative research methods and school-based civic education practices are explored.

This study examined the unique needs of Asian American students in Science, Technology, Engineering, and Mathematics (STEM) majors and the extent to which institutional agents responded to their needs. This qualitative study focused on Asian American STEM students enrolled at Shasta Fair Community College (SFCC), a federally designated and grant-funded Asian American and Native American Pacific Islander-Serving Institution (AANAPISI). Results demonstrate that both students and institutional agents reported that the AANAPISI-funded STEM program, which provides a one-stop service for counseling, tutoring, and various other support services, allowed institutional agents to support the unique needs of Asian American community college students in STEM majors.


Mindset is a key factor affecting personality and learning for adolescents, especially those living in countries focusing heavily on human resources, such as Korea, Singapore, and Hong Kong. We examined associations of fixed intelligence mindset, fixed creative mindset, students’ gender and school type via a structural equation modeling. The sample included 301 Korean adolescents: students in their second year at a gifted high school, general high school students, and vocational high school students. To confirm construct validity and examine the associations of gender and school type with both fixed intelligent and creative mindsets, we fit a two-factor model within the structural equation model. We found significant associations of school type and gender with students’ fixed intelligence mindset and fixed creative mindset. Three paths—gender → fixed intelligence mindset, school type → fixed intelligence mindset, and school type → fixed creative mindset—were significant. In Western countries where mindset research originated and developed, there have already been efforts to manage students’ mindsets with policies. However, Asian countries still lack understanding of and basic research on mindset management. Therefore, these countries should pay closer attention to policies regarding students’ mindset management. Simultaneously, a practical school-level program is required to address the associations of school type and gender with student’s mindsets revealed through this study.


Et si les sociétés humaines étaient structurées par quelques grandes propriétés de l’espèce et gouvernées par des lois générales? Et si leurs trajectoires historiques pouvaient mieux se comprendre en les réinscrivant dans une longue histoire évolutive? En comparant les sociétés humaines à d’autres sociétés animales et en dégageant les propriétés centrales de l’espèce, parmi lesquelles figurent en bonne place la longue et totale dépendance de l’enfant humain à l’égard des adultes et la partition sexuée, ce sont quelques grandes énigmes anthropologiques qui se résolvent. Pourquoi les sociétés humaines, à la différence des sociétés animales non humaines, ont-
elles une histoire et une capacité d'accumulation culturelle ? Pourquoi la division du travail, les faits de domination, et notamment ceux de domination masculine, ou les phénomènes magico-religieux se manifestent-ils dans toutes les sociétés humaines connues ? Pourquoi l'ethnocentrisme est-il si universel et pourquoi des conflits opposent-ils régulièrement des groupes qui s'excluent mutuellement ? C'est à ces questions cruciales que cherche à répondre Bernard Lahire en formulant, pour les sciences sociales, un paradigme unificateur fondé sur une synthèse des connaissances essentielles relatives à la vie sociale humaine et non humaine accumulées dans des domaines du savoir aussi différents que la biologie évolutive, l'éthologie et l'écologie comportementale, la paléoanthropologie, la préhistoire, l'anthropologie, l'histoire et la sociologie. Le pari de ce livre est que seul cet effort d'intégration permet de comprendre la trajectoire des sociétés humaines par-delà leur diversité et d'augmenter la maîtrise qu'elles peuvent avoir de leur destin incertain.


Using three waves of data from the Panel Study of Korean Children (family N = 1,723), this study investigated whether and how the longitudinal effects of marital relationships on children's social-emotional development are mediated through parenting and the moderating role of social support in the mediating processes. Results showed that fathers' coparenting and warmth and mothers' parenting stress mediated the effects of marital relationships on children's externalizing and internalizing problems. Notably, some of the mediating processes were moderated by social support from extended family, friends, and neighbors. Our findings highlight the importance of considering both the proximal and broader family environment (e.g., social support from people outside the family) in understanding children's early social-emotional development.


Little is known about the role of agency in transitions in tracked education systems or whether it varies by socioeconomic background. This study addressed this gap by estimating structural equation models based on longitudinal data that are representative of the German- and French-speaking parts of Switzerland (N = 1273 individuals, surveyed from age 6 to 18, mean age at wave 1: Mage = 6.54, SDage = 0.50, female = 49%). The findings reveal that agency (captured by study effort and occupational aspirations) and socioeconomic background (measured by parental education and family income) significantly predicted students' transitions to academically demanding tracks in lower- and upper-secondary education. In the transition to upper-secondary education, students with fewer socioeconomic resources benefitted less than their more advantaged peers from ambitious aspirations, but they benefitted more from exerting effort. These findings suggest that both an optimistic forward-looking orientation and the exertion of effort are required to make it to an academic track. Effort may serve as a "substitutive" resource for less socioeconomically advantaged students, whereas ambitious aspirations may enhance the positive effect of family socioeconomic resources on academic educational trajectories. Overall, the evidence from this study
calls for greater attention to investigating not only how agency shapes adolescents’ educational trajectories and opportunities but also how its role differs across social groups.


Guided by Chicana/Latina scholars that have written explicitly about the methodology of feminista pláticas, this article positions feminista pláticas as a methodological disruption in educational research. We argue that embodied knowledge is a necessary part of a feminista plática methodology; it centers our bodymindspirit and the power of vulnerability in the research process. Through a discussion of emotions, language, and the relationship between feminista pláticas and testimonio, we illustrate how this methodology can be used to heal from and resist traditional research approaches that are rooted in whiteness, colonial logics, and white supremacy. A feminista plática methodology creates a space where we can be our most authentic selves and work with and for our collaborators. We conclude with a discussion on positionality and areas that merit further examination in a feminista plática methodology.


A growing movement towards inclusive education worldwide means more children with autism are being educated in mainstream classrooms. However, integration does not equate to inclusion, and peer stigmatisation of autism is commonplace. This systematic review explores the merit of school-based peer education interventions targeting the stigmatisation of children with autism spectrum disorders. Relevant records published from 1994 were identified through systematic searches of five electronic databases: EBSCO, Medline, PsychInfo, PsychArticles and ERIC. Thirty-one documents pertaining to 27 studies met the pre-specified eligibility criteria and were included for data-extraction. A narrative synthesis highlighted significant flaws in the available literature, most notably poor methodological quality and a narrow research focus with regards to age, the gender of target child and implementation methods. Nevertheless, this study reports on evidence tentatively supporting the efficacy of ASD de-stigmatisation interventions when targeting ignorance and prejudice. Although no one approach can be determined as most effective, manualised programmes combining different types of information about ASD and delivered using various mediums seem to hold the most promise.


This Policy Discourse Analysis (PDA) explores 19 state legislative documents focused on the teaching of disability history in K-12 schools. Framed through critical perspectives on constructions of disability and race, alongside discourse theory, we iteratively analyzed these legislative documents to understand (a) how disability and disability history are constructed (particularly in relation to whiteness); and (b) the stated purpose of the legislation and who is meant to benefit materially as a result of the laws. We find the
legislation upholds dominant notions of whiteness and ability as part of school curriculum, while simultaneously constructing disability history as in the past and disability justice as already achieved, centering the learning and awareness of white, nondisabled students. We offer discussion and implications for research and practice surrounding policy implementation of teaching disability history.


In this article, we reflect on our experiences teaching and learning in a digital course for PhD students, Oxford-UNISA Decolonising Research Methodologies. The aim of the course was to ‘gesture’ beyond the coloniality of knowledge by thinking ‘otherwise’ about research methodologies. As a decolonial teaching praxis, gesturing embraces experimentation, humility and becoming as we pursue decolonial being/thinking and seek/create coexistence, well-being and dignity beyond its constraints. We conceive of co-teaching as co-learning and co-becoming. Teaching as becoming, we argue, means engaging with students without a rigid structuring telos. We revisit video footage from the class, course materials and review insights from our students to reflect upon the substance and configurations of our co-teaching. We analyse the significance of ‘keeping the fire’ of our shared intellectual projects, even as we remain situated within colonial institutions. Three interrelated challenges emerged while teaching decolonial geographies and decolonising methodologies in this online course. These dynamics include: (a) the challenges of cultivating student-teacher trust in digital exchanges; (b) the aspiration to embolden transdisciplinary engagements in the face of logistical, temporal and practical constraints, including ‘settler time’ and our ties to stated disciplines; and (c) the significance of co-presence and shared commitment to challenge academic hierarchies.


The paper examines the impact of a rural roads construction program in India on women’s outcomes. While spatial integration can provide women with increased education and employment opportunities, the extent of benefits might be limited by underlying gender norms. We identify the impact of the policy by exploiting the program rule that assigned roads based on the village population. Using a two-way fixed effect methodology, we find that increase in rural roads construction lowers mobility restrictions faced by women and improves norms around domestic violence. However, the result are mixed with respect to participation in other decision making and financial autonomy. Additionally, while we find positive impact on education, there is no impact on employment outcomes for females. We argue that a possible reason for a partial improvement in women outcomes could be gendered impact of the policy - men benefit more in terms of employment than women.

This study examines the entanglement of affects that occurred during a short episode at a science museum. The episode involved a small number of children and a teacher who had come to the museum in the context of a school field trip. It took place inside an exhibit called ‘Hmong House’, which reproduced various components of a traditional house of the Hmong people. A key aim of this paper is to trace, via the microethnographic analysis of a brief video recording, an affective journey meshing mathematical tessellation and Hmong shamanism. In addition, we elaborate on ways in which disparate themes, such as tessellation and shamanism, became interwoven in the life of those visiting the Hmong House at the time. The episode of the Hmong House may inspire other activities in which students or visitors, with life trajectories partially rooted in Indigenous cultures, can share practices that are foreign to other students. The most important qualities of these activities, we suggest, are the respectful dignity with which they are demonstrated and engaged with, and the freedom to undertake interdisciplinary journeys – without subjection to artificial disciplinary boundaries – in which improvisation and surprising turns are expected and ever-present.

Dès le primaire, les enfants d’origine sociale défavorisée obtiennent en moyenne de moins bons résultats que les enfants de cadres. On retrouve ces écarts au collège et ils déterminent l’orientation de fin de troisième.

Broadly, this article details the imbrication of a Black feminist qualitative researcher’s onto-epistemology and data (meta-) analysis process. I theorize Black feminist memory work, then apply this method by returning to data I collected for a completed research project and meshing those data with a curated selection of thematically connected family photographs. By revisiting and reviewing textual and visual data, I demonstrate the function of Black feminist memory work as a visual research method with which to not only describe, analyze, and interpret evocative photographs, but also excavate and make meaning of the sometimes repressed and oftentimes emotion-laden episodic and autobiographical memories that inevitably surface when conducting qualitative research. I conclude by underscoring how this tool creates opportunities for qualitative researchers to address the ontological concerns that connect qualitative inquiry to Black feminists' humanistic hopes.

Research has demonstrated that racialized students experience additional stressors during post-secondary education compared to their white counterparts. These barriers can include added institutional barriers, lower representation among faculty, additional stress associated with cultural differences and stigmatization, discrimination, and racism. According to self-determination theory, students who experience an unsupportive or controlling environment are more likely to have lower basic psychological need
satisfaction, lower academic motivation, and lower well-being. The current study aimed to examine whether white and racialized students would differ in their perceptions of need satisfaction and need frustration in their learning environment. Participants were undergraduate students (N = 712) from a large Canadian university. A one-way MANCOVA was performed comparing racialized and white students on basic psychological need satisfaction and frustration with gender as a covariate. Results suggested that racialized students perceived lower autonomy satisfaction, lower competence satisfaction, and higher relatedness frustration in their learning environment. These findings present important implications for higher education institutions. Institutions should recognize the diverse needs of their student population and ensure that learning environments are supportive of these needs, as they can have significant detrimental impacts on the overall well-being and academic success of these students.


Taking a person-centered approach, this study examined stability and change in profiles of parenting qualities observed at two times in early childhood in a sample of 146 mothers of African American children living in households experiencing poverty. Latent Profile Analysis (LPA) of six qualities of parenting rated from mother-child interactions at ages 2.5 and 3.6 years revealed four distinct parenting profiles characterized as Child-Oriented, Moderately Child-Oriented, Harsh-Intrusive, and Withdrawn at each age. Profile membership was fairly stable, with 41% classified similarly at both times. Moderately Child-Oriented was the least stable, with 24% of this group similarly classified at Time 2; 49-52% of each of the other three groups were classified similarly the second time, indicating their greater stability. Changes from Harsh-Intrusive to Withdrawn profiles or vice versa were rare (n = 3). To further address profile stability, Time 2 profile posterior probabilities were predicted in multiple regression models from Time 1 parenting profiles, with the child-oriented profile as reference group, Time 2 child externalizing and internalizing behavior problems, and cumulative risk. Results indicated Time 2 Withdrawn and Harsh-Intrusive profiles were significantly associated with Time 1 membership in their analogous profile but not with other Time 1 profiles, providing further evidence for stability and distinctiveness of these profiles. Only the Moderately Child-Oriented profile was associated with greater cumulative risk at Time 2; it was not related to any of the Time 1 profiles. In addition, Withdrawn profile membership at Time 2 was associated with greater child internalizing and fewer externalizing problems. The Time 2 Child-Oriented profile was associated with less probability of membership in the Withdrawn or Harsh-Intrusive profiles at Time 1.


Research on how teachers become culturally responsive tends to focus on preservice teachers or on the professional development activities that are associated with change for inservice teachers. Little is known about how the various elements of culturally responsive teaching—including knowledge, skills, and fundamental orientations—interact with one another as teachers change. This case study followed 19 educators
across four schools and over 2 years as they conducted action research to enhance their cultural responsiveness. We found four zones of development that characterized the teachers’ change: consciousness-raising, consciousness- and relationship-building, knowledge- and practice-building, and practice-refining. Within each zone, two or three elements of culturally responsive teaching appeared to change most dramatically and to mutually reinforce one another as teachers developed. Professional development experiences should attend to these different zones and to the gradual nature of this process.


The present study developed a brief school-based intervention focused on raising awareness about Cerebral Palsy. To assess the effectiveness of the intervention, 91 classes from the fourth and fifth grades were randomly assigned to one of three conditions: Control, Focused on the Domain (Cerebral Palsy), and Non-Focused on the Domain (promotion of inclusion in general). Groups were assessed in three waves: pre-test, post-test, and follow-up. Data from this longitudinal cluster randomised trial showed the efficacy of this brief intervention in decreasing reported social distance and increasing positive attitudes towards individuals with Cerebral Palsy. Results from the Focused on the Domain Group were more positive than the Non-Focused on the Domain Group. Implications for educational practice are discussed.


How do men and women differ in their persistence after experiencing failure in a competitive environment? We tackle this question by combining a large online experiment (N=2,086) with machine learning. We find that when losing is unequivocally due to merit, both men and women exhibit a significant decrease in subsequent tournament entry. However, when the prior tournament is unfair, i.e., a loss is no longer necessarily based on merit, women are more discouraged than men. These results suggest that transparent meritocratic criteria may play a key role in preventing women from falling behind after experiencing a loss.


Academics have historically been members of socially dominant groups—white, cisgender, heterosexual men, from middle- to upper-classes, who identify as able-bodied and able-minded. Members of other groups are often disadvantaged. In two larger studies, semi-structured interviews were conducted with professionals from marginalized groups. Here we explore the narratives of 16 participants who explicitly discussed their experiences in faculty positions within the health and social service professions. The expected academic roles of teacher, researcher, and colleague/administrator did not neatly fit for participants, clashing with the expectations they faced by virtue of their
marginalized identities. Within the health and social service professions, the norms and expectations of the academy required marginalized faculty to make sacrifices of their time and sense of self to meet job demands. The effects of these role conflicts are pervasive, affecting many areas of academic work and beyond.


The field of geographic information systems (GIS) has been exclusively associated with positivist epistemological perspectives and quantitative research methods. In a deliberate effort to move away from false notions of objectivity and neutrality, this article proposes the Chicana/Latina feminist GIS methodology of Platicando y Mapeando. By drawing on critical raced-gendered epistemologies and the Chicana/Latina feminist methodology of pláticas, the use of GIS is transformed into a collectivist endeavor that depicts embodied and situated knowledges for social justice. Additionally, the methodology of pláticas is itself transformed in that dimensions of space and spatiality are forefronted. This article outlines five principles of a Platicando y Mapeando methodology and provides a case study of the college (in)opportunities available to rural Latinx youth from California’s San Joaquin Valley to illuminate the significance of this methodology for researchers interested in interrogating the intersections of race, gender, space, and educational (in)opportunity.


The present study investigated whether the socioeconomic achievement gap in academically at-risk students varied as a function of students’ perceived classroom goal structures. We hypothesized that low socioeconomic status (SES) students would be more susceptible to the various classroom goal structures. Specifically, we hypothesized that high levels of perceived mastery classroom goal structure would mitigate, while high levels of perceived performance goal structures would exacerbate, the negative effects of low family SES on achievement development. To test these hypotheses, we analyzed a secondary dataset from a sample of 784 (53% male) low-achieving students who were assessed annually from grades 4 to 9. The patterns of adaptive learning scale was used to assess perceived classroom goal structures. Woodcock Johnson III tests of achievement or Batería III (for students who primarily spoke Spanish) were used to examine academic achievement. Socioeconomic status was determined by highest education and occupation in household and child qualification for free/reduced lunch. We conducted latent growth models to examine the predictive effects of the interactions between family SES and classroom goal structures on achievement growth trajectories. Overall, our findings did not support our main hypotheses. Specifically, perceived classroom mastery goal structure was positively associated with academic growth among all students regardless of their SES backgrounds. Perceived classroom performance goal structures negatively predicted academic growth more strongly in higher SES students than in lower SES students, stressing the negative effects of performance classroom goal structures on achievement development for low-achieving high SES students.

This article provides a descriptive account of the workings of an Indigenous-led teacher training initiative in the Peruvian Amazon (Formabiap) and considers the extent of its transdisciplinary pedagogic approach, with a special focus on the ontological and epistemological stakes of intercultural knowledge exchanges in the context of contemporary global challenges. The article evaluates the extent to which Indigenous pedagogical projects can sustain inter-species relationships that promote a good life in which diverse species, including both humans and plants, can flourish. To extol the potential of Formabiap’s 35 year plus Indigenous rights initiative, the authors forward the notion of biosocial pedagogy, a heuristic device that helps value the consubstantial, and relationally entangled epistemologies of Indigenous Life-worlds.


Recently, numerous news stories have detailed the ways teachers across the country have been disciplined for addressing issues of oppression and justice in their schools. This paper engages poststructural discourse analysis to consider data from a year-long study of recent graduates of a justice-oriented teacher education program during their first year teaching, examining the ways that stories of community backlash functioned to discipline early career teachers to behave in particular ways. I theorize that these stories serve to discourage teachers from pursuing justice-oriented work in the classroom and that such discourses must be addressed in teacher education programs to prepare preservice teachers for the political realities of entering classrooms in the United States in the current cultural moment.


Dès la rentrée, et parfois même avant, nombre de familles prévoient de remplir les soirées et les week-ends de leurs adolescents avec du soutien scolaire. Un marché à plusieurs milliards d’euros, dont le recours contribue à creuser les écarts sociaux, au sein d’un système éducatif français déjà parmi les plus inégalitaires d’Europe.


In England, Pupil Premium Plus is additional funding to help address the educational attainment gap experienced by looked after children. This paper explores the experiences of virtual school heads and designated teachers (n = 140) as they access Pupil Premium Plus-related information, guidance and training to support their practice; navigate the complexities of the Personal Education Plan (PEP) process; and measure the impact of Pupil Premium Plus-funded interventions. We explain professionals’ experiences using insights from social practice theories, and argue that the process of supporting the educational outcomes of looked after children via Pupil Premium Plus is
made up of context- and audience-dependent ‘social practices’. When the social practices are aligned, virtual school heads and designated teachers may be effectively able to support looked after children, whereas barriers may emerge when social practices become disjointed. We conclude this paper by arguing that for Pupil Premium Plus to support educational outcomes of looked after children effectively, professionals need to reflect on their own cultures and practices.


The goal of the present study was to examine factors associated with academic self-handicapping in Black students attending a predominantly white university. Factors examined included sociodemographic factors (gender, first-generation college student status); psychological factors (family support, perceived discrimination, Black identity); and academic goal orientation. Participants were 240 Black/African American students who were part of a deidentified dataset from a larger study examining undergraduate student’s personal experiences and psychosocial correlates of academic self-handicapping (mean age 19.20, 107 first-generation students, 96 men, 144 women). First-generation status and gender were not related to academic self-handicapping. Lower family support, higher Black identity positive regard, and higher perceived discrimination were associated with higher academic self-handicapping. Higher self-handicapping was also related to lower mastery orientation, but higher approach and avoidance motivation remained unique predictors of academic self-handicapping. Results suggest that higher education stakeholders focus on strategies and systems of supports to minimize self-handicapping. Stakeholders may also consider interventions focused on enhancing racial identity or directly addressing academic self-handicapping tendencies.


Using the nonparametric Mann–Whitney U-Test to analyze 128 survey responses from K-12 teachers, this paper considers how value-added measures (VAM) impact educators’ decisions to include Latinx topics in their social studies lessons. The authors found that VAM teachers are more likely to rely on district/state curriculum standards whereas non-VAM teachers rely on curriculum resources to incorporate Latinx topics. When compared to non-VAM teachers, VAM teachers cover less Latinx content when it does not align with the standards, but higher coverage when the topics do align. The findings suggest that VAM can restrict teachers from implementing a diverse curriculum.


Social Justice Pedagogies provides a diverse and wide perspective into making education more robust and useful in light of global injustices and new challenges posed by new media and communication practices, media manipulation, right-wing populism, climate crisis, and intersectional discriminations. Meant to inspire readers to see learning and teaching from a wider perspective of justice, inclusion, equity, and creativity, it
argues that relational and mindful approaches to teaching and learning in specific contexts, settings, and place-based experiences are essential in how we determine the value of education. The book draws on contributions from scholars and experts who incorporate social justice into their teaching practices in different disciplines in universities across Canada, the US, and Europe. Social Justice Pedagogies uniquely presents a wide interdisciplinary perspective on social justice in education practices in order to speak to the ways in which we all want to make our research, our classrooms, and our institutions more just. It argues that pedagogy, and specifically teaching and learning, constitutes a process of building relationships between people and knowledge by fostering a learning community.


The way in which young people’s post-school intentions and pathways reflect their social background has been the subject of a good deal of research. However, much less attention has been paid to social differentiation in the amount and kind of career guidance information received by young people and its role in reinforcing or ameliorating social differentiation in transitions. This article contributes by examining the extent to which sources of information and guidance activities vary by social background and school social mix and the consequences of this variation for intentions to go on to higher education. The paper draws on data from a large-scale longitudinal study of young people in Ireland, the Growing Up in Ireland study. It finds that young people from more advantaged backgrounds are much more reliant on their parents as a source of information and advice, reflecting access to insider knowledge of the educational system, and are more likely to pay for private guidance services. In contrast, young people from less advantaged backgrounds and those attending schools with a concentration of working-class students are more reliant on school-based sources of information, though these resources are insufficient to boost their chances of making the transition to higher education.


In this article Sharon Stein and Jan Hare ask how higher education institutions might begin to confront the connections between climate change and colonization. To grapple with this question, they examine the dynamics through which climate action can reproduce colonial relations and reflect on the challenges, complexities, and possibilities that emerged in the context of one university’s Indigenous engagement efforts around a climate emergency declaration. The authors suggest that if universities seek to interrupt climate colonialism, they will need to commit to upholding Indigenous rights, knowledges, and self-determination and to accepting responsibility for repairing colonial harm and developing respectful, reciprocal relationships with Indigenous communities and lands. To fulfill these commitments, universities will need to avoid the common tendency to seek quick solutions and instead support the development of institutional conditions and individual capacities that would make it possible to have difficult conversations about the historical and ongoing ways that they have been complicit in social and ecological harm.

The contrast between student-centred and knowledge-centred teaching is explored through a qualitative case study exploration of the pedagogies (Bruner’s ‘folk pedagogies’) of six teachers of Jewish studies. These teachers, based in orthodox Jewish schools in the UK and Australia, discussed their roles as teachers in the context of their responsibility for inducting students into the Jewish community. They appear to overcome (or at least mitigate) the tensions between being student-centred and knowledge-centred through understanding both students and knowledge in communal terms. This communally-focused approach, drawing on the philosophers of ‘personal’ knowledge such as Polanyi, and of personalist approaches to schooling such as those of Macmurray and Noddings, is then proposed as of value in debates on schooling and the curriculum in general, well beyond the religious context of this particular research.


Grant funding is essential to the advancement of science, technology, engineering and math (STEM) fields with certain grants viewed as especially prestigious and career formative. The goal of this project was twofold: first to describe the gender demographics of the national winners of two prestigious grants and second, to document the impact of an educational program aimed at improving the success for women in STEM fields in a local setting. In Study 1, we analyzed publicly available national data to document gender gaps in National Science Foundation’s Faculty Early Career Development Program (CAREER) and National Institutes of Health’s K01 awards from 2008-2021. Results showed that, while the ratio of K01 awards favored women, the ratio of men-to-women CAREER awardees favored men. In Study 2, we implemented a grant-writing program for CAREER awards based in self-determination theory at one university and analyzed its impact on funding success. Results comparing before the educational program and after showed that the average annual success rate increased for everyone from 11% to 33%. Women-identified faculty who participated in the program were awarded CAREER funding at a higher rate than would be expected from the number of women eligible to apply or submission rates. While the correlational and observational nature of this study make it impossible to conclude that it was only the educational programs that resulted in the benefits to women’s award success, we encourage other universities to consider adapting the program and enable faculty development around grant success.


The role of unpaid and informal care is a crucial part of the health and social care system in Australia and internationally. As carers in Australia have received statutory recognition, concerted efforts to foster engagement in carer participation in work and education has followed. However, little is known about the strategies and policies that higher education institutions have implemented to support the inclusion of carers. To address this lack of information, existing higher education institution policies were located to canvas supports available to student carers and identify organisational representative participants. Semi-
structured interviews were then undertaken with staff from five higher education institutions to discuss their institutions’ policies and their experiences as stewards of carer inclusion and support. Findings indicate difficulty in identifying carers, the infancy of inclusion policies, support measures that are similar to those for students with a disability and difficulties accommodating flexibility in rigid institutional settings. Findings were synthesised into a framework of strategies, policies and procedures of inclusion to support student carers in higher education.


La responsabilité implique notamment une cohérence du sujet entre son dire et son agir. Elle prend racine dans le lien entre l’Homme et la nature, l’Homme dans sa communauté, la communauté avec la nature. Ces «relations rétroactives et dynamiques» (Sauvé, 2000) nécessitent une éducation qui incite l’enfant à prendre sa part de responsabilité envers lui-même, l’environnement humain et non humain, particulièrement dans l’éducation familiale. Notre étude interroge donc la mise en place de cette éducation par les parents à travers leurs pratiques d’autorité auto-rapportées. Précisément, nous mettons l’accent sur le rapport entre les formes d’autorité parentale et les systèmes de motivation de l’enfant ainsi que sur l’acquisition des compétences indicatrices de la responsabilité qui permettent à l’enfant de répondre à ses besoins et à ses désirs en respectant ceux des autres et son milieu de vie. Par l’approche des systèmes de motivation de Daniel Favre (2007), et l’approche des cinq compétences (émotionnelles, épistémiques, attentionnelles, relationnelles et axiologiques) proposées par Hélène Hagège (2018), nous avons construit des outils de recherche dont la méthode centrale est quantitative avec des tests de comparaison appariée : parents-enfant ; parents (phrase d’attente) -parents (phrase d’observation). Des questions ouvertes, objet d’une analyse qualitative ont aussi été posées. L’enquête par questionnaire a été réalisée auprès de 38 parents et 55 enfants âgés de 8 à 11 ans afin d’apporter des réponses à la problématique relevée. Les résultats obtenus ont montré que des formes d’autorité-autonomisation favorisent l’émergence de la motivation d’innovation (plaisir de découverte, prise des initiatives) de l’enfant tandis que des formes d’autorité-domination soulèvent chez lui un sentiment de découragement et la soumission. De plus, les données indiquent que l’enfant a besoin du soutien, de l’orientation des parents afin de développer ses compétences émotionnelles, épistémiques, attentionnelles, relationnelles, axiologiques, notamment, la maîtrise des émotions, l’esprit critique, l’attention à l’utilisation langagière, les comportements envers l’environnement, la prise de conscience des conséquences de ses choix.


English learner (EL) education is widely conceived as services for immigrant-origin students, however nearly one in ten American Indian, Alaska Native, and Native Hawaiian students are classified in school as EL. Title III of the Every Student Succeeds Act (2015) defines EL eligibility differently for Indigenous, compared to non-Indigenous, students with implications for who is identified as an EL and how best to serve their academic and linguistic interests. This study presents findings from a 50-state review of
Indigenous EL identification policy. We find that states fall into four categories ranging from no differentiation in Indigenous EL identification to clear differentiation. We describe each of these four categories and conclude with reflections on how this wide variation in state policies has implications for Indigenous students’ educational resources and experiences.


In this article, we engage in a letter correspondence we call Chicana Latina Feminist (CLF) cartas, where we discuss the nuances of utilizing pláticas, along with similarly informed methodologies of video testimonios and epistolary practices within our respective research process. Our cartas correspondence demonstrates, (1) the challenges we faced through the use of pláticas, (2) the lessons we learned in the process, and (3) the bridging of pláticas with other CLF methodologies. We offer our excitement, fears, and breakthroughs in hopes that it helps others considering using CLF informed pláticas.


Self-regulation skills are an important predictor of school readiness and early school achievement. Research identifies that experiences of early stress in disadvantaged households can affect young children’s brain architecture, often manifested in poor self-regulatory functioning. While there are documented benefits of coordinated movement activities and music education to improve self-regulation, few interventions have focused exclusively on rhythmic movement activities within a universal preschool setting. This study investigated the effectiveness of a preschool intervention, delivered across eight weeks by generalist preschool teachers, which focused on coordinated rhythmic movement with music to improve self-regulation and executive function. The program is known as Rhythm and Movement for Self-Regulation (RAMSR). The study involved 213 children across eight preschools in disadvantaged communities. The intervention group received 16 to 20 sessions of a rhythm and movement program over eight weeks, while the control group undertook the usual preschool program. Primary outcome measures were executive function and self-regulation with secondary outcomes being school readiness and visual motor integration. Children across the study had baseline measures demonstrating substantial self-regulation and executive function challenges when compared to norms on these measures. Post intervention, significant intervention effects were found for self-regulation and importantly, fidelity and teacher report measures show that it is feasible for educators without any music background to deliver the program. These findings are important given that children from low socioeconomic backgrounds are both more likely to need support for self-regulation to support school transition and have inequitable access to quality music and movement programs. This study confirms that universal access to this beneficial approach can be created through building capacity in early childhood educators. This trial was registered pre-recruitment with the Australian New Zealand Clinical Trials Registry, ACTRN12619001342101.

This retrospective study investigated transitions in patterns of caregiver involvement before and during COVID-19 and their antecedents and consequences. A total of 504 young children (age: $M \pm SD = 49.92 \pm 4.30$ months) and their primary caregivers were recruited from the junior classes of 10 preschools in Zhengzhou City, Henan Province, China. Latent profile analysis identified three profiles characterized by (1) high levels of caregiver involvement (HCI), (2) average levels of caregiver involvement (ACI), and (3) low levels of caregiver involvement (LCI). Latent transition analysis showed that caregivers who belonged to the HCI or LCI latent status before COVID-19 tended to transition to the ACI latent status during COVID-19. Higher levels of caregiver depression contributed to a higher probability of transitioning from the HCI to the ACI latent status, while higher levels of household chaos predicted a higher probability of transitioning from the HCI to the ACI latent status and a lower probability of transitioning from the LCI to the ACI latent status. Finally, the transitions in patterns of caregiver involvement were associated with young children’s approaches to learning during the pandemic.


This study examines how family socioeconomic status (SES) shapes the early achievement gap among preschool children aged 3 to 6 (N=2,940, 52% boy, 68% Chinese) in an Asian context. Results based on the Singapore Longitudinal Early Development Study highlight several factors in early childhood that can contribute to the diverging achievement by family SES — parents’ value, investment in children, and children’s self-regulation. Higher-SES parents have a higher emotional value and educational expectations of their children, set more boundaries, and are more likely to provide an organized and stimulating home environment and plan for their children’s future. Children’s self-regulation measured by their ability to delay instant gratification at a young age is positively associated with early cognitive development.


Social and emotional learning (SEL) has gradually implemented in Chinese schools and is considered as an effective way to improve students’ performance. This research aimed to study the influence of SEL on students’ bullying behavior, and the role that social and emotional competence (SEC) and peer relationship play in SEL and students’ bullying. The participants were 2049 students in primary and secondary schools in Beijing, China. SEM was used to examine the mediating role of SEC and peer relationship. The study found that SEL can significantly predict students’ bullying behavior. In addition, SEC and peer relationship sequentially mediate the relationship between SEL and students’ bullying behavior.

Adolescents face many academic pressures that require good coping skills, but coping skills can also depend on social resources, such as parental support and fewer negative interactions. The aim of this study was to determine if parental support and parental negative interactions concurrently and longitudinally relate to adolescents’ ways of academic coping, above and beyond the impact of three types of academic stress, students' achievement at school (i.e., grades in school), and age. Survey data were collected from 839 Australian students in grades 5 to 10 (Mage = 12.2, SD = 1.72; 50% girls). Students completed measures of support and negative interactions with parents; academic stress from workload, external pressure (teachers/parents) to achieve, and intrapsychic pressure for high achievement; and ways of academic coping that were grouped into two positive and two negative types. Hypothesized associations were tested concurrently and from one year to the next using path modeling. Beyond the numerous significant influences of academic stress and achievement on coping, and control for age and COVID-19 timing, adolescents with more parental support reported more use of engagement coping (e.g., strategizing) and comfort-seeking, whereas those who reported more negative interactions with parents reported more use of disengagement coping (e.g., concealment) and escape. In the longitudinal model, parental support predicted an increase in engagement and comfort-seeking and a decrease in disengagement coping, whereas negative interaction with parents predicted an increase in disengagement coping. Overall, the findings support the view that coping with academic stressors will continue to depend on parent-adolescent relationships even into the teen years.


Chicana/Latina Feminist frameworks that center the lived experiences of Chicanas/Latinas/Mexicanas have helped to reshape profoundly the ways we think about the role and centrality of culture and identity in methods and methodology. However, this rich Chicana/Latina feminist cultural methodological and analytical framework has not been leveraged in conjunction with disciplinary learning, particularly in teacher education and teacher learning. This article is concerned with understanding how a rich cultural practice, feminista pláticas, can serve both as a cultural context for learning, as well as a tool for organizing human activity in which cultural ways of learning are centered. In this paper, through an empirically-informed vignette we show how feminista pláticas help organize participation in ways that make cultural knowledge a resource for future action towards equitable and justice-oriented math teaching and learning.

Cyberbullying has generated interest for researchers in the field of psychology and education in recent years. While most studies have focused on samples of adolescents, the university environment also deserves special attention due to its serious consequences on students. It is therefore very important to prevent cyberbullying in the context of university. The objectives of this study were to identify different profiles regarding cyberbullying and cybervictimization behaviors and examine the relationship between cyberbullying, social anxiety, and aggressiveness. A total of 1,368 university students participated in the study by completing the European Bullying Intervention Project Questionnaire (EBIPQ), the Social Anxiety Questionnaire for Adults (CASO-A30), and the Aggression Questionnaire (AQ). The latent profile analysis identified three cyberbullying profiles: a first group with low scores in cyberaggression and cybervictimization (not involved; 87.6%), a second group with moderately high scores in cyberaggression and cybervictimization (victimized cyberbullies; 10%), and a third group with high scores in cybervictimization and very high scores in cyberaggression (cyberbullies; 2.4%). The profile of “victimized cyberbullies” students presents higher scores in physical, verbal, anger, and hostility than the group of “not involved” students, while no differences in social anxiety were found between the groups analysed. Cyberbullying preventive programs should focus on the management of aggressive behaviors for those who have moderate scores in cybervictimization and cyberbullying behaviors, and social anxiety may not be differentiated between cyberbullying groups at this academic stage.

This study seeks to critically examine perceptions of urban school climate from a predominantly white teacher workforce and discuss the role that white identity, as the Dominant culture, plays in maintaining the status quo of racialized school climate. Participants included 145 teachers from a large southwestern urban setting. Teachers' perceptions were measured by the Teacher Perceptions of Urban School Climate survey that includes six dimensions that are important aspects of urban school climate: (1) Leadership, Relationality, and Care, (2) Perceptions of Security and Safety, (3) Student Belonging, (4) Constructivist Teacher Practice, (5) Diversity, Equity, and Inclusion, and (6) Educator Retention. Results indicate that elementary school teachers had more positive perceptions of urban school climate and beginning teachers were less positive about aspects of urban school climate. Implications stemming from the results are discussed including the role whiteness and racism play in teacher perceptions of urban school climate and teacher education.

Few studies holistically examine how students experience the multiple dimensions of school climate and resilience promoting characteristics, or how these two constructs may be interrelated. This study utilised a sample of 78,550 7th, 9th, and 11th grade students in California. Roughly half of the participants were female (52%), and roughly half (49%) were Latino. Latent Class Analysis was used to identify a 6-profile model for school climate and a 2-profile model for resilience promoting characteristics. Students experiencing
overall positive climate, those experiencing supportive adult relationships, and those who engage meaningfully in their work at schools were more likely to report higher resilience promoting characteristics. These findings highlight the importance of fostering positive and protective school climate. In addition, findings support a social-ecological theory of resilience, indicating that schools are contexts that may play an important role in developing resilience promoting characteristics for secondary students.


The current study aims to examine the mediational effects of explicit weight stigma and moral disengagement (MD) and moderating effects of empathy on the relationship between implicit weight stigma and bullying perpetration. Two hundred and twenty-eight college students (112 men, mean age of 19.89 ± 1.82 years) completed implicit (the Single Category Implicit Association Test) and explicit (the development of the weight stigma scale) measures of weight stigma, and responded to questionnaires regarding MD, empathy, and bullying perpetration. Structural equation modeling was conducted and mediating effects were tested using AMOS 17.0 software. The results indicated that implicit weight stigma significantly predicted bullying perpetration. After controlling for gender, this association was jointly mediated by explicit weight stigma and MD. Furthermore, empathy moderated the relationship between implicit weight stigma and bullying perpetration. Specifically, college students who have high levels of implicit weight stigma and low levels of empathy would score higher on the bully questionnaire. These findings may provide a possible explanation for when and how implicit weight stigma relates to bullying perpetration.


This study aimed to better understand the construct of classroom chaos in relation to child care program quality and examine its association with child externalizing problems and social competence. Towards this end, two studies were conducted at child care programs in Turkey. Study 1 was qualitative and relied on eight focus group interviews with 24 Turkish teachers to gain a deeper understanding of what is meant by quality and chaos. Study 2 included 49 teachers and 251 preschoolers as participants to investigate the concurrent relations of classroom chaos and quality with children’s socioemotional functioning. Results of multilevel linear modeling analyses revealed that teachers’ increased perception of classroom chaos was associated with higher levels of externalizing problems and lower levels of social competence in children, even after controlling for program quality, child age, gender, and temperamental effortful control. Teacher-rated classroom chaos was also associated with mother-reported externalizing problems. On average, program quality was rated as minimal and showed no significant relations with externalizing problems and social competence. The implications of these findings were discussed with respect to the intervention targets in early child care and education programs.
Previous studies have shown that peer victimization causes a great variety of severe adverse effects on children’s development, and it is necessary to explore the influential factors and mechanisms of peer victimization. This study examined the associations between teacher–student relationships and peer victimization, as well as the roles of peer status and gender in China. The participants were 734 primary school students from Grades 5–6. Structural equation models were conducted to test the roles of peer status in the associations between teacher–student relationships and peer victimization, as well as the gender differences in the above associations. The findings showed that teacher–student closeness negatively predicted peer victimization, and teacher–student conflict positively predicted peer victimization. It was also found that teacher–student conflict but not closeness could negatively predict peer status, which was in turn negatively associated with peer victimization. The above associations did not vary across genders. The findings indicated that both teacher–student closeness and conflict were directly associated with children’s peer victimization, and teacher–student conflict was indirectly associated with peer victimization via peer status. This implies that interventions for decreasing children’s peer victimization should not only focus on improving teacher–student relationships but also target peer status.

One of the most fundamental problems many students face in school is bullying. This form of harassment, known as cyberbullying, has emerged as the use of the internet and other digital media has increased in recent years. The purpose of this study is to determine the extent of secondary school students’ cyberbullying and cyber victimization experiences, to see if there is a correlation between cyberbullying and cyber victimization, and to explore how students’ cyberbullying or cyber victim status influences their cyber victim or cyberbullying behavior. Unlike experimental studies, which use manipulation and random assignment of participants and conditions, the study employed a causal-comparative research design, in which the researcher investigates the causes and consequences of differences between groups. The sample group of the study consists of 286 secondary school students in the fifth, sixth, and seventh grades who were recruited using the typical case sampling method, which is one of the purposive sampling methods. The data were collected via the scales of cyberbullying and cyber victimization. According to the findings, cyberbullying is significantly and positively influenced by cyber victimization. Instead of looking at cyberbullying in isolation, it was suggested that a more effective approach to solving the problem would be to integrate cyberbullying and cyber victimization holistically.
examined how school outcomes might be associated with bullying victimization among heterosexual and sexual minority African American youth and the factors that may attenuate that relationship. To address this gap, this study surveyed 462 heterosexual and 102 sexual minority African American youth residing in Chicago’s Southside neighborhoods, who participated in the Resiliency Project. Study variables included bullying victimization, school outcomes (i.e., school connectedness, and academic grades), and future orientation. Bullying victimization was associated with a significant increase in feeling disconnected from school among both heterosexual and sexual minority adolescents; however, there was no significant association observed between bullying victimization and receiving low grades among either group. Future orientation did not moderate the association between bullying victimization and school outcomes among heterosexual adolescents; however, positive future orientation did attenuate the association between bullying victimization and feeling disconnected from school among sexual minority adolescents. Prevention programs that focus on promoting school connectedness need to consider the role of future orientation for sexual minority youth.


Many Black women, especially those at historically White institutions (HWI), experience racial microaggressions on a regular basis. Although thought to have minimal impact in isolation, microaggressions can have severe consequences when experienced consistently over time. Among these consequences are anxiety, depression, and suicidal ideation. Students also struggle with Racial Battle Fatigue, alcohol abuse, and negative self-esteem. Using Critical Race Theory (CRT) and counterstorytelling, this paper shares the experiences of Black women with racial microaggressions at an HWI. Data from this study suggest that while students respond in various ways, the most common response is to remain silent. Implications are discussed and recommendations are provided.


The present study sought to understand how colorblind racism (CBR) and white fragility (WF) influence the presence and perpetration of racist bullying in a middle school setting. Five focus groups and one interview (n = 20) were conducted with school administrators, teachers, and racially and ethnically diverse students to elicit their experiences and perspectives concerning racist bullying. Focus groups were analyzed using template analysis. Racist bullying was a common experience among racial and ethnic minoritized students. CBR and WF were evident as white students and teachers claimed students had similar experiences regardless of race, they minimized the impact of racist bullying, and silenced discussions of race and racism. CBR and WF were critical drivers of the maintenance of racist bullying in this middle school, and thus important to address in efforts to prevent racist bullying.


L’éloignement de l’élève harceleur peut-il suffire à enrayer un phénomène aussi complexe que celui du harcèlement ? La volonté d’éradiquer la violence par l’exclusion n’est-elle pas illusoire ?


This paper provides evidence on how having violence-exposed peers who migrated to nonviolent areas affects students’ educational trajectories in receiving schools. To recover our estimates, we exploit the variation in local violence across different municipalities in the context of Mexico’s war on drugs and linked administrative records on students’ educational trajectories. We find that peer exposure to violence in elementary school imposes persistent negative effects on students in nonviolent areas. Having elementary school violence-exposed peers has detrimental effects on students’ academic performance in a high school admission exam and grade progression. For every ten students previously exposed to local violence who migrated to Mexico City’s metro area, approximately five incumbent students in safe municipalities are placed in lower-ranked and less-preferred schools.


Based on a field survey that took place between September and May 2018, the authors intend to provide a reflection on the scientific knowledge produced on the concepts of punishment in schools. Described both as the « dirty work » and the necessary element in the functioning of secondary schools, the study shows that the way in which students’ behavior is regulated stems from the social context in which the rule is constructed and then applied by educators. While it is possible to think that instruction and punishment would be the two necessary sides of the same coin, the disciplinary system, although established in a school, is based on an interpretation on the ground, an educator-educated relationship and, more generally, a social interaction that exceeds or denies certain prescriptions. Discipline-related practices are also the result of social constructions derived from a history and sociocultural context that must be taken into account. Through a comparative approach on the scale of the Caribbean, this original study makes it possible to assess the gaps that may exist between the regulatory requirements concerning the discipline and their application in schools by professionals.


Social and emotional learning (SEL) has gradually implemented in Chinese schools and is considered as an effective way to improve students’ performance. This research aimed to study the influence of SEL on students’ bullying behavior, and the role that social and emotional competence (SEC) and peer relationship play in SEL and students’ bullying. The participants were 2049 students in primary and secondary schools in Beijing, China.
SEM was used to examine the mediating role of SEC and peer relationship. The study found that SEL can significantly predict students' bullying behavior. In addition, SEC and peer relationship sequentially mediate the relationship between SEL and students' bullying behavior.


The present study investigated how students’ attitudes toward bullying were influenced simultaneously by personal and contextual factors in Mainland China, Hong Kong, and Taipei. Participants included 25,338 students (15-year-olds, from grade 7 to 12) and 663 schools from Mainland China, Hong Kong, and Taipei drawn from the Program for International Student Assessment 2018. Multilevel structural equation modeling with Bayesian estimation was conducted for data analysis. The results showed that, for personal factors, girls had stronger anti-bullying attitudes than boys in each sample. Resilience and self-efficacy predicted students’ anti-bullying attitudes positively and significantly in all three regions. For family contextual factors, parents’ emotional support had positive effects on students’ attitudes toward bullying in three regions. For school contextual factors, there was no consistent result among the three regions. School location and school belonging were positive predictors of students’ anti-bullying attitudes in Mainland China. By contrast, class size and student behavior hindering learning negatively correlated with students’ anti-bullying attitudes in Hong Kong. In Taipei, students in public schools were more likely to form anti-bullying attitudes, and a positive association was found between the student–teacher ratio and students’ attitudes toward bullying. Distinguishing the commonalities and differences in the factors influencing students’ attitudes toward bullying in Mainland China, Hong Kong, and Taipei provides empirical evidence to understand school bullying prevention and control mechanism.


The system of music education is directly attributed to arrangements that improve theoretical and working knowledge. Purpose of the article: the features of interactive methods that improve music literacy skills among students majoring in preschool education at teacher training universities, based on the Kodály method. Achievement of the set goal was possible as a result of involvement of 100 students and 55 preschoolers. Using the method of observation, the authors developed the following principles to improve the musical literacy of students: setting the voice with Erol Singer’s Studio; vocal performance of songs using active movements; learning from national vocal art, as well as academic foreign compositions; application of the soliloquy principle using the Sing Sharp app. In this study, using the calculation of the coefficient of effectiveness, the level of knowledge of students after the training was established. It was found that voice production without the involvement of a musical instrument and vocal performance of songs using active movements were developed to a greater extent (at a high level), because interactive technology was involved, promoting the assimilation of knowledge.
(Erol Singer’s Studio). Calculation of the knowledge efficiency of preschool children who were trained according to the developed principles showed that the greatest number of preschool children received a high level of knowledge, which is associated with their interest in learning. The paper’s practical implications are attributed to the possibility of applying the developed education principles for musical literacy improvement based on interactive teaching methods and the Kodály method. Further studies might measure the effectiveness of the developed teaching principles for a broader age group of students, which will help to track the positive (negative) effects of the curriculum on musical literacy skills.


Àprès la présentation d’une définition de la notion de « dispositif », l’article examine en quoi cette dernière s’avère utile pour la formation des enseignants et expose une variété de dispositifs d’enseignement de la lecture. Pour ce faire, des descriptions d’observations ethnographiques menées dans plusieurs classes d’une école primaire montréalaises sont proposées en mettant en relief les intentions didactiques, les aspects de la lecture visés par les tâches confiées, l’étayage offert aux élèves, les regroupements d’élèves en jeu dans les différents dispositifs, ainsi que le matériel impliqué.


Well-designed computer or app-based instruction has a number of potential benefits (eg increasing accessibility and feasibility of high-quality instruction, reducing time and resources required for training expert delivery, saving instructional time). However, variation in implementation can still affect outcomes when using educational technology. Research generally suggests that without follow-up support after training, implementation of educational interventions is often poor and outcomes reduced. However, the extent to which this is the case when the core element of an intervention is computer or app-delivered is not yet clear. This study investigated the effects of providing ongoing implementation support for Headsprout Early Reading (HER, an early reading programme accessible via a computer or an app), to determine whether such support leads to better outcomes. Twenty-two primary schools (269 learners) participated in a cluster-randomised controlled trial. Eleven schools received initial training followed by ongoing support across the school year, whereas the other 11 schools received initial training and technical support only. Pre- and post-measures of reading skills were conducted using the York Assessment of Reading for Comprehension. We found no effect of implementation support on outcomes, and no effect of implementation support on delivery of the core element of HER. However, there were some effects of implementation support on the implementation of other HER elements relating to the responsiveness of educators to learners’ learning within HER. These findings have implications for providing access to high quality online instruction in early reading skills at scale, with minimal training. More broadly, the current study suggests that well-designed computer or app-based instruction can yield positive outcomes with minimal implementation support and training. However, further research is required to ensure the interplay between learners’ app-based learning and teacher intervention functions as
intended to provide additional support for those who need it. Practitioner notes What is already known about this topic Well-designed computer or app-based instruction has a number of potential benefits (eg increasing accessibility and feasibility of high-quality instruction, reducing time and resources required for training expert delivery, saving instructional time). Implementation can still affect outcomes when using educational technology, and without follow-up support after training, implementation of educational interventions is often poor and outcomes reduced. The extent to which this is the case when the core element of an intervention is computer or app-delivered is not yet clear. What this paper adds We found that providing implementation support for teachers and teaching assistants delivering Headsprout Early Reading (HER; an early reading programme accessible via a computer or an app) did not affect the reading outcomes of learners. We also found the implementation support did not affect delivery of the core, app-delivered element of the programme. However, there were notable differences in implementation of other aspects of the programme, particularly in relation to the role of the teacher or educational practitioner in managing the interplay between the app-based learning and teacher intervention for learners who require further support. Implications for practice and policy These findings have implications for providing access to high quality instruction in early reading skills at scale, with minimal training. More broadly, the current study suggests that well-designed computer or app-based instruction can yield positive outcomes with minimal implementation support and training. However, the findings of this study identify some potential risk of an over-reliance on technology to facilitate the learning of all learners accessing the programme. Further research is required to ensure the interplay between learners’ app-based learning and teacher intervention functions as intended to provide additional support for those who need it.


L’oral est omniprésent dans le quotidien de la classe et dans les pratiques, mais la question de son enseignement explicite reste posée. Aussi reste-t-il important de cerner et d’analyser les empêchements à l’enracinement de cet enseignement afin de dégager des modalités de son opérationnalisation effective qui suppose des séquences spécifiques dont les contenus de savoir sont clairement identifiables. L’étude concerne la mise en œuvre d’un dispositif didactique conçu à partir de la modélisation didactique du genre scolaire disciplinaire, pour enseigner explicitement l’oral dans des classes de cycle 3 de l’école primaire. Ce dispositif propose une série de moyens qui fonctionnent dans des registres sémiotiques différents permettant de mettre en scène le genre scolaire disciplinaire dans l’objectif de rendre visible l’enseignement de l’oral aux élèves et de leur permettre de conscientiser leurs apprentissages.


Most early care and education (ECE) programs serve 3-5 year olds, but enrolling children at younger ages has the potential to multiply the benefits of ECE enrollment. This study examined characteristics of children and family who enrolled as toddlers (18-35 months; n=450) versus preschoolers (36-48 months; n=2,356), then tested the impact of toddler enrollment in high-quality ECE on fall and spring preschool outcomes for English-only and
Spanish dual language learners (DLLs). Groups were balanced using propensity score weights. Toddler enrollment was related differentially to parent education, special needs status, food insecurity, and single-parent household status for DLLs and English-dominant peers. Toddler entry was related to better English language skills (fall E.S.=0.13-0.47; spring E.S.=0.10-0.43) and lower teacher-rated self-control skills (fall E.S.=0.12-0.15; spring E.S.=0.12-0.19) than same language peers. English-only children who entered as toddlers were rated as more independent at preschool entry (E.S.=0.15). Differences were not observed in Spanish-language skills, child-teacher attachment, or behavior problems in preschool.


Depuis quelques années, les enseignantes et les enseignants de la technique en éducation spécialisée (TES) du Cégep de Jonquière constatent que le premier stage représente un lot de défis pour leurs stagiaires. Ce constat est à l’origine de la conception d’un module d’activités par le département TES et le centre ÉCOBES-Recherche et transfert pour favoriser la réussite et la persévérance scolaires de leurs étudiantes et de leurs étudiants dans le cadre de ce stage. Cet article présente le processus collaboratif mis en place entre les chercheuses et les praticiennes pour concevoir le module et décrit les principales activités conçues.


We use detailed survey data to study the influence of automation technology on workers’ training participation. We find that workers who are exposed to substitution by automation are 15 percentage points less likely to participate in training than those who are not exposed to it. However, workers who leave occupations that are highly exposed to automation increase their training participation, while those who enter them train consistently less. The automation training gap is particularly pronounced for medium-skilled and male workers, and is largely driven by the lack of ICT training and training for soft skills. Moreover, workers in exposed occupations receive less financial and nonfinancial training support from their firms, and the training gap is almost entirely related to a gap in firm-financed training courses.


The aim of the current research is to show how adults’ skill needs can be met and to explain different processes, tools and means that can foster limited training to adult coaching. In limited training to adult coaching, it is preferable to teach adults new practical skills; to obtain new information aimed at reaching the new skills; to have a
training that satisfies the adults' personal and professional desires; to improve a skill or an already acquired professional experience. We also presented some of the ways in which training is encouraged, including self-training, continuing education and distance learning.


This paper studies a large-scale educational expansion to assess whether shocks to educational inputs affect the academic achievement of adult education students. I analyze the effects of a Swedish program that rapidly doubled enrollment in adult education, thus straining school resources. The program targeted low-educated, unemployed adults aged 25 and older. Therefore, my analysis focuses on students under age 25 to reduce the risk that changes in the characteristics of the study sample drive my findings. First, I show that students in regions subject to stronger enrollment expansions experienced stronger negative shocks to educational inputs, including teacher credentials, per-pupil expenditure, and peer quality. Second, I show that the stronger negative shocks to these inputs coincided with larger increases in course dropout. Taken together, the two sets of results suggest a causal link between educational inputs and students’ academic progress in adult education.


L’enseignement à la formation générale des adultes (FGA) se pratique dans un secteur éducatif très ouvert qui propose aux apprenants adultes une diversité de voies pour réaliser leur projet de formation. La FGA comporte toutefois plusieurs particularités – approches d’enseignement, fonctionnement en classe, diversité de services, précarité d’emploi du personnel – qui en influencent la pratique. Cet ouvrage s’appuie sur nombre de travaux de recherche et sur six récits d’enseignantes qui révèlent les défis propres à leur contexte d’enseignement. À partir de ces récits qui traduisent certains enjeux typiques de la FGA, des propositions pour dénouer les difficultés sont formulées. L’ouvrage offre également plusieurs ressources utiles pour la pratique. Préparé pour le personnel enseignant de la FGA de toutes disciplines, cet ouvrage est aussi d’intérêt pour les personnes conseillères pédagogiques, les directions d’établissement, les équipes de recherche et les personnes qui offrent de la formation universitaire. Il se veut utile autant pour l’intervention auprès des adultes que pour la réflexion et l’adoption d’une pratique éthique.


Résumé De nombreuses économies en développement affichent à la fois de fortes inégalités des revenus et un emploi largement informel. Malgré cette conjonction frappante, la relation entre les deux phénomènes est peu étudiée, en particulier pour


Résumé Les auteurs analysent les effets salariaux à court et moyen terme de la surqualification et la sous-qualification, à partir de données appariées employeur-salarié relatives à la période 1998-2012 et d'un nouvel outil de mesure de l'inadéquation, reposant sur les flux de nouvelles recrues. Elles constatent que ces effets diminuent sensiblement après prise en compte de l'hétérogénéité non observée des travailleurs et des entreprises. Les caractéristiques individuelles non observées contribuent largement à l'écart salarial aux dépens des travailleurs surqualifiés et au profit des salariés sous-qualifiés. Les politiques salariales des entreprises l'alimentent aussi. Enfin, c'est sur la rémunération du début de carrière que l'inadéquation influe le plus.


L'Inde connaît une rapide croissance économique, mais peine à créer des emplois en nombre suffisant pour les millions de jeunes actifs qui arrivent chaque année sur le marché du travail.


Si les informaticiennes restent l'exception et que toutes les entreprises ne sont pas prêtes à adopter des mesures en faveur de l'égalité hommes-femmes, les besoins en main-d'œuvre les aident malgré tout à se faire une place.


Résumé Depuis l'adoption par l'Australie, le Royaume-Uni et les États-Unis de leurs premières dispositions sur le salaire minimum, au début du XXe siècle, la question fait débat. Certains rejettent cette intervention étatique, jugée contraire aux principes de l'économie de marché, d'autres la défendent, au nom de l'équité et du bien commun. Les auteurs s'interrogent sur l'influence de ces deux positions idéologiques sur la fixation des salaires dans les trois pays à l'examen. Ils combinent ainsi une lacune de la littérature, qui propose peu d'études comparatives sur la formation, l'évolution et les
caractéristiques actuelles des systèmes visant à instaurer des salaires minima dans ces pays.

https://econpapers.repec.org/paper/zbwesprep/274156.htm
The empirical evidence on how industrial robots affect employment and wages is very mixed. Our meta-study helps to uncover the potentially true effect of industrial robots on labor market outcomes and to identify drivers of the heterogeneous empirical results. By means of a systematic literature research, we collected 53 papers containing 2143 estimations for the impact of robot adoption on wages. We observe only limited evidence for a publication bias in favor of negative results. The genuine overall effect of industrial robots on wages is close to zero and both statistically and economically insignificant. With regard to the drivers of heterogeneity, we find that more positive results are obtained if primary estimations a) include more countries in their sample, b) control for ICT capital, demographic developments, or tenure, c) focus on employees that remain employed in the same sector, d) consider only non-manufacturing industries, e) are specified in long differences, and f) come from a peer-reviewed journal article. More negative effects, in turn, are reported for primary estimations that are i) weighted, ii) aggregated at country level, iii) control for trade exposure, iv) and consider only manufacturing industries. We also find some evidence for skill-biased technological change. The magnitude of that effect is albeit small and less robust than one might expect in view of skill-biased technological change. We find little evidence for data dependence.


Au sein des principaux organismes de recherche, la croissance de l’emploi total de R&D ralentit légèrement, à + 1,0 % en 2022, après + 1,6 % en 2021 et + 1,5 % en 2020.

Résumé Cet article examine la relation entre les syndicats et la hausse des inégalités de revenus observée dans les économies avancées au cours des dernières décennies. Le rôle des syndicats dans la lutte contre l’inégalité croissante des revenus a été négligé
dans les études empiriques, malgré son ambiguïté théorique. Le modèle empirique de référence, estimé pour 26 pays européens de 2005 à 2018, spécifie l'inégalité des revenus en fonction du taux de syndicalisation, de sa valeur au carré et d’un ensemble de variables de contrôle. Les institutions du marché du travail, autres que les syndicats, sont incorporées dans le modèle pour évaluer les effets distributifs de la densité syndicale dans l’ensemble du cadre institutionnel. Les auteurs constatent que la densité syndicale a une relation en forme de U inversé statistiquement significative et persistante avec l’inégalité des revenus.


Sociétés épinglées sur les réseaux sociaux pour greenwashing, entretiens d’embauche qui se muent en interrogatoires, demandes pour adopter des pratiques plus vertueuses en interne… Avec la transition écologique, le dialogue entre les responsables des ressources humaines et une certaine partie de la jeunesse est sous tension.


Résumé L’incidence des grèves au Chili a considérablement augmenté depuis la fin des années 2000. Dans cet article, nous analysons l’activité de grève en nous concentrant sur un aspect clé du modèle chilien de relations de travail: le pluralisme syndical. Sur la base d’une enquête représentative des entreprises du secteur privé, nous estimons des modèles de régression logistique qui indiquent que le pluralisme syndical augmente significativement la probabilité de grèves dans les entreprises. Cependant, notre analyse ne permet pas de conclure que l’effet positif du pluralisme syndical s’explique par la concurrence entre syndicats, comme le suggère une partie de la littérature internationale.


Résumé La négociation collective étant rare dans le secteur du travail domestique, la recherche ne s’est pas encore intéressée à son rôle dans la réglementation et la formalisation de cette activité. L’Italie, qui est l’un des pays d’Europe comptant le plus de travailleurs domestiques, est aussi l’un des rares pays dotés d’une convention collective, négociée depuis 1974 par les syndicats et les associations de ménages employeurs. L’analyse qualitative par entretiens présentée ici décrit les difficultés et limites rencontrées, mais aussi le processus de formalisation permis par la négociation collective et l’engagement des partenaires sociaux dans une profession où les femmes immigrées sont surreprésentées.
The lack of fully trained teachers is a national challenge in Sweden despite numerous attempts by authorities to approach the issue from a long-term perspective. The proportion of fully trained teachers needs to increase by just over 50% by 2035, and the imbalance will continue for many years to come. Many actors such as the media and politicians have participated in the debate, but not those who are significantly forced to handle, control, and lead in resolving the current situation and who have an overview of the problems at a structural level, namely, the school authorities (school authority in the school system according to the Education Act (Skollagen 2010: 800) can be a municipality, county council, state, or individual who is responsible for the activities in the school. In this text, the most responsible head of a municipality in the educational department has responded to the survey). This study covers 55 school authorities’ views on national tendencies and possibilities of solving this problem using an enactment policy theory. The empirical data are based on a web survey and analyzed through thematic content analysis. The result shows deep concerns about the accelerated problem, the challenges of finding fully trained teachers, and negative attitudes toward the profession. Possible solutions are higher salaries, flexible solutions to becoming teachers, higher status, and better working environments. The school authorities’ perceptions of possible solutions are to some extent consistent with ongoing political initiatives. Neither do they emphasize an overall picture of the working conditions for teachers, nor the far-reaching consequences of all political reforms. In summary, their actions are interpreted as quite reactive, nonlinear, and ad hoc solutions and less proactive perceptions and actions. This can possibly be explained by the fact that the state sets limits on economic initiatives.

La pénurie de candidatures aux concours d’enseignants met sous les feux de l’actualité les difficultés du métier. Quelles sont les stratégies qui aident à y faire face et à durer dans le métier ?

This study of a large sample of classroom teaching staff at 23 early childhood schools across the U.S. serving children birth to age 5 used survival analysis to investigate both the timing of staff turnover and the characteristics associated with turnover. The data were collected from over 2,000 teachers, assistant teachers and aides between 2007 and 2019. Survival analysis allowed for investigation of both the timing of staff turnover and the time-varying and time-invariant characteristics associated with turnover. Over time, staff who were more positive about their work environment, had more years of teaching experience, taught in infant-toddler classrooms, or identified as Black were more likely to stay, whereas staff who had more years of education were more likely to leave. The probability of leaving was greatest in the first 2 to 3 years of employment. Some predictors of retention differed between lead teachers and assistants/aides, for example, the risk of
leaving was greater for teachers with depressive symptoms but not for assistants/aides. While the results point to some areas where school leaders can effect practice changes to improve retention, the findings point to multiple areas where systemic and policy changes may be needed to reduce turnover.


As long as there have been teachers, there has been an expectation that they be of good character and model virtue. The author describes developments in the thought about teacher dispositions and identifies specific shortcomings in the effort to define and assess them as part of teacher education program accreditation. Virtue ethics as an alternative conceptual possibility is considered but found wanting. Seeking to identify a moral framework capable of supporting education, including teacher education program development, he suggests focus on the “manners” of democracy that arise from an analysis of democracy as a distinctive way of life, an essential social and civic practice. Five manners are suggested: hospitality, attuned listening, voice, reflectivity, and evidential discernment. Each manner is briefly described and discussed.


Purpose: This study examines the direct and indirect effects of distributed leadership on teacher self-efficacy in multicultural classrooms (TSMC) through school capacity building, specifically teacher team innovativeness and a feedback network. Research Design: Using data from the Teaching and Learning International Survey 2018, this study employs a 2-2-1 multilevel structural equation modeling to account for the nested data structure (teachers nested within schools). Latent variables are constructed, and their validity is tested, followed by an analysis of the relationships among distributed leadership, teacher team innovativeness, a feedback network, and TSMC. Findings: This study finds that distributed leadership has an indirect-only mediation effect on TSMC via a feedback network but not via teacher team innovativeness. The effect of distributed leadership on TSMC is fully mediated by a feedback network. In addition, the study shows that distributed leadership is positively associated with a feedback network and teacher team innovativeness. Conclusions: This study contributes to our understanding of the role of distributed leadership in fostering school capacity building and promoting TSMC. Given the increasing diversity in schools, it is crucial for school leaders to prepare teachers to teach students in multicultural classrooms. The findings suggest that school leaders can enhance teachers’ efficacy in teaching students from diverse backgrounds by facilitating their participation in school improvement processes and establishing a collective feedback network where teachers receive feedback from various sources. These results emphasize the importance of distributed leadership in equipping teachers for culturally responsive teaching in multicultural classrooms.

En dépit de récentes améliorations, la formation continue des enseignants fait face à des problèmes récurrents. Elle apparaît toujours comme une mission de second rang des enseignants : le nombre de journées de formation demeure insuffisant, l'adéquation entre les outils disponibles et les attentes des enseignants n'est pas assurée et le problème du remplacement de l'enseignant absent pour cause de formation subsiste. En outre, les missions des formateurs, dont la formation est inégale en qualité, est peu attractive. Avec un coût estimé à plus de 1,1 Md€ en 2021, la formation continue souffre également de présentations budgétaires peu claires, qui ne permettent pas de s'assurer de la priorité qu'elle mérite. Lire également le référé.


This study highlights the importance of educational leaders’ responsibilities in virtual spaces, as they are perceived by school faculties and provides a validated tool to measure teachers’ perception of a « principal’s leadership presence in social media networks ». 235 Israeli teachers participated in the study – 180 (77%) females and 55 (23%) males, using a questionnaire consisting of 14 items scaled in a 6-point Likert format. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) reveal four modalities of the principal’s on-going leadership presence in social media networks: branding and communicative, transformational, supportive-protective and enforcement presence. The questionnaire may provide principals and educational policy designers with a plan to regulate the socio-professional relationship among a school’s stakeholders.


Flipped classroom (FC) has recently attracted researchers’ interest in teacher education thanks to its potential for promoting pre-service teachers’ (PTs) professional development. However, some of major issues are the lack of interactivity, disengagement, and amotivation of PTs for pre-class activities due to poor online instruction design. This explanatory sequential mixed study explores the effects of the microlearning-supported FC on PTs’ learning performance for professional development, motivation, and engagement. A total of 128 PTs participated in this study from a university in Turkey. In the quantitative phase, a quasi-experimental pretest-posttest design was conducted and the treatment lasted for 14 weeks. The PTs were divided into two experimental groups and one control groups using random sampling technique. In first experimental group (m-FC, n = 43), the participants learned with microlearning-supported (by using a-bit sized learning chunks outside the classroom) FC model. In the second experimental group (t-FC, n = 39), the participants learned with traditional FC model. A control group (non-FC, n = 46) was not taught using FC model and teacher-centered approach was adopted in this group. The findings indicated that FC model (in both experimental groups) increased learning performance, intrinsic motivation, emotional, and behavioral engagement compared to a group that was not used to FC. Moreover, m-FC group had better intrinsic motivation and engagement than both t-FC groups.
and non-FC groups. Semi-structured interviews showed that two major themes emerged regarding benefits and challenges of microlearning-supported FC. Most of PTs had positive perceptions that it enhances the willingness to participate in pre-class activities. The implications for teacher education, recommendations and directions for further studies were also discussed.


Teacher stress, burnout, and attrition are well-documented problems that have been amplified as a result of the COVID-19 pandemic. Recent efforts to study and improve teacher well-being in response to such high levels of burnout are promising. However, the field continues to lack a unified definition of teacher well-being and consistent use of tools with which to measure teacher well-being. These inconsistencies may limit the ability to compare interventions and improve teacher well-being over time. Clarifying how teacher well-being is defined and operationalized can enable others to understand what a particular intervention or study does or does not improve. This systematic review explored 97 studies of teacher well-being and documented tools used to measure the construct. The studies reviewed relied on a wide variety of instruments, ranging from mental health tools to subjective well-being and teacher efficacy measures, with few using specific Teacher Well-Being Scales. Findings suggest the need for more uniform approaches to measurement and the need for a clearly articulated definition of teacher well-being that is distinct from stress or burnout. Researchers recommend the use of a multifactor scale that includes elements of teacher efficacy, school support, workload and time pressure, and job satisfaction.


Les directions d’établissements scolaires (DÉ) exercent un rôle névralgique en assumant diverses responsabilités au regard de la réussite éducative. Pour une direction novice, l’exercice de la fonction comporte de nombreux défis et nécessite un soutien bienveillant. C’est pourquoi il importe que les centres de services scolaires, en complément à la formation universitaire obligatoire, puissent leur offrir des dispositifs d’insertion professionnelle leur permettant de se développer et de construire leur nouvelle identité professionnelle. Notre article présente la création d’un programme d’insertion professionnelle dans un centre de services scolaire, les retombées observées et les conditions gagnantes pour en assurer la pérennité.


Although teacher’s personality is an essential component of successful classroom learning, most teacher education programs accept students solely on the basis of scholastic ability scores such as school grades, national test scores (SAT, GRE) or undergraduate college transcripts. To ensure suitability to teaching, a personality-evaluation system was developed in Israel for teacher education candidates. This evaluation system includes non-cognitive measures, such as group dynamic exercises,
simulations, a teaching exercise, situational judgement tests, personality tests and an inter-personal interview, all performed face-to-face (FTF) at a testing center. The outbreak of COVID-19 in 2020 brought about lockdowns and social distancing, precluding the administration of this FTF evaluation system. Therefore, the development team adapted the system to online remote testing, using Zoom technology. The present study examined the effect of this transition to remote evaluation on the quality of selection for teaching, looking at suitability-to-teaching scores and the subjective views of applicants and evaluators. A comparison of the 2020 remote scores with the 2019 FTF scores revealed that scores on remote evaluation were slightly lower than FTF scores, and were more centralized. While the candidates found that remote evaluation provided fewer opportunities to express themselves, both candidates and evaluators were satisfied with the administration and convenience of the evaluation day. The Discussion chapter summarizes the unique affordances and constraints of remote evaluations and presents suggestions for changes which might be made when moving an assessment online that could take advantage of this new environment.


This study critically examined the impact of a crisis context (COVID-19 pandemic) on K-12 teachers by placing emphasis on the mentor-mentee dyad through the perspective of the mentee in a large United States public school system. A phenomenological case study was undertaken that used semi-structured interviews to examine 14 early career teachers (mentees) participating in a formal mentoring program during the 2020-2021 school year. The study focused on mentor-mentee relationships by accounting for the single most traumatic and transformative event of the modern era of K-12 public education. The analysis yielded three findings highlighting the impact of COVID-19 on the mentor-mentee dyadic experiences of first- and second-year teachers engaged in a mentoring relationship. The findings indicate that (a) e-mentoring allowed for avoidant behaviors from mentors (b) successful mentoring involves the development of personal relationships between a mentor and mentee, and (c) peer and reverse mentoring became commonplace during the COVID-19 pandemic. Public school systems can use these findings to help develop positive mentor and mentee relationships that go beyond the traditional dyadic roles and help reduce stress in a crisis context, while developing a culture where superiority bias is improved. Research implications offer mentoring literature a view to pay more attention to temporal influences during environments of high stress, which may provide more explanatory power on mentorship roles, cultural influences, and social interactions in the course of mentor-mentee practices.


Mixed research is a methodology of growing importance both within and without education. This type of research forces researchers to reconcile conflicting ways of justifying and understanding research with results that have the potential to be forward pointing for all researchers. As mixed research has grown, mixed research has gained an increasingly solidified identity which is increasingly associated with the pragmatic paradigm. This paper seeks to describe and criticise pragmatism as a paradigm for mixed
research. We identify six features of pragmatism which we argue render it unfit for purpose.1. That it is a “paradigm of convenience”.2. That it takes a consequentialist view of good research.3. That it takes a consequentialist view of truth.4. That it assumes the answers to epistemic questions is “somewhere in the middle”.5. That it prioritizes the research question, rather than ontology or epistemology.6. That it treats itself as a prerequisite for mixed research. We argue that in prioritising flexibility and practicality over principles, pragmatism loses the ability to offer guidance to researchers. Furthermore, many of the issues with pragmatism arise from a conflation of paradigm and method. I.e., by thinking that there are quantitative and qualitative paradigms. We conclude that traditional paradigms are better served to act as a paradigm for mixed research.


This study investigated the relationship among teachers’ occupational interests, job satisfaction and performance in government secondary schools in North-Central Nigeria. The study adopted descriptive survey design using teachers in government secondary schools in the North-Central Geopolitical zone of Nigeria. A sample size of 384 teachers comprising 153 males and 231 females participated in the study through stratified random sampling procedure. Three instruments were used for the study – Vocational Interests Inventory (VII), Job Satisfaction Inventory for Teachers (JOSIT) and Teachers Job Performance Inventory (TEJOPI). The reliability of the instruments was determined through test re-test method using Pearson Product Moment Correlation Coefficient which yielded reliability indices of 0.92, 0.84 and 0.81 for VII, JOSIT and TEJOPI respectively. One research question and three hypotheses guided the conduct of the study. Data generated was analyzed using mean scores and standard deviation for the research question. Analysis of variance (ANOVA) was used for hypotheses one and two while Pearson Product Moment Correlation Coefficient was used to test hypothesis three. The findings revealed that teachers in government secondary schools in North-Central Nigeria were dissatisfied with their jobs as reflected in the sectional mean of 2.712. The findings further revealed that a significant relationship existed between occupational interests and job satisfaction but not with job performance. The findings further indicated that there was no significant relationship between jobs satisfaction and Job performance. The researcher recommended among other measures, that government as the major employer of labour should ensure periodic improvements in the working conditions of teachers to enhance their job satisfaction and boost productivity.


Cette thèse, ancrée dans une approche sociocognitive, s’intéresse aux apprentissages professionnels des conseillers principaux d’éducation novices (CPES) en matière de régulation de l’équipe de vie scolaire, dans le cadre d’une formation en alternance établissement scolaire/INSPE (Institut Supérieur du Professorat et de l’éducation. Elle est adossée à une démarche de recherche-intervention (RI), contractualisée avec un rectorat, et qui s’est déroulée dans le cadre de la formation des CPE tuteurs (CPET). L’objectif de la thèse est de décrire et comprendre le processus de construction des


Cette recherche s’intéresse à la formation des adultes suivant une remise à niveau des « compétences clés » dans le cadre de dispositifs régionaux des Hauts-de-France. Elle vise à comprendre et à analyser la double précarité des formateurs et des stagiaires ainsi que son impact sur la relation pédagogique créée. Ayant personnellement fait le constat d’une précarité relative aux deux types d’acteurs dans le cadre professionnel, nous nous sommes posé une double question dans une visée compréhensive : Comment se traduit la précarité chez les formateurs et les stagiaires ? Dans quelle mesure la double précarité du formateur et des stagiaires impacte-t-elle leur relation pédagogique et la construction de leur identité professionnelle respective ? Notre méthode de recherche qualitative et abductive s’appuie sur la réalisation d’entretiens semi-directifs, d’observations directes ainsi que d’un atelier d’écriture et d’échange sur l’activité au sein de cinq centres de formation. Les données recueillies ont fait l’objet d’une analyse thématique de contenu. Les résultats obtenus ont permis de caractériser la précarité des formateurs et des stagiaires ainsi que la nature de la relation d’accompagnement créée entre eux qui oscille entre asymétrie et symétrie et tend vers une réciprocité. Cette relation instaurée participe à la (re)construction identitaire des deux acteurs. Les formateurs ont une image globalement positive de leur activité, malgré une identité professionnelle qui reste assez floue, assortie d’un manque de reconnaissance socioprofessionnelle. Concernant les stagiaires, la plupart ont une image d’eux-mêmes assez négative lors de leur entrée en formation. Toutefois, celle-ci apparaît bénéfique pour eux, car elle leur permet de se projeter davantage, de s’identifier les uns par rapport aux autres, et surtout de gagner en autonomie, en assurance. Enfin, de la rencontre entre
ces deux acteurs aux profils précaires se profile une relation d’accompagnement constructive à différents niveaux.


Empirical studies have demonstrated the importance of emotion regulation for teachers' professional development. We adopted a person-centered approach to explore primary school teachers' emotion regulation and its impact on occupational well-being, job burnout, and resilience. To understand the potential types of emotion regulation, we conducted a survey in different primary schools. Both antecedent- and response-focused emotion regulation are important strategies; previous studies revealed that the former is superior to the latter. However, there is a lack of person-centered research on the pros and cons of such emotion regulation. 366 primary school teachers (333 female teachers; Mage = 37.30, SDage = 9.46) participated in this survey. The emotion regulation patterns were clarified based on latent profile analysis (LPA). The results revealed associations among these patterns and job burnout, occupational well-being and resilience. LPA revealed the following: (1) three typical emotion regulation types: the low antecedent- and low response-focused emotion regulation group (12%), the high antecedent- and low response-focused emotion regulation group (63%), and the low antecedent- and high response-focused emotion regulation group (25%). (2) The teachers in the high antecedent- and low response-focused emotion regulation group had the lowest level of job burnout and the highest level of occupational well-being. Those in the low antecedent- and low response-focused emotion regulation group had the strongest psychological resilience.


Teachers receive increasing attention as change agents within education reform policy discourses positioning their professionalism, identity, and agency as critical to implementation of reforms. However, identities either claimed by teachers or assigned by reform policies involve serious (re)negotiations on the part of teachers as they make practicality judgements in contexts changed by reforms. Using a temporal perspective of language teacher agency and dialogic conceptions of teacher identity, we explore a group of English teachers’ (re)negotiation of claimed and assigned identities in attempts to transform traditional educational culture through implementation of the New English Syllabus of the People’s Republic of China (PRC). The agency of teachers was clear in unfolding dialogic negotiation of tensions between a reform-driven identity of the effective English teacher, identities assigned by other interested groups and the community, teachers’ individual claimed identities, and the possibilities of projected imagined identities. We conclude that when curriculum reform policies disrupt cultural and structural settings of the work of English teachers, temporal dimensions of dialogic (re)negotiation of professional identities play a pivotal role in reform enactment, and that policy makers must acknowledge and respond to these processes of (re)negotiation of teachers’ professional identities.

En Communauté française, la rentrée académique de septembre 2023 voit la mise en œuvre d’une importante réforme dans l’enseignement supérieur. Celle-ci marque un tournant dans l’histoire de la formation initiale des enseignants en Belgique francophone. Notamment, les études préparant à exercer au niveau maternel, au niveau primaire ou au niveau secondaire inférieur connaissent trois changements majeurs : elles passent de trois à quatre ans, elles donnent lieu à un diplôme de master et non plus de bachelier, et elles se déroulent désormais en collaboration entre les hautes écoles et les universités. Ce Courrier hebdomadaire met cette réforme en perspective, en la replaçant dans le temps long. Retraçant plus de deux siècles d’histoire, il montre comment, au fil du temps et en réponse aux mutations successives du système éducatif, la volonté politique a évolué dans le sens d’une préparation croissante au métier d’enseignant. L’actuelle réforme fait l’objet d’une attention particulière, portant non seulement sur son contenu et sur ses implications, mais également sur les tensions, ruptures et continuités qui ont émaillé le processus décisionnel qui lui a donné naissance. Ainsi, les auteurs analysent la façon dont le décret initial, adopté en 2019, a été révisé en 2021. Ils relèvent que certaines questions importantes restent actuellement sans réponse, et soulignent les opportunités en termes de renforcement du rôle de la recherche dans le cadre de la formation initiale des enseignants.


This article contributes to a growing conversation of teachers’ advocacy for marginalized students. We follow a cohort of teachers’ advocacy from their English as a second language certification courses into their work in one linguistically diverse school district. Dialogic discourse analyses of 3 years of discussions show the types of advocacy in which the teachers engaged, and identify five foundational discourse moves teachers employed to develop ideas and manage the relational complexity of advocacy. Findings provide evidence of the important role of intertextuality: voices across time and texts facilitated the teachers’ advocacy efforts. We offer a revised definition of language teacher advocacy to emphasize its discursive nature, arguing that an examination of the dialogic processes of advocacy work can help better delineate how it develops iteratively, contextually, and not always successfully. We implicate teacher education as an important catalyst for the preparation of teachers’ advocacy for under-served and historically marginalized English-learning students.


The burnout syndrome is a public health problem and is considered a subjective experience, which depends on the interpretation and evaluation individuals make of their work. In the educational context, the causes and consequences of burnout in
teachers are multiple. The aim of this study is to explore the profiles of teachers with burnout and teachers without burnout in terms of (i) cognitive appraisal, (ii) perceived organizational justice, (iii) perception of administrative tasks, (iv) perception of students' misbehavior, and (v) perceived impact of parents' role on teachers' well-being. A total of 1878 Portuguese teachers from primary to secondary education, 81% women and 19% men, aged between 23 and 66 years (M = 48; SD = 7.67) participated in this study. The results indicate statistically significant differences between teachers with and without burnout, although the two groups show an identical response pattern (i.e., parallel). The results also suggest that administrative tasks, distributive justice of rewards, students' misbehavior, and parents, negatively impact the teachers' well-being, regardless of whether they are burned out or not. The threat and challenge perceptions are the variables with the most accentuated average differences between teachers of the two groups.


Cet atelier consiste en une présentation et une appropriation d'un kit d'aide à la publication, à destination des enseignants du supérieur souhaitant se lancer dans une démarche SoTL. Ce kit a été développé à l'Institut Villebon-Georges Charpak dans le cadre de la Chaire de recherche-action sur l'innovation pédagogique de l'Université Paris-Saclay, en collaboration avec l'Université du Québec à Montréal.


Noreau, A. (2023). Favoriser la professionnalité émergente du personnel enseignant débutant au collégial par la mise en place d'activités de développement pédagogique basées sur ses besoins de soutien (Doctorat professionnel en éducation, Université de Sherbrooke). Consulté à l'adresse https://savoirs.usherbrooke.ca/handle/11143/20576

Pendant ce parcours doctoral, nous avons travaillé à la mise en place de modalités d’accueil et d’accompagnement du personnel enseignant débutant au Cégep Limoilou au régulier et à la formation continue. Lors de la première partie du parcours doctoral, nous avons mis en lumière le processus d’insertion professionnelle vécu par les enseignantes et enseignants qui débutent au collégial et cerné les besoins de soutien ressentis pendant leurs premières années de pratique. Contrairement à l’ordre préscolaire, primaire et secondaire où les enseignantes et les enseignants doivent obtenir une qualification à l’issue d’une formation spécifique en enseignement, où les tolérances d’engagement sont balisées, au collégial, particulièrement dans les programmes techniques, il faut avoir une expertise disciplinaire (reconnue par l’obtention d’un baccalauréat disciplinaire) pour être considéré apte à enseigner. Aucune formation pédagogique n’est requise. Au collégial, qu’une personne enseignante soit novice ou expérimentée, la convention collective (Fédération nationale des enseignants et enseignantes du Québec [FNEEQ] [CSN], 2022a) prescrit que les cours doivent être distribués en fonction de l’ancienneté, sans égard au contenu du cours à enseigner. Comment sont accompagnées ces personnes enseignantes qui débutent au collégial dans la transition entre leur rôle d’experte ou d’expert disciplinaire à leur nouveau rôle

The Republic of Moldova considers education a national priority and has been making steady progress in reforming and modernising its education system. The Ministry of Education and Research (MoER) in 2023 launched its Education Development Strategy 2030 and requested the European Union (EU) to engage the OECD to undertake a deeper analysis of selected policy domains that are central to its education reform. This laid the foundation for the project “Support to the implementation of education policies in Moldova”, funded by the EU. The MoER expressed a keen interest to learn from international research evidence and relevant international examples to help advance its education reform agenda. This report is the first output of the project that presents an in-depth analysis of two of three selected policy domains: “professional development of teachers and other education professionals” and “curriculum and learning resources” and has been developed by the OECD in collaboration with the UNESCO International Institute for Education Planning. The report will be valuable for Moldova and other countries that are looking to strengthen their school systems.


This study drew on Chilean teacher survey responses from TALIS 2018 data on teacher motivation in order to examine the extent to which these data reveal different motivational profiles among Chilean teachers. Also, it explores the influence of those profiles on quality teachers’ instruction. As a conceptual scaffold, this article uses Agency Theory and Public Service Motivation theory to conceptualize and explore the data. Using latent classes analysis, multivariate regressions with survey methods, results showed three different motivational profiles: utility-laden, modal, and socially-laden. From these profiles, modal teachers seem to produce better teaching quality compared with the others profiles. These results suggest that the teachers’ profiles are more diverse when it comes to work motivation and teaching quality than what it is described in the literature. These findings give interesting insights for policymakers and school leaders to better understand the teaching workforce and think in diverse governance and teacher management tools. It also opens a set of interesting questions about how to motivate the teacher workforce in Chile.


Scientific production is fundamental in architecture schools for developing professionals with research capabilities involved in generating knowledge for society. The objective of this research was to analyze the scientific production of Peruvian architecture schools in the Scopus and Web of Science (WoS) databases until 2020. A bibliometric study was conducted considering the 37 schools of architecture recognized by SUNEDU. As a result, 131 documents were found (79 in Scopus, 30 in WoS, and 22 in both databases). The first publication was in 2005, and in the last two years (2019–2020), more than half (78) of the historical total of documents have been produced. A total of 190 authors were registered; 120 are of Peruvian affiliation, and 70 have an international affiliation. Articles were the most published type of document (56.4% in Scopus and 86.5% in WoS) and were published in more than 49 international journals. About half of the total publications were in English. This research shows that only 18 architecture schools have published at least one paper in Scopus or WoS. It is concluded that scientific production in Peruvian
architecture schools is low, recent, and heterogeneous according to the university’s type of administration (public or private) and location. It is necessary to implement strategies to promote scientific production from the undergraduate level and consider the research lines of the architecture schools in Peru.


Pride, T., Sibbald, K., MacLeod, A., Martin, D., & Owen, M. (2023). Faculty from Marginalized Groups in the Health and Social Service Professions: Challenging “Expected Academic” Identity and Roles. Canadian Journal of Higher Education, 53(1), 32-43. Consulté à l’adresse https://journals.sfu.ca/cjhe/index.php/cjhe/article/view/189935 Academics have historically been members of socially dominant groups—white, cisgender, heterosexual men, from middle- to upper-classes, who identify as able-bodied and able-minded. Members of other groups are often disadvantaged. In two larger studies, semi-structured interviews were conducted with professionals from marginalized groups. Here we explore the narratives of 16 participants who explicitly discussed their experiences in faculty positions within the health and social service professions. The expected academic roles of teacher, researcher, and colleague/administrator did not neatly fit for participants, clashing with the expectations they faced by virtue of their marginalized identities. Within the health and social service professions, the norms and expectations of the academy required marginalized faculty to make sacrifices of their time and sense of self to meet job demands. The effects of these role conflicts are pervasive, affecting many areas of academic work and beyond.

début de carrière sont désignés par plus d’un tiers des enseignants nouveaux dans le métier, tandis que l’accompagnement de fin de carrière est prioritaire pour plus de la moitié des enseignants ayant plus de trente-cinq ans d’ancienneté.


Recently, numerous news stories have detailed the ways teachers across the country have been disciplined for addressing issues of oppression and justice in their schools. This paper engages poststructural discourse analysis to consider data from a year-long study of recent graduates of a justice-oriented teacher education program during their first year teaching, examining the ways that stories of community backlash functioned to discipline early career teachers to behave in particular ways. I theorize that these stories serve to discourage teachers from pursuing justice-oriented work in the classroom and that such discourses must be addressed in teacher education programs to prepare preservice teachers for the political realities of entering classrooms in the United States in the current cultural moment.


In England, Pupil Premium Plus is additional funding to help address the educational attainment gap experienced by looked after children. This paper explores the experiences of virtual school heads and designated teachers (n = 140) as they access Pupil Premium Plus-related information, guidance and training to support their practice; navigate the complexities of the Personal Education Plan (PEP) process; and measure the impact of Pupil Premium Plus-funded interventions. We explain professionals’ experiences using insights from social practice theories, and argue that the process of supporting the educational outcomes of looked after children via Pupil Premium Plus is made up of context- and audience-dependent ‘social practices’. When the social practices are aligned, virtual school heads and designated teachers may be effectively able to support looked after children, whereas barriers may emerge when social practices become disjointed. We conclude this paper by arguing that for Pupil Premium Plus to support educational outcomes of looked after children effectively, professionals need to reflect on their own cultures and practices.


The high attrition and turnover rates of qualified special education teachers (SETs) is a significant concern exacerbated by COVID-19. Unfortunately, there are limited studies available on research-based interventions to decrease burnout. The purpose of this study was to describe our processes and results for adaptations and modifications of BREATHE, a burnout intervention originally developed for community mental health workers, into Burnout Reduction: Enhanced Awareness, Tools, Handouts, and Education: Evidence-based Activities for Stress for Educators (BREATHE-EASE) for special educators with guidance from the Framework for Reporting Adaptation and Modifications to Evidence-Based Interventions (FRAME). We applied the FRAME within a hybrid Type 1 trial for
characterizing our approach. Four focus groups (N = 30; 83% female) were conducted separately according to job title (SETs; school administrators), with semi-structured questions tailored to each group. Emergent thematic analysis was used to identify core themes related to adaptations, and results were presented to a subset of focus group members. Modifications involved content, context, and implementation changes for the adapted intervention, with most changes identified for content. FRAME was helpful for providing a systematic approach to integrate stakeholder-informed adaptations of a burnout intervention, addressing significant concerns of SET stress, burnout, and attrition.


Field experiences during teacher preparation programs support teacher candidates in forming and reforming teacher identities through real-world teaching situations. Trying out teaching approaches with children, reflecting on practice, and collaborating with cooperating teachers support teacher candidates in building a teacher identity. However, at the start of the COVID-19 pandemic in the United States, public schools closed in many states, requiring that field placements either end or change significantly. This is a study of five teacher candidates in an early childhood teacher preparation program. These candidates' field placement ended in March 2020, requiring that university faculty develop an alternative teaching placement. Using Bourdieusian theoretical concepts of habitus, field, and doxa, this study explores how the candidates perceived this change and how they were able to continue to reflect and build their teacher identities.


A credentialing standard clarification brought forth by the Higher Learning Commission could result in the elimination of approximately half of the liberal arts concurrent enrollment instructors in Indiana, Minnesota, and other locations under HLC accreditation. Concurrent enrollment instructors who were affected by this evolution in credentialing and needed to complete additional coursework to retain their eligibility to instruct concurrent enrollment courses were interviewed for this research. Using the lens of principal-agent theory, the authors share the reasoning, factors, and commonalities behind the findings as to why concurrent enrollment instructors did or did not complete the required coursework before the upcoming credentialing deadline to maintain their eligibility as a concurrent enrollment instructor. Implications for the field and recommendations for policy changes further research are offered.


This study explored relations between teachers’ perceptions of sharing educational goals and values with their colleagues (shared values), job satisfaction, and motivation to leave the teaching profession. The extent to which these associations were mediated through indicators of psychological need satisfaction (belonging, autonomy, and
competence) was also examined. Participants were 1145 Norwegian teachers. SEM analyses showed that shared values were positively associated with all indicators of psychological need satisfaction. Shared values were also indirectly associated with general job satisfaction, mediated through perceived belonging and competence. In turn, job satisfaction was strongly and negatively associated with motivation to leave.


This paper investigates the experiences of Western teacher expatriates in a Shanghai international schooling organization. We explore the risks and benefits associated with transnational mobility and how teacher expatriates, as part of the global middle-class (GMC), maintain and reaffirm their middle-class status. Focusing on adaptation and constraint in professional contexts, the data illustrates how the teachers respond to new discourses and the rules of exchange in the rapidly changing Chinese education market. We operationalise transnational habitus, as a conceptual tool, to explore how certain identities are sustained and negotiated in various moments of unsettlement. As these teacher expatriates navigate new professional contexts, we see how their habitus remains heavily influenced by class and previous professional experiences in their country of origin as they engage in new work environments, in order to secure an advantageous position.


Children’s social-emotional and cognitive development is enhanced when early childhood educators display positive affect and respond appropriately to children’s needs. However, there is little research on factors that influence teachers’ positive affect in the classroom, such as past adversity exposure and promoting teachers’ well-being. The current study examined the interactive effect of teacher participation in a well-being program (Be Well Care Well; BWCW) and their exposure to adverse childhood experiences (ACEs) on changes in observed teacher affect over time within the classroom setting. Participants included 95 early childhood teachers who completed the ACEs measure, a live classroom observation before participation in activities, and a post-intervention observation. Multilevel modeling estimated the interactive effects of teacher ACEs, participation in BWCW activities, and time on the dependent variable (i.e., teacher affect). Results from the three-level random intercept model showed a significant three-way interaction. Individuals with a higher number of ACEs and lower participation in the well-being program showed a decrease in positive affect over time. This effect was not significant for teachers who reported fewer ACEs. Results indicate that the degree of participation in the well-being program was particularly salient for teachers with higher exposure to past ACEs. Findings suggest that fostering teachers’ physical health and well-being can enhance their affect and enthusiasm in the classroom setting, particularly for those with higher levels of past adversity exposure.
In this manuscript, we argue that the increasing use of reductive tools born out of neoliberal reforms in education, such as The Framework for Teaching, a tool for teacher evaluation credited to Charlotte Danielson, limits the possibilities for emergent, improvisational teaching. We consider the broader political landscape of the last 25 years to suggest that The Framework for Teaching illuminates a preoccupation in education with so-called measurable results in ways that hurt teachers while advancing political agendas and profiting private corporations. Next, we rely on storytelling methodology to critique the framework and offer alternative ways of thinking about teacher evaluation. Ultimately, our critique intends to prompt more humane understandings of teacher evaluation, thereby permitting and engendering improvisational pedagogies.


In this paper, we critically examine the way in which scholars have traditionally defined and problematized attrition. Through a series of examples of large-scale intervention impact studies, we share insights about the sources and consequences of attrition that expand our notion of how and why attrition occurs. We also discuss potential steps for anticipating, mitigating, and responding to attrition in the dynamic context of schooling. By expanding our understanding of attrition, we hope to engage the field in further dialogue that could lead to policies and practices that might lessen the potential impacts not only on our ability to conduct research, but also our ability to advance the learning of teachers and their students.


Surveiller et punir, telle était encore, aux yeux de beaucoup, la mission du conseiller principal d’éducation (CPE), quand Hélène Viner est arrivée en 1984 dans un collège d’un quartier populaire d’une grande ville de province. Pourtant, bien d’autres responsabilités incombent au CPE désormais : organisation de la vie collective quotidienne avec des élèves en difficulté, l’équipe pédagogique et éducative, les familles mais aussi animation, médiation et collaboration avec les partenaires externes (travailleurs sociaux, police, justice…). C’est ce que l’auteure relate à travers le témoignage de sa carrière, enrichi d’un important travail de documentation. De ces mémoires on retient surtout l’attrait de l’auteure pour son métier : la place donnée à l’engagement sur le terrain social et pédagogique, au dialogue, à l’écoute… et à l’improvisation liée à la part d’imprévisibilité propre à cette profession. Un témoignage qui pourrait bien susciter des vocations...

Recent research illustrates several gaps in understanding about teacher experiences of professional well-being, as well as how teachers understand and define their well-being. Given the limited understanding of the construct and correlates of teacher well-being and the omission of theoretical models in the development of prevention efforts and supports for teachers’ mental health, it is valuable to investigate the translation and application of positive psychological well-being perspectives to better understand optimal teacher functioning. Using an explanatory sequential mixed-methods design, the purpose of this study was to explore teacher well-being and its influence on teacher burnout/attrition. Latent Class Analysis (LCA) was used to analyze data collected from a 76-item survey completed by 131 early childhood teachers. Follow-up interviews were conducted with 13 teachers to confirm or identify discrepancies within the quantitative results. Findings from the survey data and interview data revealed three profiles of Early Childhood Special Education (ECSE) teacher well-being, and qualitative interviews suggested that well-being related needs of these teachers varied. The results of this study address several gaps in the research and provide practical information for practitioners, researchers, and policymakers.


This study utilizes semi-structured interviews to explore the status quo of teacher training of rural and urban public primary school teachers in Henan Province China. Our findings showed that both rural and urban teachers had very limited training opportunities available to them. Most of the participants did not find the current training opportunities useful in improving their teaching practices. Both rural and urban teachers desired training in pedagogy, educational psychology, and curriculum. Rural teachers particularly expressed the need for training in ICT and classroom management skills. Observing education experts’ demonstration classes is the most preferred training format. Policy implications are discussed.


Micro-credential (MC) is an innovative and disruptive technology-based learning model. In higher education (HE), MCs are typically certified in the form of a digital badge (DB) issued to learners upon completion of a credential. The introduction of MCs and DBs has the potential to revolutionise the way in which HE institutions deliver degrees, and how students learn and achieve their tertiary qualifications. To explore this innovative learning, this study investigates the potentials and challenges of implementing MCs in HE. Through a systematic literature review of 56 peer-reviewed articles on MCs and related DBs in HE published between 2015 and 2021, we find that research on MCs in HE is gaining attention. While different aspects of MCs in HE have been studied using various research methodologies and theoretical lenses, further research is needed to capture the influence of technology and to understand different stakeholder perspectives. This study contributes to the growing literature on MCs in HE by synthesising the relevant knowledge
areas into key themes and developing a conceptual framework for implementing MCs in HE. This study also identifies critical research gaps to advance the literature on MC implementation in HE.


This study explores the perceptions and acceptance of medical chatbots among undergraduate students at Ekiti State University.


This study aims to employ the supervised machine learning algorithms to examine factors that negatively impacted academic performance among college students on probation (underperforming students). We used the Knowledge Discovery in Databases (KDD) methodology on a sample of N = 6514 college students spanning 11 years (from 2009 to 2019) provided by a major public university in Oman. We used the Information Gain (InfoGain) algorithm to select the most effective features and ensemble methods to compare the accuracy with more robust algorithms, including Logit Boost, Vote, and Bagging. The algorithms were evaluated based on the performance evaluation metrics such as accuracy, precision, recall, F-measure, and ROC curve, and then validated using 10-folds cross-validation. The study revealed that the main identified factors affecting student academic achievement include study duration in the university and previous performance in secondary school. Based on the experimental results, these features were consistently ranked as the top factors that negatively impacted academic performance. The study also indicated that gender, estimated graduation year, cohort, and academic specialization significantly contributed to whether a student was under probation. Domain experts and other students were involved in verifying some of the results. The theoretical and practical implications of this study are discussed.


The purpose of this study is to explore attributes that influence the quality of smart classrooms from the perspective of higher education teachers. Relying on a purposive sample of 31 academicians from Gulf Cooperation Council (GCC) countries, the study identifies themes related to quality attributes of technology platforms and social interactions. These attributes are user security, educational intelligence, technology accessibility, system diversity, system interconnectivity, system simplicity, system sensitivity, system adaptability and platform affordability. The study identifies management procedures, educational policies, and administrative practices that enact, engineer, enable, and enhance these attributes in smart classrooms. The findings also highlight strategy-oriented planning and cause-driven transformation as the main smart classroom contexts influencing the quality of education among interviewees. With insights from the
interviews, this article discusses some theoretical and practical implications of the study, research limitations, and potential future research directions.


Purpose: In this study, we used critical discourse analysis to examine what school websites convey about the expected roles of educators and students. Research Design: We analyzed 13 high school websites from a mid-sized urban district that has implemented several market-based reforms and has a centralized school choice model. We employed the concept of scripts from institutional theory to analyze what messages these websites communicate about the roles of different educational actors, how these messages relate to existing societal power dynamics, and how they relate to the school model or school demographics. Findings: For students and educators, the sites expressed that students had an important problem, while the school and educators were offered as the solution. This common framework manifested in four distinct patterns, which we describe as the savior, cultivation, assimilation, and marketplace scripts. Implications: By critically examining school websites and other semiotic materials, leaders and other stakeholders can work to “root out” potentially harmful assumptions and narratives and envision alternatives that offer empowerment and transformation.


Amid the COVID-19 lockdown many countries have replaced traditional learning with remote or mobile one. It was noted that students’ motivation has become much less with the transition to distance learning. This study analyzes how motivational processes influence mobile learning quality and aimed to analyze the factors boosted the motivation of students to learn in modern conditions of isolation and identify the major demotivating factors affecting the quality of mobile learning. Motivation is considered a key factor in improving students’ involvement in distance learning. The author surveyed 200 students and 46 teachers of The University of Jordan and Jordan University of Science and Technology regarding the factors that influenced their motivation in terms of mobile learning. The results revealed that 178 out of 200 participants agreed that intrinsic motivation impacted their interest in mobile learning. Some 78% of the students approved of mobile learning, while the remaining 22% believe it is necessary to return to the traditional face-to-face education format. The importance of feedback and communication with teachers and its impact on the process of mobile learning is considered. The role of built-in mechanisms in information systems and the positive role of gamification is equally important. Plug-ins compatible with the convenient WordPress system, i.e. applications that help organize the educational process were examined in the scientific work. The specific recommendations for raising the motivation of students in the learning process, which can be used by relevant institutions worldwide presented.

Educational applications (apps) offer opportunities for designing learning activities children enjoy and benefit from. We redesigned a typical mobile learning activity to make it more enjoyable and useful for children. Relying on the technology acceptance model, we investigated whether and how implementing this activity in an app can increase children’s intention to use. During the 27-day study, children (N = 103, 9–14 years) used the app to memorize one-sentence learning plans each day. Children used three different app-based learning activities throughout the study. In two standard activities, children reread or reassembled the words of the plan. In the redesigned activity, children represented the meaning of the plan with emojis. Children repeatedly reported on their attitude towards each activity. Subsequently, children reported perceived enjoyment and intention to use the app. Results showed children found the emoji activity most enjoyable, and enjoyment of the emoji activity contributed uniquely towards intention to use. Additionally, children’s enjoyment of the app mediated their intention to use the app in the future. Overall, the study suggests that children’s enjoyment of an app is crucial in predicting their subsequent intention to use, and it provides a concrete example of how emojis can be used to boost enjoyment. Practitioner notes What is already known about this topic Educational applications provide children with unrestricted access to mobile learning resources. Positive attitudes towards educational applications predict behavioural intention to use these applications, at least in young adults. There is a need for more research examining the relevance of enjoyable learning activities in fostering children’s sustained usage of an educational application. What this paper adds Positive attitude towards the use of emojis during learning activities uniquely contributed to children’s behavioural intention to use the application. Perceived enjoyment predicted behavioural intention to use the application. Perceived enjoyment mediated the effect of attitude towards using learning activities on the behavioural intention to use the mobile educational application. Implications for practice and/or policy These findings highlight the importance of enjoyment for children’s acceptance of educational applications. Enjoyable learning activities are necessary to ensure sustained usage of educational applications. The paper provides a concrete example of how emojis can be used to boost enjoyment of a typical mobile learning activity.


Les technologies immersives sont de plus en plus utilisées dans l’enseignement de plusieurs domaines. Or, il est essentiel de considérer certains aspects liés à la dimension pédagogique tels que les stratégies de scénarisation et la mesure de leur efficacité. Ce numéro propose une diversité de travaux explorant l’utilisation des technologies immersives dans l’éducation et la formation. Ces technologies permettent de créer des environnements d’apprentissage captivants, favorisant la compréhension approfondie et améliorant la rétention des connaissances. Néanmoins, des défis subsistent, tels que l’accessibilité à l’équipement, la formation des enseignants, la sélection de contenus pertinents et les préoccupations éthiques et de sécurité. Les avancées technologiques offrent de nouvelles possibilités pour une interaction intuitive et une personnalisation des expériences d’apprentissage. Les 14 articles présentés dans ce numéro contribuent à la réflexion sur l’utilisation des technologies immersives en éducation et en formation, dans l’espoir de susciter de nouvelles idées et initiatives innovantes pour des formations enrichissantes.

Cyberbullying has generated interest for researchers in the field of psychology and education in recent years. While most studies have focused on samples of adolescents, the university environment also deserves special attention due to its serious consequences on students. It is therefore very important to prevent cyberbullying in the context of university. The objectives of this study were to identify different profiles regarding cyberbullying and cybervictimization behaviors and examine the relationship between cyberbullying, social anxiety, and aggressiveness. A total of 1,368 university students participated in the study by completing the European Bullying Intervention Project Questionnaire (EBIPQ), the Social Anxiety Questionnaire for Adults (CASO-A30), and the Aggression Questionnaire (AQ). The latent profile analysis identified three cyberbullying profiles: a first group with low scores in cyberaggression and cybervictimization (not involved; 87.6%), a second group with moderately high scores in cyberaggression and cybervictimization (victimized cyberbullies; 10%), and a third group with high scores in cybervictimization and very high scores in cyberaggression (cyberbullies; 2.4%). The profile of “victimized cyberbullies” students presents higher scores in physical, verbal, anger, and hostility than the group of “not involved” students, while no differences in social anxiety were found between the groups analysed. Cyberbullying preventive programs should focus on the management of aggressive behaviors for those who have moderate scores in cybervictimization and cyberbullying behaviors, and social anxiety may not be differentiated between cyberbullying groups at this academic stage.


This study employed the design-based research (DBR) methodology to explore how to design instructional prompts integrated into a computer-based cognitive tool, GeoGebra, for gifted mathematics education. This study was divided into two iterative research phases lasting for 3 semesters, in which differentiating the instructional prompts for gifted students was explored. During two iterations, a combination of quantitative and qualitative data collection and analysis procedures were used to examine the effect of the designed prompts on gifted students’ learning achievements and explore their feedback on the learning activities based on the research conducted on 60 participants who were tenth-grade students. The findings led to a set of design propositions that contribute to the literature on both instructional prompts integrated into computer-based cognitive tools and gifted mathematics education. The propositions emphasize (a) prompts’ types, the algebraic-based prompts (ABPs) and software-based prompts (SBPs), (b) prompts’ order, emphasizing on presenting ABPs before SBPs, (c) prompts’ sequencing, adjusting the number of prompts’ sequences to gifted students’ characteristics, and (d) prompts’ combination, merging ABPs and SBPs to gain higher order learning outcomes. The prospective studies for the next phases of the DBR study are also discussed.

Since the covid pandemic, universities propose online education to ensure learning continuity. However, the insufficient preparation led to a major drop in the learner’s performance and his/her dissatisfaction with the learning experience. This may be due to several reasons, including the insensitivity of the virtual learning environment to the learner’s preferences. We propose to address the issue of student’s dissatisfaction and lack of interaction, by integrating learning style theory into the analysis of the learner’s online behavior. Our work differentiates itself from the rest of researches that employed learning style theory by its two step process. First, we classify the learning activities into learning categories based on learning style theory. Second, we define behavioral features that quantify the learner’s behavior across the learning categories. The analysis of the learner’s online behavior based on the behavioral features revealed new aspects of the learner’s preferences. We consider these findings to be best useful for developing learning style-sensitive adaptive learning environments. Nevertheless, the behavioral features could be beneficial in different contexts. In fact, when applied to course outcome prediction, the behavioral features enhanced the results by 10%. The latter indicates that behavioral features reflected the correlation between behavior and academic performance.


Advancements in artificial intelligence are rapidly increasing. The new-generation large language models, such as ChatGPT and GPT-4, bear the potential to transform educational approaches, such as peer-feedback. To investigate peer-feedback at the intersection of natural language processing (NLP) and educational research, this paper suggests a cross-disciplinary framework that aims to facilitate the development of NLP-based adaptive measures for supporting peer-feedback processes in digital learning environments. To conceptualize this process, we introduce a peer-feedback process model, which describes learners’ activities and textual products. Further, we introduce a terminological and procedural scheme that facilitates systematically deriving measures to foster the peer-feedback process and how NLP may enhance the adaptivity of such learning support. Building on prior research on education and NLP, we apply this scheme to all learner activities of the peer-feedback process model to exemplify a range of NLP-based adaptive support measures. We also discuss the current challenges and suggest directions for future cross-disciplinary research on the effectiveness and other dimensions of NLP-based adaptive support for peer-feedback. Building on our suggested framework, future research and collaborations at the intersection of education and NLP can innovate peer-feedback in digital learning environments. Practitioner notes What is already known about this topic There is considerable research in educational science on peer-feedback processes. Natural language processing facilitates the analysis of students’ textual data. There is a lack of systematic orientation regarding which NLP techniques can be applied to which data to effectively support the peer-feedback process. What this paper adds A comprehensive overview model that describes the relevant activities and products in the peer-feedback process. A terminological and procedural scheme for designing NLP-based adaptive support measures. An application
of this scheme to the peer-feedback process results in exemplifying the use cases of how NLP may be employed to support each learner activity during peer-feedback. Implications for practice and/or policy To boost the effectiveness of their peer-feedback scenarios, instructors and instructional designers should identify relevant leverage points, corresponding support measures, adaptation targets and automation goals based on theory and empirical findings. Management and IT departments of higher education institutions should strive to provide digital tools based on modern NLP models and integrate them into the respective learning management systems; those tools should help in translating the automation goals requested by their instructors into prediction targets, take relevant data as input and allow for evaluating the predictions.


Artificial intelligence (AI) is increasingly integrating into our society. University education needs to maintain its relevance in an AI-mediated world, but the higher education sector is only beginning to engage deeply with the implications of AI within society. We define AI according to a relational epistemology, where, in the context of a particular interaction, a computational artefact provides a judgement about an optimal course of action and that this judgement cannot be traced. Therefore, by definition, AI must always act as a ‘black box’. Rather than seeking to explain ‘black boxes’, we argue that a pedagogy for an AI-mediated world involves learning to work with opaque, partial and ambiguous situations, which reflect the entangled relationships between people and technologies. Such a pedagogy asks learners locate AI as socially bounded, where AI is always understood within the contexts of its use. We outline two particular approaches to achieve this: (a) orienting students to quality standards that surround AIs, what might be called the tacit and explicit ‘rules of the game’; and (b) providing meaningful interactions with AI systems. Practitioner notes What is already known about this topic Artificial intelligence (AI) is conceptualised in many different ways but is rarely defined in the higher education literature. Experts have outlined a range of graduate capabilities for working in a world of AI such as teamwork or ethical thinking. The higher education literature outlines an imperative need to respond to AI, as underlined by recent commentary on ChatGPT. What this paper adds A definition of an AI that is relational: A particular interaction where a computational artefact provides a judgement about an optimal course of action, which cannot be easily traced. Focusing on working with AI black boxes rather than trying to see inside the technology. Describing a pedagogy for an AI-mediated world that promotes working in complex situations with partial and indeterminate information. Implications for practice and/or policy Focusing on quality standards helps learners understand the social regulating boundaries around AI. Promoting learner interactions with AI as part of a sociotechnical ensemble helps build evaluative judgement in weighting AI’s contribution to work. Asking learners to work with AI systems prompts understanding of the evaluative, ethical and practical necessities of working with a black box.


When we started the Anzaldúing It podcast in 2017, we were trying to find a healing space outside of academia to process our everyday experiences as first-generation
queer Latina/xs in graduate school. We chose the medium of podcasting as our platform because of our shared experience of pláticas being transformative spaces of knowledge sharing, consciousness-raising, and connection. Drawing on the tenets of Chicana/Latina Feminista Pláticas and coupling it with jotería identity and consciousness, and literature on academic counterspaces we conceptualize five tenets that make up what we refer to as digital jotería counterspaces. As co-creators and co-hosts, we engage in digital pláticas to enact self and community care through co-learning and co-construction of knowledge, this digital presence affirms our commitment to centering queer and trans Latinx identity and consciousness. We share our pláticas with the public through the digital and host them on an online repository, and as a result, create opportunities for multiple pláticas and consciousness-raising to occur.


Digital literacy games can be beneficial for children with reading difficulties as a supplement to classroom instruction and an important feature of these games are the instructional supports, such as feedback. To be effective, feedback needs to build on prior instruction and match a learner’s level of prior knowledge. However, there is limited research around the relationship between prior knowledge, instruction and feedback in the context of learning games. This paper presents an empirical study exploring the influence of prior knowledge on response to feedback, in two conditions: with or without instruction. Thirty-six primary children (age 8–11) with reading difficulties participated: each child was assessed for their prior knowledge of two suffix types—noun and adjective suffixes. They subsequently received additional instruction for one suffix type and then played two rounds of a literacy game—one round for each suffix type. Our analysis shows that prior knowledge predicted initial success rates and performance after a verbal hint differently, depending on whether instruction was provided. These results are discussed with regards to learning game feedback design and the impact on different types of knowledge involved in gameplay, as well as other game design elements that might support knowledge building during gameplay. Practitioner notes What is already known about this topic Instructional supports, such as elaborative feedback, are a key feature of learning games. To be effective, feedback needs to build on prior instruction and match a learner’s level of prior knowledge. Prior knowledge is an important moderator to consider in the context of elaborative feedback. What this paper adds Providing additional instruction (eg, pre-training) may act as a knowledge enhancer building on children’s existing disciplinary expertise, whereas the inclusion of elaborative feedback (eg, a hint) could be seen as a knowledge equaliser enabling children regardless of their prior knowledge to use the pre-training within their gameplay. Highlights the importance of children’s preferred learning strategies within the design of pre-training and feedback to ensure children are able to use the instructional support provided within the game. Possible implications for pre-training and feedback design within literacy games, as well as highlighting areas for further research. Implications for practice and/or policy Pre-training for literacy games should highlight key features of the learning content and explicitly make connections with the target learning objective as well as elaborative feedback. Pre-training should be combined with different types of in-game feedback for different types of learners (eg, level of prior knowledge) or depending on the type of knowledge that designers want to build (eg, metalinguistic vs. epilinguistic). Modality,
content and timing of the feedback should be considered carefully to match the specific needs of the intended target audience and the interaction between them given the primary goal of the game.


Early evidence suggests that robot programming offers an important foundation for spatial reasoning and computational thinking; however, researchers have debated how to introduce young children to these skills. We explored how preschoolers develop understanding of spatial concepts and computational thinking as the children took turns navigating a path during guided play with a programmable robot. Our analysis of the data included a multimodal visualization of the exchanges between the teacher, children, and a programmable robotic device. The findings highlight the effects that arose from the physical-digital convergence of technology integrated into play including: (a) the robot evoked a chain of actions, enacting pedagogic forces that transformed children’s learning; (b) children used their own bodies as spatial referents, co-locating themselves in space with the robot; (c) the teacher remained a key actor, providing verbal and nonverbal scaffolding to promote children’s understanding and mastery of spatial and computational concepts; and (d) talking with the teacher about spatial concepts combined with the interactions with the robot enhanced children’s acquisition of spatial ideas relative to the quantity of children’s verbal expressions and complexity of their applied spatial skills and computational thinking.


The present study assessed the effectiveness of the ECRIMO educational application designed to build first-grade level spelling skills. We tested whether using the app to teach spelling would be as effective as providing the same training using traditional paper exercises. The effect of integrating gamification into mobile learning apps, which has been little studied in the context of young children, is also investigated. A pretest/training/posttest design was implemented with 311 first-graders divided in four groups: no training, paper training, the ECRIMO app with gamification features, and the ECRIMO app without gamification. Spelling, reading and phonological awareness abilities was measured at both pretest and posttest. The training was conducted over a 7-week period (4.40 hours in total). The experimental design allowed us to answer three questions: (1) Is spelling training effective regardless of the medium used? (2) Is training through the app as efficient as paper-based training? (3) Does gamification impact students’ learning performance? Mixed-model analyses revealed (1) a positive effect on the training outcome depended on the initial spelling ability of participants, (2) a comparable efficiency between autonomous training using the ECRIMO app on tablets and the same training provided by teachers using paper exercises and (3) a marginally positive effect of gamification that is greater for the weakest students. The present study proposes an original and pertinent experimental design to test the relevance of educational applications. The design features of learning apps can impact students’ learning differently depending on their initial level. A critical step should be verifying that using online apps for training is at least as effective as the same training using paper
exercises. Practitioner notes What is already known about this topic A significant number of children experience difficulties in reading and spelling from the first years of learning. The use of new technologies to support classroom teaching is rapidly developing as a topic of interest for educational professionals and researchers. Evaluations of new technologies developed to enhance literacy skills suggest that many factors can vary their effectiveness. The effectiveness of a digital educational application can be enhanced or undermined by design choices, such as gamification. What this paper adds Spelling training with the app ECRIMO seems effective for first year students, especially those with the lowest and middle level. Comparable effects of both the tablet-based and paper equivalent training on participants' spelling were found. The use of gamification in ECRIMO could be more suitable for the weakest students. Implications for practice and/or policy Educational technologies should be evidence-based and should be evaluated with both a passive and an active control group. The design should be carefully considered and tested, as it may be advantageous for some students and disadvantageous for others. The use of digital technology in education can be beneficial for classroom practice, when the activity can be carried out in total autonomy, leaving the teacher available for a group of pupils with specific needs.


We study the distributional effects of remote learning. Our approach combines newly collected data on parental preferences with administrative data from Los Angeles. The preference data allow us to account for selection into remote learning while also studying selection patterns and treatment effect heterogeneity. We find a negative average effect of remote learning on reading (–0.14 SD) and math (–0.17 SD). Notably, we find evidence of positive learning effects for children whose parents have the strongest demand for remote learning. Our results suggest an important subset of students who currently sort into post-pandemic remote learning benefit from expanded choice.

Gamified learning is an instructional strategy that motivates students to learn, and the use of multiple representations assists learning by promoting students’ thinking and advanced mathematical problem-solving skills. In particular, emergency distance learning caused by the COVID-19 pandemic may result in a lack of motivation and effectiveness in learning. This study designed an online gamified learning activity incorporating multi-representational scaffolding and compared the differences in the learning achievement and motivation for the gamified activity and general synchronous distance learning. In addition, for the group that conducted the gamified learning
activity, we measured the participants’ flow, anxiety, and emotion during the activity. A total of 36 high school students participated in the experiment. The results indicated that the gamified learning activity was not significantly effective in terms of enhancing learning achievement. In terms of learning motivation, a significant decrease in motivation was found for the group using general synchronous learning, while a significant increase in motivation was found for the group using synchronous gamified learning. This indicates that despite the negative impact of the pandemic on learning, gamified learning still enhances students’ learning motivation. The results of flow, anxiety, and emotion showed that the participants had a positive and engaged experience. Participants provided feedback that the multi-representational scaffolding facilitates learning.


This study examines university faculty members’ successful behaviours and the factors influencing these behaviours, when dealing with the issues posed by emergency remote teaching during the COVID-19 pandemic. Data was gathered through interviews with 12 carefully chosen instructors who competently prepared and implemented their first online classes despite various challenges encountered during the crisis. Interview transcripts were analysed by applying the theoretical concepts of the positive deviance approach to identify exemplary behaviours in the face of crisis. The results revealed that the participants performed three unique but effective behaviours, called ‘positive deviance behaviours’, in their online teaching: philosophy-driven decision making informed planning and ongoing performance monitoring. These behaviours were affected by individual factors (e.g., community engagement and emotion management during different phases of emergency remote teaching) and organisational factors (e.g., networks/hardware and training/support). By examining the positive deviance behaviours of instructors who delivered effective classes, this study offers online teaching and faculty development strategies in both crisis and non-crisis situations.


With growing interest in supporting the development of computational thinking (CT) in early childhood, there is also need for new assessments that serve multiple purposes and uses. In particular, there is a need to understand the design of formative assessments that can be used during classroom instruction to provide feedback to teachers and children in real-time. In this paper, we report on an empirical study and advance a new unit of observational analysis for formative assessment that we call an indicator of a knowledge refinement opportunity or as a shorthand, KRO indicators. We put forth a new framework for conceptualizing the design of formative assessments that builds on the Evidence Centered Design framework but centers identification and analysis of indicators of knowledge refinement opportunities. We illustrate a number of key indicators through empirical examples drawn from video recordings of Kindergarten classroom lessons.

This study highlights the importance of educational leaders’ responsibilities in virtual spaces, as they are perceived by school faculties and provides a validated tool to measure teachers’ perception of a «principal’s leadership presence in social media networks». 235 Israeli teachers participated in the study –180 (77%) females and 55 (23%) males, using a questionnaire consisting of 14 items scaled in a 6-point Likert format. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) reveal four modalities of the principal’s on-going leadership presence in social media networks: branding and communicative, transformational, supportive-protective and enforcement presence. The questionnaire may provide principals and educational policy designers with a plan to regulate the socio-professional relationship among a school’s stakeholders.


Wikidata is a free, multilingual, open knowledge-base that stores structured, linked data. It has grown rapidly and as of December 2022 contains over 100 million items and millions of statements, making it the largest semantic knowledge-base in existence. Changing the interaction between people and knowledge, Wikidata offers various learning opportunities, leading to new applications in sciences, technology and cultures. These learning opportunities stem in part from the ability to query this data and ask questions that were difficult to answer in the past. They also stem from the ability to visualize query results, for example on a timeline or a map, which, in turn, helps users make sense of the data and draw additional insights from it. Research on the semantic web as learning platform and on Wikidata in the context of education is almost non-existent, and we are just beginning to understand how to utilize it for educational purposes. This research investigates the Semantic Web as a learning platform, focusing on Wikidata as a prime example. To that end, a methodology of multiple case studies was adopted, demonstrating Wikidata uses by early adopters. Seven semi-structured, in-depth interviews were conducted, out of which 10 distinct projects were extracted. A thematic analysis approach was deployed, revealing eight main uses, as well as benefits and challenges to engaging with the platform. The results shed light on Wikidata’s potential as a lifelong learning process, enabling opportunities for improved Data Literacy and a worldwide social impact.


Higher Education Institutions (HEls) are involved in an evolution to a new model of university called digital university. This model implies not only adopting new technologies but also developing an organizational strategic transformation which includes information, processes, human aspects, and more. Because an organization’s digital maturity correlates with the scope of its digital transformation efforts, this study aims to identify digital transformation initiatives (DTI) taken by HEls, defining the new processes and technologies used to implement them. The main motivation is to have a real and clear vision of how universities are transforming themselves, discovering the most relevant
DTI that they have applied and if they are doing it through an integrated plan aligned with a digital strategy, as recommended by experts. We conducted a Multivocal Literature Review, as methodology research, to include both academic and grey literature in the analysis. Main results show that the DTI implemented are primarily focused on providing a quality and competitive education (24% of 184 DTI from 39 different universities analyzed). Emerging technologies most frequently used are advanced analytics (23%), cloud (20%) and artificial intelligence (16% of total DTI). We conclude that HEIs are in the first steps to digital maturity as only 1 in 4 have a digital strategy and 56% have launched isolated DTI that are not integrated in a plan and do not have a high strategic return value to the organization.


Digital advances in the learning space have changed the contours of student engagement as well as how it is measured. Learning management systems and other learning technologies now provide information about student behaviors with course materials in the form of learning analytics. In the context of a large, integrated and interdisciplinary Core curriculum course in a graduate school of public health, this study undertook a pilot randomized controlled trial testing the effect of providing a “behavioral nudge” in the form of digital images containing specific information derived from learning analytics about past student behaviors and performance. The study found that student engagement varied significantly from week to week, but nudges linking coursework completion to assessment grade performance did not significantly change student engagement. While the a priori hypotheses of this pilot trial were not upheld, this study yielded significant findings that can guide future efforts to increase student engagement. Future work should include a robust qualitative assessment of student motivations, testing of nudges that tap into these motivations and a richer examination of student learning behaviors over time using stochastic analyses of data from the learning management system.


This paper discusses a three-level model that synthesizes and unifies existing learning theories to model the roles of artificial intelligence (AI) in promoting learning processes. The model, drawn from developmental psychology, computational biology, instructional design, cognitive science, complexity and sociocultural theory, includes a causal learning mechanism that explains how learning occurs and works across micro, meso and macro levels. The model also explains how information gained through learning is aggregated, or brought together, as well as dissipated, or released and used within and across the levels. Fourteen roles for AI in education are proposed, aligned with the model’s features: four roles at the individual or micro level, four roles at the meso level of teams and knowledge communities and six roles at the macro level of cultural historical activity. Implications for research and practice, evaluation criteria and a discussion of limitations are included. Armed with the proposed model, AI developers can focus their work with learning designers, researchers and practitioners to leverage the proposed roles to improve individual learning, team performance and building knowledge.
communities. Practitioner notes What is already known about this topic Numerous learning theories exist with significant cross-over of concepts, duplication and redundancy in terms and structure that offer partial explanations of learning. Frameworks concerning learning have been offered from several disciplines such as psychology, biology and computer science but have rarely been integrated or unified. Rethinking learning theory for the age of artificial intelligence (AI) is needed to incorporate computational resources and capabilities into both theory and educational practices. What this paper adds A three-level theory (i.e., micro, meso and macro) of learning that synthesizes and unifies existing theories is proposed to enhance computational modelling and further develop the roles of AI in education. A causal model of learning is defined, drawing from developmental psychology, computational biology, instructional design, cognitive science and sociocultural theory, which explains how learning occurs and works across the levels. The model explains how information gained through learning is aggregated, or brought together, as well as dissipated, or released and used within and across the levels. Fourteen roles for AI in education are aligned with the model’s features: four roles at the individual or micro level, four roles at the meso level of teams and knowledge communities and six roles at the macro level of cultural historical activity. Implications for practice and policy Researchers may benefit from referring to the new theory to situate their work as part of a larger context of the evolution and complexity of individual and organizational learning and learning systems. Mechanisms newly discovered and explained by future researchers may be better understood as contributions to a common framework unifying the scientific understanding of learning theory.


Durant la pandémie, l’utilisation des technologies numériques est devenue incontournable pour rejoindre les élèves. Cette recherche-action porte sur les pratiques utilisées par les personnes enseignantes en éducation physique et à la santé du 2e cycle du secondaire pour engager les élèves dans l’adoption d’un mode de vie sain et actif. Des groupes de discussion ont été réalisés afin de dégager les facilitateurs et les défis rencontrés lors de ce changement de pratiques. Les résultats constituent une première phase de la recherche et permettent de préciser les étapes conduisant à la production d’un outil en soutien à l’enseignement-apprentissage.


One of the most fundamental problems many students face in school is bullying. This form of harassment, known as cyberbullying, has emerged as the use of the internet and other digital media has increased in recent years. The purpose of this study is to determine the extent of secondary school students’ cyberbullying and cyber victimization experiences, to see if there is a correlation between cyberbullying and cyber victimization, and to explore how students’ cyberbullying or cyber victim status influences their cyber victim or cyberbullying behavior. Unlike experimental studies, which use manipulation and random assignment of participants and conditions, the study employed a causal-
comparative research design, in which the researcher investigates the causes and consequences of differences between groups. The sample group of the study consists of 286 secondary school students in the fifth, sixth, and seventh grades who were recruited using the typical case sampling method, which is one of the purposive sampling methods. The data were collected via the scales of cyberbullying and cyber victimization. According to the findings, cyberbullying is significantly and positively influenced by cyber victimization. Instead of looking at cyberbullying in isolation, it was suggested that a more effective approach to solving the problem would be to integrate cyberbullying and cyber victimization holistically.


This study investigated the extent to which self-report and digital-trace measures of students’ self-regulated learning in blended course designs align with each other amongst 145 first-year computer science students in a blended “computer systems” course. A self-reported Motivated Strategies for Learning Questionnaire was used to measure students’ self-efficacy, intrinsic motivation, test anxiety, and use of self-regulated learning strategies. Frequencies of interactions with six different online learning activities were digital-trace measures of students’ online learning interactions. Students’ course marks were used to represent their academic performance. SPSS 28 was used to analyse the data. A hierarchical cluster analysis using self-reported measures categorized students as better or poorer self-regulated learners; whereas a hierarchical cluster analysis using digital-trace measures clustered students as more active or less active online learners. One-way ANOVAs showed that: 1) better self-regulated learners had higher frequencies of interactions with three out of six online learning activities than poorer self-regulated learners. 2) More active online learners reported higher self-efficacy, higher intrinsic motivation, and more frequent use of positive self-regulated learning strategies, than less active online learners. Furthermore, a cross-tabulation showed significant (p < .01) but weak association between student clusters identified by self-reported and digital-trace measures, demonstrating self-reported and digital-trace descriptions of students’ self-regulated learning experiences were consistent to a limited extent. To help poorer self-regulated learners improve their learning experiences in blended course designs, teachers may invite better self-regulated learners to share how they approach learning in class.


Sense of success and self-efficacy regarding technology integration in teaching are among the most important factors that influence teachers’ well-being and professional development, and may have a substantial impact on student learning. In this quantitative study (N = 735 K-12 teachers in Israel), we explored the factors contributing to sense of success in emergency remote teaching and self-efficacy for integrating technology in teaching following the experience of teaching during COVID-19 days. We use decision-tree models to look at nuanced relations. Overall, our findings highlight the crucial—albeit not surprising—role of experience in teaching with technology as an important factor that promotes sense of success and self-efficacy. Going beyond this
factor, we emphasize that emotional difficulties in times of emergency may serve as an important risk factor, and that taking a leading role in school may serve as an important protective factor. We also found an advantage to STEM and Language teachers, compared with Social Sciences and Humanities teachers. Following our findings, we conclude with a set of recommendations that could enhance school-based teaching and learning at large.


We use detailed survey data to study the influence of automation technology on workers’ training participation. We find that workers who are exposed to substitution by automation are 15 percentage points less likely to participate in training than those who are not exposed to it. However, workers who leave occupations that are highly exposed to automation increase their training participation, while those who enter them train consistently less. The automation training gap is particularly pronounced for medium-skilled and male workers, and is largely driven by the lack of ICT training and training for soft skills. Moreover, workers in exposed occupations receive less financial and nonfinancial training support from their firms, and the training gap is almost entirely related to a gap in firm-financed training courses.


Capturing evidence for dynamic changes in self-regulated learning (SRL) behaviours resulting from interventions is challenging for researchers. In the current study, we identified students who were likely to do poorly in a biology course and those who were likely to do well. Then, we randomly assigned a portion of the students predicted to perform poorly to a science of learning to learn intervention where they were taught SRL study strategies. Learning outcome and log data (257 K events) were collected from n = 226 students. We used a complex systems framework to model the differences in SRL including the amount, interrelatedness, density and regularity of engagement captured in digital trace data (ie, logs). Differences were compared between students who were predicted to (1) perform poorly (control, n = 48), (2) perform poorly and received intervention (treatment, n = 95) and (3) perform well (not flagged, n = 83). Results indicated that the regularity of students’ engagement was predictive of course grade, and that the intervention group exhibited increased regularity in engagement over the control group immediately after the intervention and maintained that increase over the course of the semester. We discuss the implications of these findings in relation to the future of artificial intelligence and potential uses for monitoring student learning in online environments. Practitioner notes What is already known about this topic Self-regulated learning (SRL) knowledge and skills are strong predictors of postsecondary STEM student success. SRL is a dynamic, temporal process that leads to purposeful student engagement. Methods and metrics for measuring dynamic SRL behaviours in learning contexts are needed. What this paper adds A Markov process for measuring dynamic SRL processes using log data. Evidence that dynamic, interaction-dominant aspects of SRL predict student achievement. Evidence that SRL processes can be meaningfully impacted through educational intervention. Implications for theory and practice
Complexity approaches inform theory and measurement of dynamic SRL processes. Static representations of dynamic SRL processes are promising learning analytics metrics. Engineered features of LMS usage are valuable contributions to AI models.


Based on the Teaching Through Interaction (TTI; Hamre et al., 2013) framework and the observational tool Classroom Assessment Scoring System (CLASS; Pianta, La Paro, et al., 2008), some professional development (PD) programs combined with video-based coaching had been developed. Previous studies have well-documented the effects of these PD programs on in-service teachers’ mastery of interactional skills; however, little research has been done on the effects for preservice teachers. In the current study, we aimed to explore: (1) if video-based coaching improves preservice teachers’ interactional skills, and (2) how the personal characteristics of teachers (whether they attend coaching or not) predict the change of interactional skills during their practicum. Using an experimental approach, the study recruited 56 preservice teachers from a Chinese university to participate in the assessment and intervention. Results showed that preservice teachers in the coaching group who received one semester of sustained and individualized coaching support demonstrated a greater improvement in teacher-child interaction skills in the Emotional Support domain than those in the control group. Further, preservice teachers’ higher levels of child-centered beliefs and initially lower levels of knowledge of effective teaching, ability of identifying effective teaching behavior, and teacher-child interactional skills related to a greater increase in interactional skills during the internship. These findings shed light on how to design effective preparation programs for preservice teachers during their practicum.


Although studies have shown that computational thinking (CT) can enhance learning processes and outcomes across traditional subjects, they have not shown how teachers might scaffold children’s CT processes in a technology-mediated learning context. This exploratory study examined how teacher talk and technologies impacted the CT of three children (6 to 8 years old). Seven videotaped 90-minute sessions of weekly project-based activities yielded 4,842 turns of talk (2,974 by children). Statistical discourse analysis revealed the following results. After a teacher command, the children more often executed a sequence of actions toward a solution but less often demonstrated problem understanding than otherwise. Following a teacher’s open question, the children were more likely to offer logically organized ideas. In response to a teacher’s rhetorical question, they more often searched for information. These results inform educators regarding when to use each type of teacher talk to scaffold children’s CT processes.


Interactive apps are commonly used to support the acquisition of foundational skills. Yet little is known about how pedagogical features of such apps affect learning outcomes,
attainment and motivation—particularly when deployed in lower-income contexts, where educational gains are most needed. In this study, we analyse which app features are most effective in supporting the acquisition of foundational literacy and numeracy skills. We compare five apps developed for the Global Learning XPRIZE and deployed to 2041 out-of-school children in 172 remote Tanzanian villages. A total of 41 non-expert participants each provided 165 comparative judgements of the five apps from the competition, across 15 pedagogical features. Analysis and modelling of these 6765 comparisons indicate that the apps created by the joint winners of the XPRIZE, who produced the greatest learning outcomes over the 15-month field trial, shared six pedagogical features—autonomous learning, motor skills, task structure, engagement, language demand and personalisation. Results demonstrate that this combination of features is effective at supporting learning of foundational skills and has a positive impact on educational outcomes. To maximise learning potential in environments with both limited resources and deployment opportunities, developers should focus attention on this combination of features, especially for out-of-school children in low- and middle-income countries. Practitioner notes What is already known about this topic Interactive apps are becoming common to support foundational learning for children both in and out of school settings. The Global Learning XPRIZE competition demonstrates that learning apps can facilitate learning improvements in out-of-school children living in sub-Saharan Africa. To understand which app features are most important in supporting learning in these contexts, we need to establish which pedagogical features were shared by the winning apps. What this paper adds Effective learning of foundational skills can be achieved with a range of pedagogical features. To maximise learning, apps should focus on combining elements of autonomous learning, motor skills, task structure, engagement, language demand and personalisation. Free Play is not a key pedagogical feature to facilitate learning within this context. Implications for practice and/or policy When developing learning apps with primary-aged, out-of-school children in low-income contexts, app developers should try to incorporate the six key features associated with improving learning outcomes. Governments, school leaders and parents should use these findings to inform their decisions when choosing an appropriate learning app for children.


Leadership is one of the skills necessary for the career of future health professionals. The purpose of this study is to get an insight into developing leadership skills in online learning as well as ways to deal with various management issues. The methods used in this study include a survey, quantitative and qualitative analysis, and statistical data processing. The research conducted among medical students suggests that a leader is identified by behavioral, cognitive personality traits, and physical qualities. Online learning creates an inclusive environment, as well as directly prepares the ground for gaining leadership. Such format of learning reduces society’s pressure regarding the molding of personality. The implications of the study are based on the development of tools for addressing leadership and management issues in online learning. It aims to demonstrate the benefits of online learning and show facets of leadership that are worth paying attention to.

Artificial intelligence (AI) has generated a plethora of new opportunities, potential and challenges for understanding and supporting learning. In this paper, we position human and AI collaboration for socially shared regulation (SSRL) in learning. Particularly, this paper reflects on the intersection of human and AI collaboration in SSRL research, which presents an exciting prospect for advancing our understanding and support of learning regulation. Our aim is to operationalize this human-AI collaboration by introducing a novel trigger concept and a hybrid human-AI shared regulation in learning (HASRL) model. Through empirical examples that present AI affordances for SSRL research, we demonstrate how humans and AI can synergistically work together to improve learning regulation. We argue that the integration of human and AI strengths via hybrid intelligence is critical to unlocking a new era in learning sciences research. Our proposed frameworks present an opportunity for empirical evidence and innovative designs that articulate the potential for human-AI collaboration in facilitating effective SSRL in teaching and learning. Practitioner notes What is already known about this topic For collaborative learning to succeed, socially shared regulation has been acknowledged as a key factor. Artificial intelligence (AI) is a powerful and potentially disruptive technology that can reveal new insights to support learning. It is questionable whether traditional theories of how people learn are useful in the age of AI. What this paper adds Introduces a trigger concept and a hybrid Human-AI Shared Regulation in Learning (HASRL) model to offer insights into how the human-AI collaboration could occur to operationalize SSRL research. Demonstrates the potential use of AI to advance research and practice on socially shared regulation of learning. Provides clear suggestions for future human-AI collaboration in learning and teaching aiming at enhancing human learning and regulatory skills. Implications for practice and/or policy Educational technology developers could utilize our proposed framework to better align technological and theoretical aspects for their design of adaptive support that can facilitate students' socially shared regulation of learning. Researchers and practitioners could benefit from methodological development incorporating human-AI collaboration for capturing, processing and analysing multimodal data to examine and support learning regulation.


The online and offline blended learning mode based on SPOC has gradually become a popular teaching mode in higher institutions due to COVID-19 pandemic. However, students of English as a Foreign Language (EFL) in SPOC-based blended learning environments continue facing problems of low participation and persistent intention. In order to explore the influencing factors of EFL students' continuance intentions to learn under the SPOC blended learning environment, this study recruits 48 EFL students from three higher vocational colleges based on the grounded theory. Through the triple coding method of open, axis, and selective coding based on the grounded theory and the used of software Nvivo to conduct a triple coding analysis of the text data obtained from the in-depth interviews and focus group interviews, a theoretical model of the influencing factors of EFL students' continuous learning intention (pre-influencing factors,
external situational factors, and continuance intention) is proposed. Besides, a systematic framework based on stakeholders response to improve EFL students’ continuance learning intentions in SPOC-based blended learning environments is constructed accordingly. This study can provide reference for basic theory and variable selection for subsequent research on the influencing factors of EFL students’ continuance learning intentions in China and elsewhere.


Using Virtual Reality (VR) in educational contexts is becoming increasingly common. The ability of VR to provide authentic learning experiences is making it a particularly promising platform for language learning, but the research on its acceptance among language teachers is scarce. This paper reports the results obtained from a large-scale (N = 2,176) survey on language teachers’ beliefs toward the use of VR for education. The survey explored the relationships between language teachers’ beliefs about using VR in a classroom and their teaching experiences, such as previous use of VR for teaching, their stages of VR technology integration, and their preferred teaching approaches. Furthermore, the survey yielded answers on the relationship between the availability of information technology (IT) personnel in language teachers’ schools. We found that practical knowledge and past experiences of incorporating VR in teaching were crucial determinants of teachers’ positive beliefs, showing that teachers were motivated to adopt VR technology in their classrooms if they had previously used it. Language teachers’ favorable beliefs were also positively correlated with the availability of IT personnel in their schools.


This research aimed to explore the views of 8th grade students on digital game-based English language learning as a foreign language (EFL). A total of 69 students between the ages of 12 and 14 participated in the study. Students’ vocabulary acquisition skills were tested using a web 2.0 application called « Quizziz. » The study utilized a triangulation method in which the results of a quasi-experiment and the metaphorical perceptions of the learners were obtained. The results of the tests were recorded at two-week intervals, and students’ reactions to the results were collected using a data collection tool. The study used a pre-test, post-test, and control group design. The experimental and control groups took a pre-test before the study began. The experimental group then practiced vocabulary using Quizziz, while the control group practiced vocabulary by memorizing it in their mother tongue. The post-test results showed significant differences between the control and experimental groups. In addition, content analysis was used to analyse the data, with metaphors being grouped and frequencies calculated. The students generally expressed positive views on digital game-based EFL, stating that it was highly successful and that in-game power-ups, competing with other students, and receiving rapid feedback improved their motivation.

An extraordinary amount of data is becoming available in educational settings, collected from a wide range of Educational Technology tools and services. This creates opportunities for using methods from Artificial Intelligence and Learning Analytics (LA) to improve learning and the environments in which it occurs. And yet, analytics results produced using these methods often fail to link to theoretical concepts from the learning sciences, making them difficult for educators to trust, interpret and act upon. At the same time, many of our educational theories are difficult to formalise into testable models that link to educational data. New methodologies are required to formalise the bridge between big data and educational theory. This paper demonstrates how causal modelling can help to close this gap. It introduces the apparatus of causal modelling, and shows how it can be applied to well-known problems in LA to yield new insights. We conclude with a consideration of what causal modelling adds to the theory-versus-data debate in education, and extend an invitation to other investigators to join this exciting programme of research. Practitioner notes What is already known about this topic ‘Correlation does not equal causation’ is a familiar claim in many fields of research but increasingly we see the need for a causal understanding of our educational systems. Big data bring many opportunities for analysis in education, but also a risk that results will fail to replicate in new contexts. Causal inference is a well-developed approach for extracting causal relationships from data, but is yet to become widely used in the learning sciences. What this paper adds An overview of causal modelling to support educational data scientists interested in adopting this promising approach. A demonstration of how constructing causal models forces us to more explicitly specify the claims of educational theories. An understanding of how we can link educational datasets to theoretical constructs represented as causal models so formulating empirical tests of the educational theories that they represent. Implications for practice and/or policy Causal models can help us to explicitly specify educational theories in a testable format. It is sometimes possible to make causal inferences from educational data if we understand our system well enough to construct a sufficiently explicit theoretical model. Learning Analysts should work to specify more causal models and test their predictions, as this would advance our theoretical understanding of many educational systems.


This paper describes a study designed to investigate the promise of resources that support the development of computational thinking (CT) in preschool children. This study was the culmination of a collaborative research process between researchers and media developers of a home-based intervention that included media and hands-on activities created to support the development of young children’s CT. The mixed-methods study included 108 families, each with a 4- or 5-year-old child. Families, who participated in the study at home for six weeks, were randomly assigned to an intervention group that viewed media and engaged with hands-on activities with a CT focus or a control group that viewed and engaged with non-STEM literacy content. Data collection consisted of parent surveys, parent interviews, and CT learning and pre-coding tasks to assess children’s CT abilities. Results indicate that the learning intervention demonstrates promise in supporting parental understanding of CT. Experience with the intervention over the six weeks also appeared to cultivate some CT strategy use in
children as evidenced by parental reports and performance on learning and pre-coding sequencing tasks.


Collecting and organizing data to understand and answer real-world questions is an increasingly important skill in our current world. Fostering data collection and analysis (DCA) skills in young children leverages key mathematics skills as well as the data representation, visualization, and interpretation skills of computational thinking (CT), culminating in a problem-solving approach with data. As such, the intervention, comprising investigations and a digital app, supported preschool teachers and children to answer data-focused questions by engaging in each step of the DCA process in order to foster CT and math skills. Teachers appreciated that the app offers a new way for children to visualize data and noted that the app provided learning opportunities for children that would not otherwise be possible or easy to implement. Results also suggest that the app provides a systematic process for data collection, entry, and interpretation. Children in classrooms that completed the intervention had significantly higher scores at post-intervention compared to children in classrooms that did not complete the intervention, controlling for pre-intervention scores, $B(SE) = 0.13(0.05)$, $t(6) = 2.48$, $p = .048$.


The adoption of online learning for adolescent students accelerated with the outbreak of the COVID-19 pandemic. However, few studies have investigated the mechanisms influencing adolescent students’ online learning engagement systematically and comprehensively. This study applied the Presage-Process-Product (3P) model of learning to investigate the direct effects of presage factors (i.e., information literacy and self-directed learning skills) and process factors (i.e., academic emotions) on high school students' online learning engagement; and the mediating role of process factors. Data from 1993 high school students in China (49.3% males and 50.7% females) were analyzed using structural equation modeling. The result showed that students' information literacy, self-directed learning skills, and positive academic emotions positively predicted their online learning engagement. Moreover, the positive impact of self-directed learning skills on students' online learning engagement was significantly and largely enhanced through the mediation effects of positive academic emotions ($$$\text{upbeta}$$ = 0.606, 95% CI = [0.544, 0.674]). Based on these results, to enhance adolescent students' online learning engagement, it is important for school administrators, teachers, and parents to improve students' information literacy, self-directed learning skills, and positive academic emotions.


A discussion forum is an indispensable part of a massive open online course (MOOC) environment as it enables knowledge construction through learner-to-learner interaction.
such as discussion of solutions to assigned problems among learners. In this paper, a machine prediction model is built based on the data from the MOOC forum and the depth of discussion of solutions to assigned problems on the topic among students was analyzed. The data for this study was obtained from Modern educational technology course through Selenium with Python. The course has been offered to a total of 11,184 students from China seven times since February, 2016. The proposed model includes the formula of the depth of problem-solving discussion in MOOC forum and its prediction probability. The efficiency of the prediction model and the most important factor of the depth of problem-solving discussion in MOOC are explained in the paper. Based on the results, useful suggestions for effective teaching in MOOC forums are provided in the article.


Collaborative programming can develop computational thinking and knowledge of computational programming. However, the researchers pointed out that because students often fail to mobilize metacognition to regulate and control their cognitive activities in a cooperation, this results in poor learning effects. Especially low-achieving students need more metacognitive support. Therefore, this study proposed a metacognition-based collaborative programming approach (M-CPA) to improve students' performance in collaborative programming. To evaluate the effectiveness of the method for students with different levels of learning achievement, a 7-week experiment was conducted. A total of 222 middle school students were divided into the experimental group with the M-CPA learning and the control group with the conventional collaborative programming approach (C-CPA). The results showed that learning methods and learning achievement had interactive effects on computational thinking tendency, critical thinking tendency, and metacognition tendency. M-CPA could significantly improve students' computational thinking tendency, critical thinking tendency, and metacognition tendency. Moreover, the proposed approach is more effective for low-achieving students. The results also showed that M-CPA could improve the students' achievement in program analysis questions.


This study explores the effects of pre-service teachers’ digital literacy and self-efficacy on their perception of AI education for young children in early childhood education settings. Digital literacy refers to the ability to communicate with others by using digital technology, including the ability for sharing knowledge and information after user's creation. A survey was conducted on 212 pre-service early childhood teachers at two Universities located in the eastern United States, and the collected data were analyzed by descriptive statistics, correlation analysis, and hierarchical multiple regression. As a result of the study, first, pre-service teachers had high critical thinking among the sub-factors of digital literacy, but relatively low problem-solving skills. Second, the relationship between digital literacy, self-efficacy, and the perception of AI education for young
children showed a positive correlation. Third, among the sub-factors of digital literacy of pre-service early childhood teachers, technical application, learning interaction, and problem-solving with teachers’ self-efficacy were found to have a significant effect on the perception of AI education for young children. This study proposes that developing a pre-service teacher education program that can improve their digital literacy and self-efficacy is necessary for guiding early childhood teachers to use artificial intelligence technology with young children in early childhood education classrooms in educationally meaningful ways.


This study attempts to: (a) investigate whether positive and negative emotions mediate the pathways linking self-efficacy for learning programming with effort and persistence in undergraduates’ learning Scratch programming combining with a programmable hardware platform (i.e., Arduino), and (b) assess the effect of academic major (i.e., information technology-related majors vs non-information technology-related majors) on self-efficacy for learning programming and emotions. With the use of responses collected from a sample of 156 undergraduate students, the research model is empirically validated using partial least squares structural equation modeling (PLS-SEM). The findings reveal that undergraduates’ effort and persistence while learning programming were significantly predicted by positive emotions, but not by negative emotions. Self-efficacy for learning programming significantly and positively influenced positive emotions and negatively influenced negative emotions. Finally, variations in predicting positive emotions were found between different academic majors: students in information technology-related majors experienced less negative emotional experiences than those in non-information technology-related majors.


With the rapid development of Artificial Intelligence, automatic writing evaluation (AWE) has received much attention from English Foreign Language (EFL) writing teachers. However, the obstacles and potential problems of integrating AWE in EFL writing instruction have yet to be explored. Scholars have indicated that the effectiveness of AWE in EFL writing instruction depends on the learners’ depth of reflection. Hence, this study proposes a learning approach that integrates AWE and peer assessment (PA) based on the knowledge-building theory, with the expectation that learners will be able to strengthen their reflections on AWE feedback through PA, and thereby improve their EFL writing performance. To examine the effectiveness of the proposed approach, a quasi-experiment was conducted in a university EFL writing class. One of the classes (33 students) was the experimental group using the PA-AWE approach, and the other class (31 students) was a control group that studied using the conventional AWE approach (C-AWE approach). Findings revealed that the PA-AWE group outperformed the C-AWE group regarding EFL writing performance, learning motivation, critical thinking, and
reduced EFL writing anxiety. In addition, a thematic inductive qualitative analysis of the interview data indicated each approach's benefits and learning conceptions.


Reflection plays a very important role in the learning process, contributing to improved learning performance and potentially influencing cognitive process. Few studies, however, have used computer-based mind mapping to enhance student reflective activities and examine the relationship between reflection, cognitive presence, and learning outcomes. Therefore, a quasi-experiment was implemented by recruiting students from a big data class at a normal university in central China. The collected data was analyzed by jointly using analysis of covariance, cognitive network analysis, linear regression, and moderating effect analysis. The results were as follows: (a) Students who used computer-based mind mapping performed better on reflection, higher-order cognitive presence, and learning outcomes. (b) The epistemic network analysis showed that students who used computer-based mind mapping had strong connections in higher levels of cognitive presence. (c) Reflection had a positive predictive effect on cognitive presence and learning outcomes, with mind mapping positively moderating the relationship between reflection, cognitive presence, and learning outcomes.


Higher perceived digital literacy (DL) led to higher occupational self-efficacy (OSE).


ABN (Abierto Basado en Números—Open Calculation Based on Numbers) is a method for teaching basic arithmetic operations in primary education that has become popular in recent years and that is based on the decomposition of numbers through manipulative materials that encourage mental calculation. Currently there is limited number of tools that can be used to support the ABN method and so this article presents the design and development of two tools that facilitate learning with this method, a physical device, ABENÉARIO-P, and a virtual device (web application), ABENÉARIO-V, that complements the physical device. In addition, a study of the use of these tools was carried out with 80 learners (ages 7 and 9) and 9 teachers with a focus on ABENÉARIO-V. The results of this study showed a positive evaluation of the tool by both learners and teachers, an adequate time to complete the mathematical operations assigned to learners and an improvement in performance as the tool was used. As a conclusion, it is important to provide adequate tools that can support teachers and learners in the practice with the ABN method as in the case of ABENÉARIO-P and ABENÉARIO-V. Limitations refer mainly to the context of the study, which was conducted at a time of severe social distance restrictions during the COVID-19 pandemic on touching physical devices or being able to gather a larger number of learners in the classroom.

Much research has been done on the benefits of video games in a physical education context (Camunas-Vega & Alcaide-Risoto, 2020; Fang et al., 2020). However, little attention has so far been paid to the effectiveness of commercial video games combined with actual basketball practice in helping students improve their reasoning skills (Chuang et al., 2021; Rogers et al., 2020). The study presents a quasi-experimental pre-post design with a control group in order to evaluate the impact of a specific training program in reasoning with the video game NBA 2K16. A convenience sample of 215 high school students participated in the study. Three reasoning subscales of the Evalua-9 psycho-pedagogical test (inductive $\alpha = 0.88$; deductive $\alpha = 0.85$; spatial $\alpha = 0.89$) were used for data collection. Our findings show a significant moderate effect in the students who participated in the training program. An additional outcome was that sex differences in spatial and deductive reasoning in the pre-test disappeared in the post-test. We discuss the educational implications of the use of the video game as the main learning tool to enhance the reasoning process of Secondary Education students in Physical Education.


Publicly available generative AI (GenAI) tools are rapidly emerging, and the release of iterative versions is outpacing the adaptation of national regulatory frameworks. The absence of national regulations on GenAI in most countries leaves the data privacy of users unprotected and educational institutions largely unprepared to validate the tools. UNESCO’s first global guidance on GenAI in education aims to support countries to implement immediate actions, plan long-term policies and develop human capacity to ensure a human-centred vision of these new technologies. The guidance presents an assessment of potential risks GenAI could pose to core humanistic values that promote human agency, inclusion, equity, gender equality, linguistic and cultural diversities, as well as plural opinions and expressions. It proposes key steps for governmental agencies to regulate the use of GenAI including mandating the protection of data privacy and considering an age limit for their use. It outlines requirements for GenAI providers to enable their ethical and effective use in education. The guidance stresses the need for educational institutions to validate GenAI systems on their ethical and pedagogical appropriateness for education. It calls on the international community to reflect on their long-term implications for knowledge, teaching, learning and assessment. The publication offers concrete recommendations for policy-makers and education institutions on how the uses of GenAI tools can be designed to protect human agency and genuinely benefit students, teachers and researchers.


The present study investigates the debugging process of 526 children in preschool (4–6 aged) when programming a tangible robot. When a child is involved in programming, it
is needed to identify and correct errors, or in other words, debug a program. Debugging is a high-level thinking skill and is an essential component closely related to developing Computational Thinking in early childhood education. Though the debugging process is a cognitive function in programming investigated by many researchers in recent decades, most studies are conducted either in primary, secondary education, or higher education concerning beginners or experts in programming. Very few reviews, and some focus on preschool education. Our study set out the following objectives: 1) How do children identify the existence of error and locate it? 2) What types of errors emerge when coding? 3) What type of error is complex for novice programmers? 4) What strategies are developed by novice programmers to debug effectively? and 5) What types of knowledge do novice programmers construct by debugging the tangible robot Bee-Bot? The study follows an iterative model of a design-based research approach. It uses multiple case studies to collect qualitative and quantitative data. The programming intervention was implemented by 30 educators in their classrooms and was based on a scenario-based teaching design. The debugging process was analysed using Klahr & Craven’s framework (1988): 1) test and evaluate program, 2) identify bug, 3) represent program, 4) locate bug and 5) correct bug. The main finding is the construction and development of syntactic and semantic knowledge.


This paper proposes to evaluate learning efficiency by implementing the flipped classroom and automatic source code evaluation based on the Kirkpatrick evaluation model in students of CS1 programming course. The experimentation was conducted with 82 students from two CS1 courses; an experimental group (EG = 56) and a control group (CG = 26). Each student in each group completed 15 programming tasks. The level of knowledge of the participants acquired between the two groups is measured using the Kirkpatrick model, taking as a source a pre-test of previous knowledge, the grade assessment, the time of the activities, and a post-test of learning achieved. When comparing the submits time between the experimental and control group, it is observed that the value of the means is similar for the EG and CG; in this case, time is not a factor for comparison between the groups. However, in the grading, the value of the means is different for the EG and CG; EG students scored better than CG students. The evaluation of the Kirkpatrick model shows that the strategy implemented, on the one hand, does not improve the time of the activities; on the other hand, it improves the grades in the CS1 course.


Young children are exposed to new digital technologies, such as social robots. Limited research exists on how children engage with social robots and their role in the preschool classroom. This study observed 35 English-speaking children (M age = 4.60 years) participating in two tasks (Simon Says and iPad drawing) under the guidance of a social robot or human instructor. Children’s engagement was measured across behavioural, emotional, and verbal domains. Results showed higher behavioural and positive emotional engagement with a human instructor than a social robot instructor across both
tasks. Children uttered more words with the human instructor than the social robot instructor for the iPad drawing task, although there were no differences for the Simon Says task. Children’s engagement and utterances were positively correlated during the social robot and human instructor conditions. The findings suggest that child engagement was overall higher with a human than with a social robot and such differences may be important for teachers to consider when using social robots in the preschool classroom.


The unanticipated switch from face-to-face learning to online education caused by the Covid-19 pandemic has led to a lack of familiarization preparation for students, potentially hampering their learning processes in several ways. The success of online learning is primarily based on the quality of the information system, self-regulated learning, and intrinsic learning motivation. The severe stress amid epidemic lockdowns might trigger negative impacts on students' learning motivation and self-regulated learning. Nevertheless, studies examining the relationship between information system success, self-regulated learning, perceived stress, and intrinsic learning motivation in the context of developing countries are still scarce. The current research aims to address this gap in the literature. Participants were 303 university students. The results of second-order structural equation modelling revealed the positive direct and indirect relationships between information system success, intrinsic learning motivation, and online self-regulated learning. Besides, despite the insignificant relationships between perceived stress, intrinsic learning motivation, and online self-regulated learning, most participants in this study were found to have moderate to high stress levels. Hence, the potential adverse effect of stress on students' learning process should not be ignored. The results provide implications for educators and researchers studying online learning environments and educational psychology.


We know little to what extent peer feedback strategies can be applied on a large scale in higher education for complex tasks. This study aimed to design, implement, and evaluate an online-supported peer feedback module for large-scale use to enhance higher education students' argumentative essay writing performance. To do this, 330 students from five different courses at bachelor and master levels followed the online supported peer feedback module. In this module, students were asked to write an argumentative essay about a controversial issue, provide peer feedback for two peers, and revise their original essays based on the received feedback. Three types of data including original essay (pre-test) data, peer feedback data, and revised essay (post-test) data collected. Students also filled out the learning satisfaction questionnaire at the end of the module. The findings showed that the suggested online-supported peer feedback module was effective in improving students’ argumentative essay quality in all
courses at the bachelor and master levels. The findings also showed there is a difference in the level of students’ satisfaction with the module among the courses and between the education levels. The findings of this study provide insights into and add value to the scalability of online peer feedback tools for argumentative essay writing in different contexts. Based on the findings, recommendations for future studies and educational practice are provided.


Studies have shown that the digital divide affects students' educational achievement across racial and ethnic groups. In light of this, the study investigates the effect of technology access at home on student learning hours during the COVID-19 pandemic and across racial and ethnic groups in the U.S. The Household Pulse Surveys (HPS), conducted by the United States Census Bureau and administered from August 19, 2020, to March 29, 2021, were used for the analysis. We compute a composite index of technology access using the principal component analysis (PCA). And for the empirical model, the study employed a Tobit regression model. The result shows that the estimated index of technology access based on PCA for the whole sample is about 0.92, indicating a higher level of access. However, the breakdown by race/ethnicity shows an average of about 0.93, 0.89, 0.90, 0.94, and 0.89 for students representing White, Black, Hispanic, Asia, and other races, respectively. This means the intensity at which households in the sample have access to technology is higher among the Asian and White students, followed by Hispanic, Black, and other races in that order. The estimated effect of technology access on the student learning hours during COVID-19 based on the Tobit regression model shows about a 3.1 unit points increase over the whole sample. And further analysis reveals variation at which access to the technology impacts learning hours across race and ethnicity groups. For example, we find that access to technology significantly increased learning hours by about 3.5, 1.6, 2.2, and 3.4 unit points among White, Black, Hispanic, and Asian students, respectively. The observed differing effect of access to technology on learning hours further highlights the racial disparities in American society’s digital divide, which reveal how access to technology disproportionately impacts student learning hours during the COVID-19 pandemic across race and ethnicity.


The purpose of this paper was to examine learners’ perspectives on massive open online course (MOOC) design. For the past decade, there has been substantial discussion on the design aspects and instructional quality of MOOCs. However, research investigating MOOC design from learners’ perspectives is rarely conducted. Understanding MOOC learners’ perspectives regarding MOOC design can bring useful insights to researchers and practitioners for the growth and success of MOOCs. However, research investigating MOOC design from learners’ perspectives is rarely conducted. Understanding MOOC learners’ perspectives regarding MOOC design can bring useful insights to researchers and practitioners for the growth and success of MOOCs. Through exploratory factor analysis of 209 learners of a MOOC, this study identified four MOOC design dimensions that the learners value: human interactions, navigation, professional development, and course workload. In addition, the study found that learner characteristics such as learners’ age and the type of goals learners bring to the MOOCs are related to what they value in MOOC design. Expanding our understanding of MOOC design, implications for future research and practice for designing a MOOC are discussed.

In view of school closures due to the COVID-19 pandemic, this paper examines how a Home-Based Learning program affects learning outcomes of children in under-resourced communities. To overcome limited internet connectivity, the program provides remote instructions via phone calls and simple text messages along with automated voice calls to engage children enrolled in grades one to five in activity-based learning content. This intervention was conducted in three districts in the state of Odisha in India. Using a difference-in-differences framework, we find that the intervention led to a statistically significant improvement in basic number recognition and arithmetic operations, and language learning scores of children by 4.69 percentage points and 5.52 percentage points, respectively. Our results are robust to alternative methods of estimation and application of Lee bounds, thus indicating that well-designed low cost interventions could be a useful supplement for continued learning in the face of sudden shocks in low income countries. With a rise in hybrid format of teaching and learning, such interventions have the capability to cushion the decline in learning levels and provide a safety net in the event of school closures.


This study uses structural regression analysis to test an integrated model that reveals the relationship between internal technology barriers, learning approaches, and technology adoption in educational contexts. The findings show that the direct effect of internal technology barriers on acceptance is significant. In addition to this, deep and surface learning approaches influence perceived internal technology barriers and acceptance, while learning approaches and internal technology barriers have a considerably large effect on acceptance. Based on the findings, both deep and surface learning approaches, together with the technology internal barriers, have a direct and significant effect on acceptance, suggesting that compared to surface learners, deep learners have more influential internal technology barriers in terms of technology acceptance.


New technologies have led to digital educational tools to improve learning. Game-Based Learning makes it possible to test whether there is a positive impact on official grades. We have collected the scores of the Kahoot! games, the marks of the continuous assessment, the final exam, and the final mark of the subject, to create an ad-hoc database. Finally, we have analyzed a database consisting of 392 marks of higher students from the first semester of the 2018/2019 academic year. We have calculated a correlation matrix, tested a hypothesis for differences in mean paired samples, and proposed three regression models to obtain that there is a positive influence of the games on the official marks. Therefore, Kahoot! is a didactic tool that improves students’ learning and is reflected in their official marks.

Educational applications (apps) are ubiquitous within children’s learning environments and emerging evidence has demonstrated their efficacy. However, it remains unclear what the active ingredients (ie, mechanisms), or combination of ingredients, of successful maths apps are. The current study developed a new, open-access, three-step framework for assessing the educational value of maths apps, comprised of type of app, mathematical content and app design features. When applied to a selection of available maths apps previously evaluated with children in the first 3 years of school (the final sample included 23 apps), results showed that practice-based apps were the most common app type tested (n = 15). Basic number skills, such as number representation and relationships, were the most common area of mathematics targeted by apps (n = 21). A follow-up qualitative comparative analysis showed observed learning outcomes with maths apps were enhanced when apps combined the following: a scaffolded and personalised learning journey (programmatic levelling) and explanations of why answers were right or wrong (explanatory feedback), as well as praise, such as ‘Great job!’ (motivational feedback). This novel evidence stresses the significance of feedback and levelling design features that teaching practitioners and other stakeholders should consider when deciding which apps to use with young children. Directions for future research are discussed. Practitioner notes What is already known about this topic Educational apps have been shown to support maths attainment in the first 3 years of school. Several existing frameworks have attempted to assess the educational value of some of these maths apps. Emerging experimental evidence also demonstrates the benefits of specific app design features, including feedback and levelling. What this paper adds Practice-based maths apps are the most common type of app previously evaluated with young children. These evaluated maths apps have mostly focused on basic number skills. The combination of explanatory and motivational feedback, with programmatic levelling (either dynamic or static), was a necessary condition for enhancing learning outcomes with maths apps. Implications for practice and policy The inclusion of feedback and levelling in maths apps should be considered by app developers when designing apps, and by educational practitioners and parents when deciding which apps to use with their children. Further consideration is also needed for the development of educational apps that include a broad range of maths skills.


Plagiarism has been among the top forms of academic misconduct. Detective, reactive and proactive measures are taken to mitigate plagiarism in scholarly works. Text-matching tools play a significant role in the detection of plagiarism. Many studies have tested the performance of text-matching tools in detecting plagiarism from various perspectives. However, no study addressed the performance of such tools in ideographic languages, particularly Japanese. Considering the sharp increase in the number of academic Japanese text and plagiarism incidents in the Japanese context, it is essential to explore to what extent text-matching tools catch similarities in Japanese texts and respond to the needs of Japanese users. Within this scope, this study set out to explore
the coverage and usability performance of text-matching tools in the Japanese language. We tested the coverage performance of 10 text-matching tools with five types of intentionally plagiarized documents. Also, we tested the usability performance via a feature checklist. The testing results suggested that the tools generally give a relatively higher performance on the usability side rather than the coverage aspect. Most tools have minimal coverage performance in the Japanese language. In the end, we provided takeaways for vendors, policymakers and educators.


The current study explored the relationship between learner profiles and the nature of their interaction with content in massive, open, and online learning environments. The research was conducted on the Anadolu University Open Education System, and data from 597,164 learners enrolled in 86 different degree programs were analyzed by unsupervised machine learning methods. Cluster analysis was used to identify learner profile groups and association rules were applied to identify learner-content interaction patterns. As a result of the analyses, five clusters were obtained, and it was determined that the attribute with the highest discrimination in determining the clusters was the learners’ semester grade point average. The clusters were named according to learner-content interactions and the learners’ semester grade point average. Analysis of the association rules revealed that various learner-content interactions emerged in the context of profile groups.


The purpose of this study was to look into how Information and Communication Technology (ICT) is used in teaching English language from the point-of-view of English language teachers in Palestine. A quantitative approach was employed to collect data from 780 language school teachers from 260 schools who participated in a course project utilizing ICT in English as a Foreign Language teaching (TEFL). These participants responded to a questionnaire survey about the effects of the Covid-19 epidemic on language education and how they dealt with these. We statistically analysed the responses through four domains: the use of ICT in students’ lives; the use of ICT in education generally; the use of ICT to support learning and teaching in EFL; and teachers’ perceived skills for using ICT in education. Results indicated that English language teachers in Palestinian public schools believed that ICT has clear potential to support the learning of English, but that there remain barriers to its implementation. Teachers feel equipped to use ICT but would like to see a greater emphasis on training in order to maximise their teaching.


This study explored how self-control and eudaimonic orientation are associated with learning burnout and internet addiction risk (IAR). Our results demonstrate that learning
burnout has a significant and positive impact on IAR. The impulse system and control system play parallel mediating roles in the relationship between learning burnout and IAR. The relationship between learning burnout and IAR is moderated by eudaimonic orientation. Finally, the mediating role of the impulse system on learning burnout and IAR is moderated by eudaimonic orientation. With these findings, our study clarifies the mediating roles of the impulse system and control system in learning burnout and IAR and the moderating effects of hedonic orientation and eudaimonic orientation. Our study not only offers a new perspective for IAR research but also has practical implications for intervening in middle school students’ IAR.


This paper suggests that artificial intelligence in education (AIEd) can be fruitfully analysed as ‘policies frozen in silicon’. This means that they exist as both materialised and proposed problematisations (problem representations with corresponding solutions). As a theoretical and analytical response, this paper puts forward a heuristic lens that can provide insights into how AI technologies (or advocated AI technologies) function as proposed solutions to certain problematisations based on various imaginaries about how education and learning are best performed or supported. The combined reading of imaginaries and problematisations can thereby aid in our understanding of why and how visions of learning and education are framed in relation to AIEd developments. The overall ambition is to advance theoretical and analytical approaches towards an educational system which is (anticipated as) increasingly permeated by AI systems—systems that also support and implement, more or less, invisible models, standards and assessments of learning, as well as more grand visions of (technology-augmented) education in society. Practitioner notes What is already known about this topic Artificial intelligence in education (AIEd) is repeatedly presented as a solution for a range of educational ‘problems’. This means that such ‘solutions’ must also frame certain aspects as ‘problems’. Such problems and ‘solutions’ (problematisations) also exist within certain imaginaries of the present times and of the future, where these problematisations are presented as particularly significant and acute, and promoting specific anticipations of learning and ideals of education. What this paper adds An exposition of problematisations in educational settings. An exposition of educational imaginaries. A heuristic lens for understanding the ‘present’ and ‘future’ in a particular imaginary as entangled in, and dependent on, a certain ‘past’. Implications for practice and/or policy The approach presented in this paper provides a heuristic lens for examining how AI technologies (or advocated AI technologies) function as proposed solutions to problematisations based on imaginaries about how education and learning are best performed or supported. This aids our understanding of how and why certain visions of learning and education are framed in relation to AIEd developments (real or imagined). It also advances theoretical and analytical approaches towards an educational system, which is (anticipated as) increasingly permeated by AI systems—systems that also support and implement, more or less, invisible models, standards and assessments of learning, as well as more grand visions of (technology-augmented) education in society.


Well-designed computer or app-based instruction has a number of potential benefits (e.g., increasing accessibility and feasibility of high-quality instruction, reducing time and resources required for training expert delivery, saving instructional time). However, variation in implementation can still affect outcomes when using educational technology. Research generally suggests that without follow-up support after training, implementation of educational interventions is often poor and outcomes reduced. However, the extent to which this is the case when the core element of an intervention is computer or app-delivered is not yet clear. This study investigated the effects of providing ongoing implementation support for Headsprout Early Reading (HER, an early reading programme accessible via a computer or an app), to determine whether such support leads to better outcomes. Twenty-two primary schools (269 learners) participated in a cluster-randomised controlled trial. Eleven schools received initial training followed by ongoing support across the school year, whereas the other 11 schools received initial training and technical support only. Pre- and post-measures of reading skills were conducted using the York Assessment of Reading for Comprehension. We found no effect of implementation support on outcomes, and no effect of implementation support on delivery of the core element of HER. However, there were some effects of implementation support on the implementation of other HER elements relating to the responsiveness of educators to learners' learning within HER. These findings have implications for providing access to high quality online instruction in early reading skills at scale, with minimal training. More broadly, the current study suggests that well-designed computer or app-based instruction can yield positive outcomes with minimal implementation support and training. However, further research is required to ensure the interplay between learners' app-based learning and teacher intervention functions as intended to provide additional support for those who need it. Practitioner notes: What is already known about this topic Well-designed computer or app-based instruction has a number of potential benefits (e.g., increasing accessibility and feasibility of high-quality instruction, reducing time and resources required for training expert delivery, saving instructional time). Implementation can still affect outcomes when using educational technology, and without follow-up support after training, implementation of educational interventions is often poor and outcomes reduced. The extent to which this is the case when the core element of an intervention is computer or app-delivered is not yet clear. What this paper adds We found that providing implementation support for teachers and teaching assistants delivering Headsprout Early Reading (HER; an early reading programme accessible via a computer or an app) did not affect the reading outcomes of learners. We also found the implementation support did not affect delivery of the core, app-delivered element of the programme. However, there were notable differences in implementation of other aspects of the programme, particularly in relation to the role of the teacher or educational practitioner in managing the interplay between the app-based learning and teacher intervention for learners who require further support. Implications for practice and policy These findings have implications for providing access to high quality instruction in early reading skills at scale, with minimal training. More broadly, the current study suggests that well-designed computer or app-based instruction can yield positive outcomes with minimal implementation support and training. However, the findings of this study identify some potential risk of an over-reliance on technology to facilitate the learning of all learners accessing the programme. Further research is required to ensure the interplay between learners' app-based learning and
teacher intervention functions as intended to provide additional support for those who need it.


We argue in this paper that there is currently no adequate theoretical framework or model that spans the twelve odd year trajectory from non-reader to proficient reader, nor addresses fine-grain skill acquisition, mastery and integration. The target construct itself, reading proficiency, as often operationalized as an endpoint of formal secondary schooling, is defined and measured in imprecise, fragmented terms. Consequently, schools (and empirical research) fall back on heuristics like the Simple View of Reading, or a few stages (learn to read, read to learn, read to do) to describe reading development. Those models, however, are too general to guide instructional decisions for adaptive learning systems. Progress in engineering an adequate learning system has been inhibited by a mismatch with curriculum standards and school organization that impose good-faith but not fully optimized developmental targets on the educational system. We propose the development of a learning and assessment framework to scaffold reading proficiency development while accounting for the diverse learning trajectories of groups or individuals across development. We then identify some key problems, challenges and opportunities that AI technologies are poised to help us address in conceiving individualized, adaptive learning systems for reading proficiency across the developmental spectrum. We close with a selective review of examples of AI-enhanced research or products.

Practitioner notes What is already known about this topic Reading proficiency is a vital component of education systems design. Theoretical and empirical studies across multiple disciplines have been published, but much of this research is framed in fragmented theories that do not seamlessly span the trajectory of life-long reading development. Current assessments are time-consuming, coarse-grained and fail to provide a roadmap for educators and designers of adaptive learning environments. There is a significant lack of knowledge of potentially non-linear growth in reading skills within or between years and how to design adaptive instruction for diverse subpopulations. What this paper adds We describe the initial steps towards a literacy learning and assessment framework that spans the trajectory from non-reader to proficient reader. We provide a landscape of exemplars of artificial intelligence and computational linguistics that reflect the possibilities of a more comprehensive, cohesive literacy development system. We reflect upon key problems, challenges and opportunities that AI technologies can help address in conceiving individualized, adaptive learning systems for reading proficiency across the developmental spectrum. Implications for practice and/or policy AI and computational linguistics can help fill in the gaps in understanding and enacting a longitudinal vision of reading development. Educators would ideally know what to expect of their students at particular points of development, identify deviations and have additional tools to intervene effectively to maximize progress. There is a need to develop adaptive instruction that spans the development of proficiency from preschool to college/career levels and adapts to address common barriers among diverse subpopulations.

The aim of this study is to determine whether Escape Rooms can be used as an active methodological approach for the purpose of teaching mathematics. The research adapted a quantitative approach via an experimental design. Two different study groups were established, the first of which comprised the control group who were taught using conventional training methods, and the second consisted of the experimental group, who were taught using a novel approach incorporating an Escape Room activity. The participants included 80 students who were all attending secondary school within the Kingdom of Saudi Arabia. The findings revealed how the activity involving the Escape Room led to a significant enhancement in the student’s motivation, achievement and autonomy. The conclusion can be drawn that using an Escape Room in mathematics teaching can enhance learning achievement, anxiety, motivation and autonomy, with students’ negative attitudes regarding mathematics learning considered as an important variable, particularly with respect to autonomy and motivation. Hence, Escape Rooms can potentially be more effective than conventional methods for teaching mathematics.


With a strong demand for online education and project management in deeper scope and larger scale to better fit COVID-19 pandemic situation, exploring new knowledge of online education to make it more effective became vital with the new challenges of STEM education. To resolve the above problem, this paper focuses on various aspects of online STEM education project management where the Enhanced Noyce Explorers, Scholars, Teachers (E-NEST) three-tiered structure was implemented during the COVID-19 period. Two City University of New York (CUNY) institutions, New York City College of Technology (City Tech) and Borough of Manhattan Community College (BMCC) used the three-tiered structure referred to as Explorer, Scholar and Teacher which incorporated advancements in teaching internships, professional development workshops and mentorships remotely. Built upon the theories of engagement, capacity and continuity (ECC) and team-based learning (TBL), this remote learning model and infrastructure had a positive impact on STEM education and project management. The technological tools utilized included Zoom, Google Meet, Microsoft teams, Blackboard Collaborate Ultra, Skype and SurveyMonkey. The results from qualitative and quantitative data including project evaluation, online surveys and focus group interviews demonstrate that the modified remote learning and management tools were effective. This indicated that the E-NEST model greatly supported student success and faculty in online learning and project management meetings.


When the traditional « one size fits all » approach is used in designing educational games, the game context is usually arranged in a fixed sequence. However, the designated content may not effectively support the diversity of players. The player’s ability and characteristics should be considered and supported with an appropriate learning context embedded in the game to facilitate personalised experiences. Adapting game scenarios to a player’s characteristics can boost motivation and ultimately improve
learning outcomes. This research applies a context-aware design approach and the Learner-Centered Design approach to establish a personalised adaptation framework for designing educational serious games and enhancing personalised knowledge delivery. The proposed framework decouples the game logic implementation and adaptation mechanism. It dynamically adapts the designed game objects and activities to personal learning objectives, learning levels and learning progress to achieve a non-linear learning sequence. Through synchronous real-time xAPI message exchange mechanisms, system components and learning content adaptation are enabled. The adaptation aims to fit personal learning objectives and provide a non-linear learning sequence in a game environment. The framework provides students with personalised learning experiences. A game named GhostCoder is implemented and used to evaluate the framework. Based on the externalised adaptive mechanism, the game content is adapted to the player’s performance by adjusting the difficulty of the learning content within the game. Testing of the game in the lab environment has been performed. At the next stage, an evaluation will be conducted with the target groups of students.


This study used online photovoice to study students’ perceptions of online/distance education during the COVID-19 pandemic. It aimed to (a) find the factors that facilitated and impeded online/distance education during the pandemic and (b) determine to which level of ecological systems theory participants attributed facilitators and barriers. We utilized community-based participatory research as the theoretical framework, based on the ecological systems theory. The participants consisted of 119 university students. We used online interpretative phenomenological analysis to analyze the data and found 12 facilitating themes in favor of online education (e.g., technology, 31%; home study comfort, 23%; with family, 17%). In terms of barriers to online education, 14 main themes emerged (e.g., lack of finance, 28%; Internet problems, 22%). Participants attributed facilitators and barriers respectively to the following levels of ecological systems theory: individual/intrapsychic (50%, 51%), microsystem (56%, 58%), exosystem (38%, 43%), and macrosystem (25%, 45%).


Le Forum de coélaboration de connaissances (FCC) est un outil de communication asynchrone qui permet l’appropriation de connaissances par la lecture et l’écriture de notes exprimant la pensée (Catel, 2001). L’article présente les résultats de l’apport de ce dispositif d’écriture collaborative pour soutenir l’énonciation d’idées lors de la rédaction individuelle d’un récit en cinq temps chez des élèves du primaire. Ces résultats, obtenus dans le cadre d’une recherche-action, tendent à mettre en lumière le potentiel d’une écriture collaborative soutenue par le FCC pour fournir des idées aux élèves lorsqu’ils sont ensuite soumis à une tâche individuelle d’écriture.

Reading is a fundamental skill to acquire during children’s school career. The present meta-analysis examined research on the effectiveness of digital technologies to foster early reading skills during Tier-1 interventions (i.e., high-quality core reading instruction which is intended to promote learning for all children). Unlike previous meta-analyses, this meta-analysis investigated the effectiveness in a broad way, taking into account cognitive versus non-cognitive learning outcomes, near versus far transfer outcomes and immediate versus delayed outcomes. Furthermore, different study characteristics were taken into account including participant characteristics, the targeted reading subskills, duration of intervention, type of technology and the level of integration. A total of 568 effect sizes from 72 studies encompassing 60,890 participants were analysed using a meta-analytic three-level model. A Hedges’g effect size of 0.37 was obtained, suggesting that using digital technologies generally have a positive, albeit small, effect compared to traditional teaching methods. Moderator analyses indicated that this effect was robust to cognitive and non-cognitive outcomes, near and far transfer outcomes, and immediate and delayed outcomes, but differed by participants’ age and study quality. Recommendations are formulated to push forward research on how digital interventions can be effectively implemented in the classroom. Practitioner notes What is already known about this topic Digital technologies can foster (early) reading skills. Meta-analyses to date focus only on the effect of digital reading interventions in terms of cognitive outcomes. Unclear how different factors moderate the effectiveness of digital reading interventions (e.g., type of technology, trained content, level of integration). What this paper adds Results corroborate previous findings indicating a positive but small effect compared to traditional teaching methods. This study provides some evidence that this effect was robust to cognitive and non-cognitive outcomes, near and far transfer outcomes, and immediate and delayed outcomes. The effect differed by participants’ age and study quality. Game elements, adaptivity and whether the intervention was well integrated made little difference to the effectiveness of the intervention. Implications for practice and/or policy The results confirm that digital reading interventions are effective in fostering cognitive, non-cognitive and efficiency outcomes. Call for more intervention studies investigating how game characteristics and the level of integration of a digital tool moderate the effectiveness. There is a need for reports of pilot studies investigating the effectiveness of recent digital technologies such as AR and VR.


Intervention fidelity is crucial in ensuring efficient and quality support for students in need. Some coaching strategies have evidenced positive impacts on intervention fidelity and virtual coaching has been emerging in recent years, especially during the COVID-19 pandemic. However, current literature is still limited in examining the effects of virtual coaching. After adapting an evidence-based set of in-person coaching materials and procedures into a virtual delivery format, this study used a multiple baseline design to evaluate the efficacy of the virtual coaching program in supporting interventionists who implemented a small-group reading intervention. Visual analysis and nonparametric analyses demonstrated considerable improvement in interventionists’ fidelity after
receiving the virtual coaching program. Additionally, surveys from interventionists indicated positive perceptions toward the coaches and the virtual coaching process. Practical implications of virtual coaching and future research directions are discussed.


Given the varied quality of massive open online courses (MOOCs), it is necessary to construct a MOOC evaluation framework to guide teachers’ online teaching practices. Based on the Quality Matters online course evaluation framework and studies on effective online teaching practices, a MOOC evaluation framework was constructed through literature analysis and expert interviews. Finally, an evaluation framework with eight dimensions and 42 secondary indicators was constructed. To examine its validity, five MOOCs were evaluated with this framework. Results show that the evaluation framework is helpful for evaluating MOOCs and providing implications for online instructors. They revealed the common limitations of MOOCs: single method for knowledge introduction, traditional evaluation methods, insufficient attention to student initiative, and inadequate copyright concerns. Corresponding suggestions are provided to improve the quality of MOOCs. Theoretical and practical implications for the improvement of MOOCs are discussed along with avenues for further research.


The mental health of students learning online is a critical task for many countries around the globe. The research purpose was to analyse the factors affecting the quality of mental health of young individuals who learnt under conditions of not total lockdowns but adaptive quarantine restrictions. The research involved 186 volunteers from Zhengzhou University of Technology, 94 were first-year students, and 92 were fourth-year students. The experimental group involved first-year students, and the control group involved fourth-year students. An average age of the participants in the experimental group was 18.3 years, and in the control group, the average age was 22.4 years. The scholars conducted the research after four months of distance learning under the adaptive quarantine. The students could be involved in their usual entertainment activities and interpersonal communication outside the home. The Behavioural Health Measure, better known as BHM-20, was the core psychometric tool. The research finds that distance learning is less effective for first-year students than for fourth-year students because the former cannot effectively adapt and communicate in a new social environment, and develop trusting interpersonal relationships with fellow students and teachers. The research results coincide with other research on this issue and demonstrate a low degree of mental resilience during and after the pandemic. Previous research is not suitable for the analysis of the mental health of students under adaptive quarantine, including the freshmen, considered the most vulnerable group. The article will be useful for professionals interested in distance education in higher educational institutions, workers of socio-psychological services at universities or individuals involved in adapting curriculum materials for distance learning.

Teacher education programs play a crucial role in developing teachers’ equity/social justice mindsets and technology integration knowledge and expertise. Scholars have advocated for merging these two areas to support common curricular goals and access unique learning benefits. However, little is known about how equity pedagogy and technology integration intersect in preservice teacher (PST) education. This scoping review aims to expand knowledge and understanding at this intersection with the goal of developing a foundation for future research and practice. Findings revealed that relevant studies focused on two main styles of pedagogy: (a) leveraging technology to teach about equity and social justice (i.e., tech-infused equity pedagogy), and (b) adopting a critical stance toward technology’s roles in schools and society (i.e., digital equity pedagogy). We provide a detailed description of these pedagogies and present useful systems of classification for related studies. We also present key implications of this work for PST education practice, policy, and scholarship.


Teachers are gatekeepers of technology integration in the classroom. Pre-service teachers’ attitudes, confidence, and competence in exploring emerging technologies play a critical role in teachers’ adoption of technology in teaching. This study examined the effects of a gamified technology course on pre-service teachers’ confidence, intention, and motivation in integrating technology into teaching. A sample of pre-service teachers (N = 84) at a Midwestern university in the United States in the academic year of 2021–22 was surveyed. The regression results revealed that the gamified course significantly and positively influenced pre-service teachers’ confidence in using technology in education, intention to adopt gamification, and motivation to explore more emerging technologies for teaching, after controlling for gender. In contrast, gender did not affect pre-service teachers’ confidence, intention, and motivation in integrating technology into instruction after controlling for the gamified course effects. Suggestions on gamifying course design while leveraging quest-based learning and active learning principles to enhance student positive attitudes and motivation to explore technology integration are discussed.


MOOCs might be an important organization way to realize the online learning process. Online technology and sharing technology enable MOOCs to realize the adaptive scheduling of learning resources, as well as the independent construction of learning sequences. At the same time, it also generates a large number of complex learning behaviors. How to mine and predict the value and laws of MOOCs is a difficult problem in learning analytics applied to MOOCs. This study integrates the context information of the learning process of MOOCs, designs a deep learning model based on multi-entity knowledge graph, in order to predict and track the interest propagation of learning behaviors, and realizes the learning trend guidance mechanism supported by multi
features and complex relationships. Through sufficient experiments, the effectiveness and reliability of this model are verified, and based on the analysis results, the best path and implementable scheme for the interest propagation of learning behaviors are constructed. The whole research might provide more references for the study of learning behaviors described by multi-entity knowledge graph of MOOCs.


As a result of the COVID-19 pandemic, many college students have been isolated at home and unable to walk into class as usual. This series of protective measures to avoid the spread of the disease may have an additional psychological impact on the lives of college students. The purpose of this study was to propose a strategy for using an intelligent online learning system based on content recommendations and electronic questionnaires in the educational domain. We invited 3000 isolated university students (47.6% male and 52.4% female) to an online trial. It proved to be effective in helping us intervene in students’ psychological problems quickly, objectively, efficiently, and in real-time. In addition, our analysis of the data collected from the intelligent online learning system showed that the degree to which college students’ psychological problems were affected by isolation was closely related to students’ grade level, family background, major category, and computer proficiency. The current study suggests that the mental health of college students should be well monitored during segregation. Targeted psychological counseling is more necessary for students in upper grades, low-income families, liberal arts majors, and those with weak computer proficiency to reduce the emotional impact of segregation on students.


This study explored the interaction between cognition and emotion in blended collaborative learning. The participants (n=30) of this study were undergraduate students enrolled in a 16-week course on information technology teaching. These students were divided into six groups of five people each. The behavior modes of the participants were analyzed using a heuristic mining algorithm and inductive miner algorithm. Compared with the groups with low task scores, the high-scoring groups exhibited more reflection phases and cycles in the interaction process and thus more frequent self-evaluation and regulation behavior for forethought and performance. Moreover, the frequency of emotion events unrelated with cognition was higher for the high-scoring groups than for the low-scoring groups. On the basis of the research results, this paper presents suggestions for developing online and offline blended courses.


Considering the importance of group member familiarity in collaborative learning in classroom learning environments, this study examined the impact of group member familiarity on CSCL (computer-supported collaborative learning) in a networked setting.
Also, the differences between CSCL in the online environments and FtF (face-to-face) collaborative learning were also compared. An analysis using structural equation modeling revealed that group member familiarity increased teamwork satisfaction, which in turn increased student engagement and perceived knowledge construction. A multi-group analysis revealed that while FtF collaborative learning exhibits higher levels of group member familiarity, teamwork satisfaction, student engagement, and perceived knowledge construction, the mediating effect of teamwork satisfaction was more pronounced in online settings. The study findings provided insights for teachers to improve collaborative learning experiences and adapt different teaching strategies.


Cartoon images have been widely applied in children’s educational media. The study examined the effect of cartoon images in touchscreen media on young children’s recognition of time. With a 2 (clock type: cartoon clock, non-cartoon clock) × 2 (media type: touchscreen, video) between-subjects design, ninety-two children aged 4–6 were randomly assigned to one of four experimental conditions. Each group was exposed for 10 min to the media designed to teach children how to tell the time. We examined children’s learning to tell time by pre- and post-test clock tests. Results showed that: (1) In the condition of the cartoon clock, children in the touchscreen groups got significantly higher total clock learning scores than the video groups; (2) In the condition of touchscreen, children in the cartoon groups got significantly higher total clock learning scores than non-cartoon groups. Findings suggest that touchscreen interaction is more beneficial for children to learn to tell time than watching videos, and when using educational apps for touchscreen learning, cartoon images have a positive effect on children’s learning to tell time. However, cartoon images have no effect on children’s learning to tell time through videos.


Online collaborative learning is increasingly used in online courses in higher education, but assessing student online collaborative learning presents unique challenges as well as interesting opportunities. Thus, it is critical to gain a clear picture of online group collaboration assessment strategies, including group learning assessment methods and examining the effectiveness, challenges, and opportunities in online education. The present study systematically reviewed 12 empirical studies on online collaborative learning assessment in higher education published in journals from 2011 to 2021. The results show that diverse strategies were used to facilitate group collaboration, including group agreements, project planning, role assignments, problem-based projects, and instructor feedback. The reviewed studies primarily evaluated learners through instructor evaluation, peer evaluation, and self-evaluation methods. The most common strategy was instructor assessment, while self-evaluations were used the least. The findings of this mapping review provide practical examples for future online group collaborative learning assessment research and practice.
Our study focuses on the gender gap in college aspirations and enrolment among high school students in Germany. We build on socialisation theory, rational choice theory, and formal restrictions to college access to explain gender differences in idealistic college aspirations, realistic college expectations, and the disparities between the two. Specifically, we examine the prevalence of « pessimistic » college expectations, where college aspirations are higher than expectations, which we expect to be more likely among young women than young men. By analysing survey data from 1,766 upper secondary students in Germany, we find that women are equally interested in pursuing higher education as their male counterparts. They even express higher aspirations for college enrolment. However, women are more pessimistic than men about realising their aspirations. While factors such as the subjective probability of success and perceived costs impact both genders, young women are also affected by formal restrictions limiting entry to their preferred fields of study.

Students in low-income contexts often lack guidance in their career decisions which can lead to a misallocation of educational investments. We report on a randomized field experiment conducted with 1715 students in rural Cambodia and show that a half-day workshop designed to support adolescents in developing occupational aspirations increased educational investments. We document substantial heterogeneity in treatment effects by baseline student performance. While the workshop increased schooling efforts of high-performing students, treated low-performing students reduced their educational investments. We develop a simple model that explains why an information intervention can affect educational aspirations and investments in opposing directions.

Research on transfer student flows has focused almost exclusively on transitions occurring between colleges and universities. Few have sought to systematically examine the regional dimensions of these student flows, and how they may map on to prevailing migration patterns that drive individuals out of remote geographical regions. Through this study, we perform the first comprehensive analysis of regional dynamics in early transfer student flows within Ontario post-secondary education (PSE), drawing on novel administrative linkages within Statistics Canada’s Education and Labour Market Linkage Platform (ELMLP). Our empirical analyses (i) map the magnitude of transfer student flows across the province, and (ii) statistically model the predictors of within- and cross-region forms of student transfer. Our findings demonstrate that PSE students commencing their studies in the provincial north are more likely to transfer out of their region, and that correcting these imbalances could serve as a useful strategy to retain and inject further
human capital into northern communities. We explore the implications of these findings for both provincial policy makers and researchers interested in how geography shapes student trajectories.


Entre la cohorte des élèves scolarisés en troisième en 2019 ou 2020 et celle des élèves scolarisés dans cette même classe en 2010 ou 2011, la part d’élèves qui reçoivent une décision d’orientation en seconde générale et technologique (GT) a sensiblement progressé : à l’issue de la troisième, 69 % des élèves obtiennent une orientation en seconde GT contre 61 % neuf ans auparavant.


Little is known about the role of agency in transitions in tracked education systems or whether it varies by socioeconomic background. This study addressed this gap by estimating structural equation models based on longitudinal data that are representative of the German- and French-speaking parts of Switzerland (N = 1273 individuals, surveyed from age 6 to 18, mean age at wave 1: Mage = 6.54, SDage = 0.50, female = 49%). The findings reveal that agency (captured by study effort and occupational aspirations) and socioeconomic background (measured by parental education and family income) significantly predicted students’ transitions to academically demanding tracks in lower- and upper-secondary education. In the transition to upper-secondary education, students with fewer socioeconomic resources benefitted less than their more advantaged peers from ambitious aspirations, but they benefitted more from exerting effort. These findings suggest that both an optimistic forward-looking orientation and the exertion of effort are required to make it to an academic track. Effort may serve as a “substitutive” resource for less socioeconomically advantaged students, whereas ambitious aspirations may enhance the positive effect of family socioeconomic resources on academic educational trajectories. Overall, the evidence from this study calls for greater attention to investigating not only how agency shapes adolescents’ educational trajectories and opportunities but also how its role differs across social groups.


The way in which young people’s post-school intentions and pathways reflect their social background has been the subject of a good deal of research. However, much less attention has been paid to social differentiation in the amount and kind of career
guidance information received by young people and its role in reinforcing or ameliorating social differentiation in transitions. This article contributes by examining the extent to which sources of information and guidance activities vary by social background and school social mix and the consequences of this variation for intentions to go on to higher education. The paper draws on data from a large-scale longitudinal study of young people in Ireland, the Growing Up in Ireland study. It finds that young people from more advantaged backgrounds are much more reliant on their parents as a source of information and advice, reflecting access to insider knowledge of the educational system, and are more likely to pay for private guidance services. In contrast, young people from less advantaged backgrounds and those attending schools with a concentration of working-class students are more reliant on school-based sources of information, though these resources are insufficient to boost their chances of making the transition to higher education.


Au fil d’une carrière, on peut changer de position dans la hiérarchie ou encore, passer du chômage à un emploi. Est-il plus fréquent pour les générations récentes de monter (ou descendre) les barreaux de l’échelle sociale, que pour les précédentes ? L’analyse de la sociologue Marta Veljkovic.


Le présent rapport fait état d’études de cas réalisées dans sept pays africains (Burkina Faso, Kenya, Malawi, Mali, Mozambique, Niger et Nigeria), lesquels ont mis en œuvre des programmes et des innovations en réponse aux effets de la pandémie de COVID-19 sur les systèmes éducatifs. Le rapport fournit des informations sur le renforcement de la résilience des systèmes éducatifs africains pour l’avenir. Ces études de cas pallient les lacunes des connaissances sur les pratiques prometteuses et apportent une valeur
ajoutée aux discussions sur les facteurs contextuels qui ont facilité la mise en œuvre des interventions, y compris l’implication active du gouvernement dans la mobilisation et le soutien des initiatives. Les programmes en question comprennent le programme national d’alimentation scolaire (PRONAE) au Mozambique, le programme de développement professionnel des enseignants en ligne au Kenya, la formation des enseignants au Niger, les campagnes de réinsertion scolaire au Malawi, la formation à l’éducation de base dans les camps de personnes déplacées au Burkina Faso et au Niger, ainsi que les initiatives de lutte contre les violences sexuelles et basées sur le genre au Mali. Les études de cas examinent également dans quelle mesure les interventions ont abordé les questions de genre, d’équité et d’inclusion. Pour les pays partenaires du Partenariat mondial pour l’éducation, ces études de cas fournissent des informations précieuses sur le fonctionnement des systèmes éducatifs et le bien-être des apprenants.


The 2015 constitution of Nepal declared Nepal to be a Federal, Democratic, and Republic nation. The constitution has provided local governments the right to manage school education, and the 2017 Local Government Operation Act of Nepal has outlined the roles and responsibilities of local governments in taking guardianship of school education. Since 2017, Nepal has been in the process of institutionalising decentralised governance practices, but this is proceeding at a slow pace. Unprecedentedly, from early 2020, the COVID-pandemic hit hard the lives of Nepali people, and Nepali education suffered greatly. The pandemic has brought several opportunities for the government to devolve the management system of school education to local levels. This article is based upon the analysis of the six newly introduced plans, regulations, and guidelines in Nepali education, that aim to continue school education amid the COVID-pandemic. These newly introduced polices have significantly acknowledged and mobilised the local strengths in educational management. This research supports a new academic discussion on governance ideas of the Nepalese education system, induced by the COVID-19 pandemic.


The purpose of this study is to explore attributes that influence the quality of smart classrooms from the perspective of higher education teachers. Relying on a purposive sample of 31 academicians from Gulf Cooperation Council (GCC) countries, the study identifies themes related to quality attributes of technology platforms and social interactions. These attributes are user security, educational intelligence, technology accessibility, system diversity, system interconnectivity, system simplicity, system sensitivity, system adaptability and platform affordability. The study identifies management procedures, educational policies, and administrative practices that enact, engineer, enable, and enhance these attributes in smart classrooms. The findings also highlight strategy-oriented planning and cause-driven transformation as the main smart classroom contexts influencing the quality of education among interviewees. With insights from the interviews, this article discusses some theoretical and practical implications of the study, research limitations, and potential future research directions.


Purpose: In this study, we used critical discourse analysis to examine what school websites convey about the expected roles of educators and students. Research Design: We analyzed 13 high school websites from a mid-sized urban district that has implemented several market-based reforms and has a centralized school choice model. We employed the concept of scripts from institutional theory to analyze what messages these websites communicate about the roles of different educational actors, how these messages relate to existing societal power dynamics, and how they relate to the school model or school demographics. Findings: For students and educators, the sites expressed that students had an important problem, while the school and educators were offered as the solution. This common framework manifested in four distinct patterns, which we describe as the savior, cultivation, assimilation, and marketplace scripts. Implications: By critically examining school websites and other semiotic materials, leaders and other stakeholders can work to “root out” potentially harmful assumptions and narratives and envision alternatives that offer empowerment and transformation.


L’éducation en Afrique connaît de nouveaux changements sous l’effet des mutations locales et globales. La croissance démographique, l’arrivée de non-experts dans la sphère éducative, l’expansion de l’éducation non formelle, la crise économique et la crise des valeurs sont autant de réalités qui ont remodelé le secteur de l’éducation dans plusieurs pays. La connaissance n’est plus le seul objectif de l’engagement dans l’éducation. L’argent, les diplômes et le pouvoir deviennent également des facteurs de motivation importants. Les guerres, les épidémies et les catastrophes naturelles perturbent profondément le fonctionnement du système éducatif. Face à ces changements, les acteurs socio-éducatifs affichent des attitudes contrastées: soutien, rejet, indifférence. Répondre efficacement aux défis éducatifs posés par ces mutations nécessite une gestion prospective et une politique sectorielle cohérente de la part des autorités éducatives.


The aim of this paper is to highlight the benefits brought about by a learning-through-the-arts project aimed at creating links between the cultural heritage of students from diverse backgrounds and the fundamental aims of school instruction. Guided by a naturalistic research strategy and the principles of teacher action research, the data was collected during the implementation of a training project for preservice teachers at a highly
complex school setting. The results provide an interdisciplinary and inclusive methodology for learning through the arts that promotes the development of cognitive and socio-affective competences, which are essential for lifelong learning. The project was carried out in a multicultural primary school, where a disadvantaged social composition prevails as a result of school segregation. Evidence of learning and the schoolchildren’s artistic creations provide examples of good inclusive practices that foster collaborative interactions, widen participation, and improve academic achievement in various school subjects. Ideas for future research are also discussed.


Cet article expose les résultats d’une recherche-action à l’origine de la création d’un centre de ressources sociocommunautaires visant à améliorer le partenariat école-famille-communauté au Bas-Saguenay Sud. Les perceptions recueillies sur la mobilisation des moyens éducatifs disponibles sur le territoire auprès des acteurs scolaires et communautaires poussent à renforcer leurs collaborations et à générer une dépendance réciproque entre l’école et ses partenaires externes.


While the health risks of Covid-19 for young people are low, they have borne a heavy cost of the pandemic through intense disruption to their education and social lives. These effects have not been experienced equally across social and demographic groups. Using data from a nationally representative survey of 4,000 young people in England linked to their education records, we study inequalities in late adolescents’ experiences of the Covid-19 pandemic. We find particularly stark inequalities by socio-economic status, with those from poorer families facing disadvantage on multiple fronts, particularly in their experiences of home learning, returning to school, and exam cancellations compared to their more advantaged peers. Gender and ethnic inequalities were more mixed, though young females reported significantly lower wellbeing scores than males. This evidence suggests that the pandemic has exacerbated existing inequalities, meaning policymakers concerned with increasing equity and social mobility now face an even bigger task than before.


Targeted instruction is one of the most effective educational interventions in low- and middle-income countries, yet reported impacts vary by an order of magnitude. We study this variation and use the results to inform a new randomised trial.

Using the stereotype logistic model, this study examines the determinants of doctoral graduate’s satisfaction with their overall doctoral programme experience in Italian universities. The dataset used (Istat 2019) covers a representative sample of national and international graduates for the graduation years 2012 and 2014 including more than 80 academic institutions and 14 disciplinary areas. The detailed questionnaire allows investigation of various aspects of satisfaction with the doctoral experience, framed by the two broader constructs of the role of the supervisor and that of the department. Regression results show that the dominant factors are related to the support for career development beyond the doctorate and to certain aspects of the supervisor’s role. Of less importance are research facilities.


The Every Student Succeeds Act (ESSA) reverses a trend toward centralization of education policy and instead provides greater authority to the states. This study explores states’ interpretation and early implementation of ESSA’s equity-related provisions. Using a qualitative case study approach, we find wide variation in the design and implementation of equity-related provisions. We provide an overview of implementation efforts and highlight states that are making significant strides and those that are lagging behind. Our findings highlight the need to build capacity at the state and district levels and to better understand the role of state education agencies in implementing ESSA.


Multigrading represents the practice of mixing children of different ages in the same classroom. This paper examines the effect of attending a multigrade class in Grade 2 on students’ academic achievement in Grades 2, 5, and 8, respectively, considering Italy as a case study. To address the issue of endogeneity of multigrading (and class size), we adopt an IV identification strategy based on a law that disciplines class composition. We show that multigrading has a positive (16 percent of a standard deviation) short-term effect on academic achievements. However, this effect diminishes over time and becomes negative (-10 percent of a standard deviation) if students spend several years in a multigrade class. Mechanism analysis indicates the fundamental role of teachers and suggests that the negative long-term effect of multigrading is not statistically different from zero when multigrade classes are taught by more experienced teachers. These findings, based on longitudinal data, reconcile contrasting results in the literature, which are based on cross-sectional data and on the short-term effects of multigrading.


This paper investigates the effect of student loans on students’ (financial) behavior. For causal identification, we exploit quasi-experimental evidence using a nudge in the take-up of student loans in higher education in the Netherlands. We estimate an instrumental variable (IV) model with a first-stage Difference-in-Differences design. We find that a decline in the default student loan reduced monthly student borrowing by 141 euros. A one-euro decline in student loans reduced students’ expenditures by 61 cents, but also
led to a substantial increase of parental financial contributions (43 cents). Especially expenditures on leisure activities were affected. There is no evidence for increased labor earnings among students, on average. Self-reported indicators of academic performance do not worsen in response to the reform; students' GPA even improves.


Jordan’s 2017 Public Law No. 20, Rights of Persons with Disabilities Act has given rise to a renewed focus on inclusive education. Using a qualitative comparative case study design, the purpose of this study was to examine factors impacting how schools in Jordan are defining, interpreting and enacting inclusion. Four shadow teachers working in schools to promote inclusive education participated in interviews and weekly journaling prompts. Data were analyzed using cultural–historical activity theory (CHAT) and sensemaking. Results showed support for inclusion by the community when there are adequate resources and supportive administration. Additionally, the shadow teachers have taken on a progressive role as coaches to general education teachers, while promoting social inclusion. This study establishes the utility of CHAT and sensemaking in global research on inclusive practices. The results provide areas of strength in Jordanian schools that should be built on to increase inclusion of students with disabilities.


The lack of fully trained teachers is a national challenge in Sweden despite numerous attempts by authorities to approach the issue from a long-term perspective. The proportion of fully trained teachers needs to increase by just over 50% by 2035, and the imbalance will continue for many years to come. Many actors such as the media and politicians have participated in the debate, but not those who are significantly forced to handle, control, and lead in resolving the current situation and who have an overview of the problems at a structural level, namely, the school authorities (school authority in the school system according to the Education Act (Skollagen 2010: 800) can be a municipality, county council, state, or individual who is responsible for the activities in the school. In this text, the most responsible head of a municipality in the educational department has responded to the survey). This study covers 55 school authorities’ views on national tendencies and possibilities of solving this problem using an enactment policy theory. The empirical data are based on a web survey and analyzed through thematic content analysis. The result shows deep concerns about the accelerated problem, the challenges of finding fully trained teachers, and negative attitudes toward the profession. Possible solutions are higher salaries, flexible solutions to becoming teachers, higher status, and better working environments. The school authorities’ perceptions of possible solutions are to some extent consistent with ongoing political initiatives. Neither do they emphasize an overall picture of the working conditions for teachers, nor the far-reaching consequences of all political reforms. In summary, their actions are interpreted as quite re-active, nonlinear, and ad hoc solutions and less proactive perceptions and actions. This can possibly be explained by the fact that the state sets limits on economic initiatives.
This paper considers the case of Italy to analyze the short- and medium-term effect of a longer school day in primary school on both students' learning and mothers' labor supply. We rely on unique application-to-primary-school data: first, we control for parental preferences, proxied by individual applications; second, we exploit variation in the probability of attending the full-time (FT) scheme that only stems from nonlinearities in the mix of FT and part-time (PT) applications received by the school and from class size limits set by the law. We show that attending the FT scheme increases Math test scores in grades 2 and 5 and Italian scores in grade 2 by around 4.5% of a standard deviation, but the effects fade away by grade 8. Conversely, there is a positive impact on maternal labor force participation and employment, which is long-lasting (approximately 2 p.p.). No effect is found on fathers' employment. Finally, we find some evidence of negative selection on gains, as the groups of students and mothers for whom the effect seems to be larger are not those more likely to apply to the FT scheme or to attend it conditional on applying.


Research shows student success in advanced-level science, technology, engineering, and mathematics (STEM) programs is connected to future educational and economic opportunities. Yet, Black students have been excluded from participating in rigorous mathematics courses that prepare them to engage in STEM majors and careers. This article reviews research on Black student mathematics participation at the pre-college, post-secondary, and professional levels. Three systemic barriers to Black student participation are limited access, limiting mindsets and beliefs, and lack of support. Eliminating these barriers can result in an increase in Black students' enrollment, persistence, and achievement in advanced mathematics courses. The article provides strategies proven successful in urban contexts to ensure equitable learning environments that maximize the full potential of Black students. Educational leaders must address systemic inequities rooted in racism, purposefully engage Black students in rigorous and extended learning opportunities, and provide them with peer and faculty support.


Au 31 décembre 2022, les centres de formation d’apprentis accueillent 576 000 étudiants préparant un diplôme de l’enseignement supérieur, soit une hausse de 20 % en un an et de 78 % en deux ans.


This paper estimates the effects of extending the school day during elementary school on students’ educational outcomes later in life. The analysis takes place in the context of a large-scale program introduced in 2007 that extended the school day from 4.5 to 8 h in Mexico City’s metropolitan area. The identification strategy leverages cohort-by-cohort variation in full-time enrollment in elementary schools. The results indicate that full-
time elementary schools have positive and long-lasting effects on students’ performance, increasing high-stakes high school admission test scores by 4.8 percent of a standard deviation. The effects are larger for females than for males. The difference in the effects between males and females of 2.1 percent of a standard deviation represents 16% of the gender gap in the high school admission exam. Moreover, full-time schooling decreases the probability of delays in schooling completion.


Does a school district that expands school choice provide better outcomes for students than a neighborhood-based assignment system? This paper studies the Zones of Choice (ZOC) program, a school choice initiative of the Los Angeles Unified School District (LAUSD) that created small high school markets in some neighborhoods but left attendance-zone boundaries in place throughout the rest of the district. We study market-level impacts of choice on student achievement and college enrollment using a differences-in-differences design. Student outcomes in ZOC markets increased markedly, narrowing achievement and college enrollment gaps between ZOC neighborhoods and the rest of the district. The effects of ZOC are larger for schools exposed to more competition, supporting the notion that competition is a key channel. Demand estimates suggest families place substantial weight on schools’ academic quality, providing schools with competition-induced incentives to improve their effectiveness. The evidence demonstrates that public school choice programs have the potential to improve school quality and reduce neighborhood-based disparities in educational opportunity.


Increased education affects market and non-market outcomes. This paper investigates the causal impact of the extension of compulsory education from 6 to 9 years on females’ education, marriage, and fertility outcomes in Thailand. Using data from the Multiple Indicator Cluster Survey (MICS) and a donut-hole Regression Discontinuity (RD) design, we show that the new law increases lower secondary school completion in girls, leading to decreased probabilities of giving birth in the school-age years (14–17 years). The policy primarily affects the marginal child leading to the postponement of the timing of their fertility to after-school years. We also document heterogeneity and show that the fertility effects are stronger for Muslim women. The policy leads to a consistent drop in the probability of marriage and cumulative births for Muslim women, which sustain beyond the completion of schooling years. The results hold with alternative empirical model specifications and falsification tests.


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Le système éducatif comorien est un héritage colonial, qui après l’indépendance s’érige toujours sur ce modèle de départ. L’appropriation de ce système par l’adaptation des programmes scolaires nationaux afin de répondre aux spécificités locales peine à se mettre en place. Ce travail est le lieu pour l’interrogation de cette approche, vers la voie de la contextualisation, le poids des nouveaux concepts comme l’éducation au développement durable (EDD) qui fait partie, dès le début des années 2000, des enseignements transdisciplinaires au niveau mondial. Partant de son pilier « environnement », l’EDD serait une voie d’instruction, pouvant servir à la valorisation de l’environnement, de la biodiversité locale et nationale auprès des élèves. Ces travaux sont orientés vers l’étude des manuels scolaires et des programmes d’enseignement pour la contextualisation de l’EDD aux Comores. L’objectif principal de cette thèse est de mettre en évidence, les informations véhiculées, à la fois par les images et le texte des manuels scolaires de SVT, pour l’acquisition de connaissances et de compétences des élèves, pour la sauvegarde de l’environnement. Au départ, notre hypothèse est que les ouvrages et les programmes éducatifs ne favorisent pas la contextualisation de l’EDD, mais que les élèves en possèdent des connaissances empiriques. Notre travail consiste à déterminer, le niveau de conceptions et de compétences des apprenants en EDD, afin de proposer une voie de contextualisation de l’enseignement de la SVT. Pour ce faire, une analyse des programmes et des outils didactiques du secondaire s’est effectuée. Puis des entretiens avec les écoliers pour déterminer leurs connaissances et avec les administrateurs sur l’enseignement contextualisé de l’EDD. Les résultats de l’enquête par questionnaire menée auprès d’un échantillon représentatif de plus de 615 élèves, de collège premier degré, sont présentés. Les caractéristiques des milieux scolaires nous permettent de nous situer sur le contexte éducatif comorien par rapport à ce qui concerne leurs conditions de vie au quotidien. De cette base pour s’y rendre, quatre thématiques principales du développement durable (DD) nous servent d’indicateurs sur leur présence et leur mode de gestion en milieu scolaire : l’eau, l’énergie, les déchets et de la biodiversité. Les programmes officiels de disciplines transversales proposent une approche liée à l’éducation relative à l’environnement, nous nous questionnons sur l’initiative des enseignants ainsi que celle des administrateurs des écoles dans sa mise en application auprès des élèves. L’ensemble des décideurs et professeurs sont conscients de l’importance des démarches liées à l’éducation au développement durable, mais ne semblent pas s’y mettre pour des raisons de connaissances et de motivation. De ce fait, ces programmes de « disciplines transversales restent au niveau de prescriptions, car son application nécessite l’acquisition d’une pensée didactique dans le domaine via
des formations orientées davantage sur une approche de contextualisation de son enseignement. Cependant, ils abordent ces thématiques en ordre d’importance sur le quotidien de la société. Ce point de vue sur l’actualité pourrait bien servir à une instruction spécifique de l’EDD. La majorité des élèves interrogés n’ont jamais appris ou ne se souviennent pas, des expressions liées à l’EDD dans leurs cursus scolaires. La télévision est la source la plus privilégiée parmi ceux qui déclarent les avoir déjà entendus et l’école serait au 4e rang en ordre d’information sur six voies possibles. L’éducation relative à l’environnement proposé dans les disciplines transversales, traduit un faible impact sur leurs connaissances des phénomènes écologiques locaux et sur l’EDD. En ce sens, les certaines idées qu’ils ont sur l’EDD, seraient l’œuvre en grande partie de ces enseignements non formels (…).


Purpose: This study examines the direct and indirect effects of distributed leadership on teacher self-efficacy in multicultural classrooms (TSMC) through school capacity building, specifically teacher team innovativeness and a feedback network. Research Design: Using data from the Teaching and Learning International Survey 2018, this study employs a 2-2-1 multilevel structural equation modeling to account for the nested data structure (teachers nested within schools). Latent variables are constructed, and their validity is tested, followed by an analysis of the relationships among distributed leadership, teacher team innovativeness, a feedback network, and TSMC. Findings: This study finds that distributed leadership has an indirect-only mediation effect on TSMC via a feedback network but not via teacher team innovativeness. The effect of distributed leadership on TSMC is fully mediated by a feedback network. In addition, the study shows that distributed leadership is positively associated with a feedback network and teacher team innovativeness. Conclusions: This study contributes to our understanding of the role of distributed leadership in fostering school capacity building and promoting TSMC. Given the increasing diversity in schools, it is crucial for school leaders to prepare teachers to teach students in multicultural classrooms. The findings suggest that school leaders can enhance teachers’ efficacy in teaching students from diverse backgrounds by facilitating their participation in school improvement processes and establishing a collective feedback network where teachers receive feedback from various sources. These results emphasize the importance of distributed leadership in equipping teachers for culturally responsive teaching in multicultural classrooms.


Cette thèse étudie les effets de la territorialisation des politiques culturelles sur le travail des enseignants des établissements d’enseignement artistique (EEA) au prisme d’un instrument d’action publique : le schéma des enseignements artistiques de la métropole de Lyon. Elle analyse les interactions entre le processus d’instrumentation de l’action publique territoriale, les traductions locales de ces instruments par les directions de ces établissements ainsi que leurs financeurs locaux et, enfin, leur appropriation par les enseignants et les effets des mesures mises en œuvre sur leur travail. Elle souligne ainsi
L’importance des processus organisant la gouvernance culturelle territoriale et plus particulièrement la production, la mise en œuvre et la réception de « bonnes pratiques » devant rendre l’accès aux EEA plus démocratique. L’instrumentation de l’action publique territoriale en faveur des EEA installe des nouvelles modalités de financement en partie fondées sur la capacité de ces derniers à créer des dispositifs visant démocratiser leur accès. En l’absence d’égalité de moyens, de relations et d’information entre eux, l’enquête souligne l’aptitude inégale des EEA à se saisir des incitations accompagnant cet instrument. Il en va de même au sein des établissements où cet instrument, très diversement présenté aux équipes pédagogiques, est progressivement rendu invisible du fait de son déplacement dans des objets d’ordre administratif. La mise en œuvre de nouveaux dispositifs pédagogiques est ainsi fréquemment perçue par les enseignants comme une injonction descendante aux objectifs flous. Ces dispositifs varient fortement d’un EEA à l’autre, tout comme leurs réceptions et appropriations par les enseignants, allant de la recomposition de certains aspects du métier à des situations de souffrance professionnelle.


L’organisation des Jeux olympiques peut-elle être un levier pour lutter contre la sédentarité des élèves ? C’est dans cet esprit qu’a été lancé le dispositif « 30 minutes d’activité physique par jour ».


This study aimed to better understand the construct of classroom chaos in relation to child care program quality and examine its association with child externalizing problems and social competence. Towards this end, two studies were conducted at child care programs in Turkey. Study 1 was qualitative and relied on eight focus group interviews with 24 Turkish teachers to gain a deeper understanding of what is meant by quality and chaos. Study 2 included 49 teachers and 251 preschoolers as participants to investigate the concurrent relations of classroom chaos and quality with children’s socioemotional functioning. Results of multilevel linear modeling analyses revealed that teachers’ increased perception of classroom chaos was associated with higher levels of externalizing problems and lower levels of social competence in children, even after controlling for program quality, child age, gender, and temperamental effortful control. Teacher-rated classroom chaos was also associated with mother-reported externalizing problems. On average, program quality was rated as minimal and showed no significant relations with externalizing problems and social competence. The implications of these findings were discussed with respect to the intervention targets in early child care and education programs.
La formation continue des enseignants de l'enseignement public.

En dépit de récentes améliorations, la formation continue des enseignants fait face à des problèmes récurrents. Elle apparaît toujours comme une mission de second rang des enseignants: le nombre de journées de formation demeure insuffisant, l’adéquation entre les outils disponibles et les attentes des enseignants n’est pas assurée et le problème du remplacement de l’enseignant absent pour cause de formation subsiste. En outre, les missions des formateurs, dont la formation est inégale en qualité, est peu attractive. Avec un coût estimé à plus de 1,1 Md€ en 2021, la formation continue souffre également de présentations budgétaires peu claires, qui ne permettent pas de s’assurer de la priorité qu’elle mérite. Lire également le référé.


Despite being the poorest or second poorest participant, Vietnam outperformed all other developing countries, and many wealthier countries, on the 2012, 2015, and 2018 PISA assessments. We investigate Vietnam’s strong performance, evaluating several possible explanations for this apparent exemplary achievement. After correcting for potentially non-representative PISA samples, including bias from Vietnam’s large out-of-school population, Vietnam remains a large positive outlier conditional on its income. Possible higher motivation of, and coaching given to, Vietnamese students can at most only partly explain Vietnam’s performance. The child-, household- and school-level variables in the PISA data explain little of Vietnam’s strong PISA performance relative to its income level. At most, they explain about 30% of Vietnam’s exceptional performance in math and reading. Further research is needed to understand the exceptional performance of Vietnamese students.


En France, neuf écoles sur dix ont au moins une classe regroupant des élèves de différents niveaux d’enseignement.


Research into the causal impact of formal education on political beliefs and ultimate voting behavior arrives at contradictory results. While some early work, e.g. Dee (2004) finds education induces more socially-liberal views, more recent works suggests that education makes individuals more fiscally conservative. We use quasi-experimental variation in schooling created by compulsory schooling laws (CSLs) to reconcile these results. Following Marshall (2019), we first examine a pooled sample of voter and find that policy-induced increases in education lead to voters being more likely to identify as, and vote for, Republican candidates, largely due to concerns regarding taxes. Delving further
into this result, however, we find highly heterogeneous impacts of education, which depend on the efficacy of CSLs. In particular, in states where CSLs significantly increased educational attainment, impacted individuals become more fiscally conservative, but also exhibit greater support for traditional Democratic social issues like abortion rights and environmental protection, creating so-called “Rockefeller” Republicans. By contrast, voters educated in states where CSLs have no measured impact on educational attainment exhibit generally more conservative attitudes toward non-economics and social issues, which are traits that are consistent with so-called “Goldwater” Republicans.


Estimates show that, in 2019, only 41 per cent of students completed lower secondary and 28 per cent upper secondary education in the sub-Saharan Africa (SSA) region (UNESCO, 2021). One of the reasons for the low completion rates is the poor transition across secondary education due to the significant impact of factors at individual, household, and community levels shaping demand and supply constraints. This article employs a three-level logit to investigate the key determinants for transitions and their variability across countries and communities, and explores whether less wealth inequality is at odds with increasing countries’ and communities’ performances. It finds that variation on transition rates is 40–50 per cent larger between communities within countries than between countries themselves, and that heterogeneity is larger for upper secondary transition. Leading sources of inequality are wealth, gender, and communities’ prevalence of early marriage. Further, the article finds that the equity–performance trade-off does not hold across countries, but it does at the community level where communities with stronger rates of transitions are more unequal. The analysis suggests policies to improve SSA youth chances to move up to the next level of secondary education, starting for narrowing heterogeneity across communities, boosting chances for the poorest groups and female youth living in communities with weak social norms, and measures to diminish the impact of community wealth on their transition performance.


Academic agency is recognized as an important predictor of higher education attainment among the general population during the school-to-work transition. However, there is little evidence on whether (a) academic agency is associated with higher education attainment among young people facing education difficulties (i.e., lower attainers), (b) academic agency is associated with a smooth entry in a meaningful job among lower attainers, and (c) these associations vary across educational contexts. This study draws on longitudinal data from lower attainers in the province of Québec (Mage = 16.31, SD = 0.98; 48% females) and in England (Mage = 15.86, SD = 0.72; 42% females), two regions with similar education systems, yet different vocational training provision. In both samples, fewer than one in four participants reach higher education by age 20. Also, in both countries academic agency is associated with a greater likelihood of being in higher education compared to other employment and education outcomes at age 20, but not with rapid entry into meaningful employment. Thus, focussing on higher
education attainment and academic-related factors such as academic agency is of limited relevance for understanding lower attainers’ success over school-to-work transitions. For them, understanding this transition also requires considering rapid entry in meaningful employment, as well as non-academic forms of agency supporting such work-oriented outcomes.

Desmond, C., Watt, K., Naicker, S., Behrman, J., & Richter, L. (s.d.). Girls' schooling is important but insufficient to promote equality for boys and girls in childhood and across the life-course. Development Policy Review, n/a(n/a), e12738. https://doi.org/10.1111/dpr.12738

Motivation Investing in girls’ schooling in low- and middle-income countries (LMICs) is seen as central to improving gender equity. It is argued that interventions to promote girls’ enrolment are appropriate as girls face gendered barriers to school enrolment and completion and investing in girls' schooling has high economic and human-development returns. But is this fair to boys and enough for girls? Purpose We ask how appropriate it is to direct development assistance towards improving girls’ school enrolment, compared to prioritizing schooling for both girls and boys, and addressing barriers to gender equality throughout the life-course. Methods and approach We frame the enquiry through a human development framework with three distinct but interdependent domains: protection of human development potential; realization of human development potential; and use of human development potential. Using publicly available data, we identify indicators likely to be correlated with the degree to which human development potential is protected, realized, and utilized in LMICs. We compare male and female outcomes on each of these indicators to assess gender parity at different life stages. Findings In most regions, girls are ahead of boys in both school enrolment and completion. Girls have better outcomes than boys in several other indicators in early life and childhood. In adolescence and adulthood girls and women fall behind boys and men. This is especially apparent in workforce participation, in unemployment, in pay, and in share of unpaid care work and political participation where women have less favourable outcomes than men. The bias against women is most marked in South Asia and sub-Saharan Africa. Policy implications A focus on girls’ schooling should be tempered by ensuring quality pre-primary, primary, and secondary schooling for both boys and girls. Simultaneously we must address causes of gender inequality, including labour market discrimination and social norms which justify the exclusion and exploitation of women and girls.


Emerging data suggests the COVID-19 crisis exacerbated preexisting, long-documented gender inequities among U.S. faculty in higher education. During the initial Spring 2020 ‘lockdown’ in the U.S., 80 students conveyed their experiences with faculty across 362 courses. We evaluated whether students’ reports of faculty supportiveness, accommodations granted, and pandemic-impacted, anticipated grade outcomes differed according to faculty gender via mixed linear models (data on 362 courses were nested within 80 student reporters). Students perceived their women instructors as more supportive, accommodating, and anticipated lesser course grade decreases across the semester than in courses taught by men. Accordingly, we interpret that amidst the
‘lockdown’ crisis, women faculty earned higher perceived supportiveness and positive student outcomes than their male counterparts. Further, the data likely reflects women faculty’s greater conscription into demonstrated care work, despite the coding of such labor as “feminine,” thereby rendering such work devalued. To reframe, to the degree that students expect more ‘intensive pedagogies,’ which invites faculty and administrators to gender disparate demands, such pressures likely translate to ‘hidden service’ burdens, and correspondingly, less time for career-advancing activities (such as research). Broader implications are discussed, alongside women faculty’s documented experiences of acceleration in career and work/family pressures in pandemic-times, which combine to exacerbate long-standing, yet now-amplified penalties, potentially driving a widening, gendered chasm in academic career outcomes. We conclude by offering constructive suggestions to mitigate any discriminatory impacts imposed by students’ gendered assessment inputs and expectations.


This critical ethnography utilizes critical policy analysis and a theoretical understanding of neoliberal racism to examine the practiced reality of school choice in a public, under-resourced, and historically underperforming neighborhood elementary school attended predominantly by Latina/o/x students. Despite improvement initiatives that resulted in performance distinctions, the school under study experienced substantial enrollment decline amidst the poaching of students by charter schools within the attendance zone. Moreover, the competitive school choice market within the school's district resulted in the reshuffling of teachers, reinforcement of neoliberal improvement discourses, and even the exploitation of dual language students to raise the school's market profile. The study provides a unique, up-close representation of marketization in public schools and the residualizing effects that school choice policies can have on public education writ large.


As a result of patchwork policies, early childhood education (ECE) providers combine funding from multiple sources, known as blended funding. However, little is known about the consequences of blended funding for policy goals. We use national ECE provider data to identify the prevalence of blended funding models, and detailed state quality rating data to describe the relation between funding and quality through the lens of organizational theory. We operationalize blended funding as the total number of revenue sources, which reflects participation in multiple ECE institutions. Results emphasize that combining funding from distinct ECE policies within programs is a typical practice for ECE providers, and reveal a positive association between a provider’s number of funding sources and program quality.


In the last four years, with the implementation of the policy of integration of the Syrian refugee students into the public schools in Turkey, there has been a significant rise in the
number of Syrian students in mainstream classrooms. Based on the analysis of the
discourses of Turkish teachers and students about Syrian students, this study examines the
ways in which attitudes towards the Syrians in the Turkish community are reflected into
the classroom context and also the ways that such attitudes shape intergroup
communication as well as contribute to the construction of collective identities within the
multilingual classrooms in Turkish schools. Using linguistic ethnography as a
methodological approach, data were collected through classroom recordings of natural
interactions, teacher interviews, informal conversations and ethnographic classroom
observations. Analysis of teacher and student discourses reveals how negative portrayals
of the Syrian students as guests, outsiders, deprived, incompetent, cheaters and liars are
being constructed and how those adversely affect communication and teaching
practices within the classrooms. The authors argue for the need of the development and
implementation of holistic educational policies in the country taking multiculturalism and
multilingualism as pivotal points and focusing not only on language instruction but social
integration as well.

Esposito, J. (2023). Free Speech, Cancel Culture, Race, Privilege, and Higher Education:
An Intersectional Analysis of Netflix’s The Chair. Innovative Higher Education, 48(5),
949-969. https://doi.org/10.1007/s10755-023-09659-4

A Netflix original six-episode series, The Chair, examines the experiences of a woman
faculty of color department chair at the fictional Pembroke College. One of the many
stressors she must navigate is a response to an incompetent white male faculty (who is
also her love interest) after he makes a Nazi salute during a lecture in class. By watching
this series, many viewers learned about how higher education administrators may
respond to situations where a faculty member engages in questionable speech. The
ensuing drama that occurs on campus in response to the Nazi salute and the students’
perceptions that the administration will and can do nothing of consequence to the
professor showcases the messiness and intricacies of what has been termed “cancel
culture.” In this paper, I use intersectional analysis to examine The Chair and the
messages it sends about race, privilege, and cancel culture in higher education.

European University Association (EUA). (2023a). HE Transformation Leadership – an
analysis of emergent and high potential leadership styles. In https://veille-et-
Consulté à l’adresse European University Association (Transnational) website:
https://eua.eu/downloads/projects/newlead%20workbook%204.pdf

This report is another NEWLEAD project output exploring the transformation agenda in
the higher education context and leadership styles. HEIs operate in a global environment
that is evolving quickly. New technologies combined with complex political, economic,
socio-demographic, and environmental pressures present a multitude of challenges. In
addition, the HE sector is a culturally embedded sector with a relatively high level of
specialisation and intellectual capital. However, academic leaders in public HEIs tend to
gain leadership experience through several positions at university. Leadership
development classically occurs through the acquisition of experience in different
institutional roles: lecturer, head of department, dean, vice-rector, rector. Ten leadership
styles are presented by the report, including authoritative (autocratic), participative
(democratic), delegative (laissez-faire), transactional, transformational, visionary,
decentralised (shared), inclusive, servant and resonant. The report concludes that whilst
each leadership style has its strengths, those with a more directive or controlling quality
such as the autocratic and transactional leadership styles have relatively lower appeal and effectiveness in an HE environment characterised by high levels of autonomy. Leadership styles that promote engagement, service, collaboration, and inclusion, especially when directed toward shared purpose or intentionality, have potential better fit and efficacy.


This report presents the key findings and recommendations of the NEWLEAD project’s efforts to build the capacity of university leaders across Europe in steering change and addressing new priorities on the institutional transformation agenda. From, 2020 to 2023, the main activities of the Innovative Leadership and Change Management in Higher Education (NEWLEAD) project consisted of survey-based mapping exercises, focus groups on leadership development and institutional transformation, and the development of a framework for the design of leadership development programmes (LDPs). The project also developed specific case studies on leading change on equity, diversity, and inclusion, collective leadership during a crisis, and leadership styles. Findings from the NEWLEAD project demonstrate that leading and transforming universities is a complex endeavour, requiring a diverse skill set, adaptability, and the ability to navigate through ever-evolving challenges. Leadership and management are also among the many prerequisites to reaping the benefits of institutional autonomy and address today’s big transformation agendas. To succeed in these endeavours, universities must foster leadership development throughout the institution, including academic and professional support leaders. The report highlights recommendations for national and European policy makers and universities, underlining the importance for upscaling support for the development and implementation of leadership development programmes for university leaders.


We evaluate the education and labour impact of vocational education and training (VET). Identification draws on a reform to reduce early school leaving, which involved a large-scale, staggered introduction of VET courses. Drawing on comprehensive student-school matched panel data, we find that VET increased upper secondary graduation rates considerably: our LATE estimates are as large as 50 percentage points. These effects are even stronger for low-achieving students and welfare recipients; and also hold when exploiting the large gender differences of VET, with many courses selected almost only by either boys or girls. Moreover, we find evidence of regional youth employment growth and VET wage premiums following VET expansion.

Equity-centered preparation builds novice teachers’ capacity to make meaningful instruction accessible to all students, particularly those historically excluded from high-quality learning experiences. Drawing on social learning theory, we examined Teacher Study Groups as a model for supporting preservice special educators’ development of equity-centered practices. We examined 60 preservice teachers’ instruction prior to and following study group participation, embedded in a fieldwork support course, alongside related artifacts shared during weekly sessions. Using a convergent mixed-methods approach, we analyzed quantitative and qualitative data separately and then integrated findings using joint display analysis; in doing so, we generated meta-inferences regarding how teachers’ attitudes mediated growth in practice. We uncovered salient participatory experiences that influenced—and hindered—professional growth. Our findings have implications for programs interested in structuring professional learning in a manner that builds foundations for an equity-centered practice.


Cet ouvrage constitue le troisième volume des actes du 4e Colloque international IDEKI Didactiques et métiers de l’humain, organisé par le réseau IDEKI, l’Université de Reims Champagne-Ardenne et la Maison des Sciences Humaines et Sociales ainsi que le laboratoire Cérep (Centre d’études et de recherches sur les emplois et les professionnalisations) les 2 et 3 décembre 2021, à l’Abbaye des Prémontrés de Pont-à-Mousson (France). Ce dernier volume est consacré entièrement au concept de Territoires Apprenants. Il nous invite à croiser nos regards tant du point de vue des recherches engagées qu’en référence à des situations mobilisatrices de travail dans différents secteurs d’activités et dans le respect du travail original et singulier de chacun pour développer des compétences professionnelles dans les métiers de l’humain. Les contributeurs ont choisi une entrée, parfois en ont croisé deux en produisant tantôt des émergences, tantôt des cheminements, tantôt des constructions de savoirs à différents niveaux.


The outbreak of the COVID-19 pandemic in Singapore has resulted in the adoption of home-based learning (similar to remote or distance learning worldwide) due to periodic school closures in Singapore. The media and academia have diverse views on the effectiveness of this alternative mode of education. This study draws data from teachers’ interviews and students’ focus group discussions of an ongoing large-scale baseline study on mother tongue education to reveal teachers’ and students’ perceptions of home-based learning. Findings showed that the participating teachers generally mimicked physical lessons online during home-based learning, and they faced difficulties in
monitoring students’ tasks online. Though students enjoyed the freedom of doing their learning tasks at their own pace, they were concerned with the lack of teachers’ support and the social-emotional support from peers. With the feedback and reflections from teachers and students, it was observed that despite the availability of technology and online infrastructure, teachers need readiness for transiting between physical teaching and online instruction, whereas students need readiness for self-directed learning. From students’ feedback, it was also noted that parents need readiness for educational technology and support for their children. To better prepare teachers, students, and parents for home-based learning, it is recommended that the developers provide more dedicated resources that take into consideration the different characteristics (e.g. orthography) of each language subject. Parents should also assume a greater role in monitoring their children’s learning on behalf of the teachers for better effect in home-based learning.


Although teacher’s personality is an essential component of successful classroom learning, most teacher education programs accept students solely on the basis of scholastic ability scores such as school grades, national test scores (SAT, GRE) or undergraduate college transcripts. To ensure suitability to teaching, a personality-evaluation system was developed in Israel for teacher education candidates. This evaluation system includes non-cognitive measures, such as group dynamic exercises, simulations, a teaching exercise, situational judgement tests, personality tests and an inter-personal interview, all performed face-to-face (FTF) at a testing center. The outbreak of COVID-19 in 2020 brought about lockdowns and social distancing, precluding the administration of this FTF evaluation system. Therefore, the development team adapted the system to online remote testing, using Zoom technology. The present study examined the effect of this transition to remote evaluation on the quality of selection for teaching, looking at suitability-to-teaching scores and the subjective views of applicants and evaluators. A comparison of the 2020 remote scores with the 2019 FTF scores revealed that scores on remote evaluation were slightly lower than FTF scores, and were more centralized. While the candidates found that remote evaluation provided fewer opportunities to express themselves, both candidates and evaluators were satisfied with the administration and convenience of the evaluation day. The Discussion chapter summarizes the unique affordances and constraints of remote evaluations and presents suggestions for changes which might be made when moving an assessment online that could take advantage of this new environment.


Becoming HOPEless in the 2-year sector addresses the question: what happens when a state-wide policy removes merit-based financial aid from low-income students making satisfactory academic progress? To assess the magnitude of this HOPEless effect, we compared credits attempted, attained, and persistence and graduation indicators of HOPEless students against the outcomes of their not targeted/affected peers. Relying on multiple quasi-experimental analytic techniques (difference in differences [DD], DD in differences, Fuzzy regression discontinuity, and multi-treatment propensity score weighting), two mutually exclusive analytic samples (one longitudinal and one cross-
sectional), and over one million observations across four academic years (2009–2010 to 2012–2013), we consistently found that HOPEless students realized worse outcomes and even persisted fewer terms/semesters than students on academic probation. The State saved about $150 million in lottery money (largely funded by lower-income households) but did so at the expense of 665,192 credit hours that would have been attained by HOPEless (low-income) students.


This paper presents an analysis of the extent to which poor pupils in England are clustered in schools with others like them. It is based on a segregation index of pupils eligible for free school meals for every year for which official national data is available. The trend over time has been published before up to 2019, and this paper extends the analysis to 2021, covering both the Covid-19 era so far and the beginning of transitional arrangements for Universal Credit, which have led to a substantial increase in the number of pupils eligible for free school meals. Results show that the segregation of poor pupils between secondary schools has continued to decline annually – a decline that started with the onset of Pupil Premium funding. This decline in segregation has not occurred for other possible indicators of disadvantage, such as pupils having a special educational need or disability, which are not addressed by Pupil Premium funding. Clustering disadvantaged pupils together in parts of a national school system has been linked to worse pupil outcomes overall, lower aspirations, less ethnic cohesion, and reduced trust in society by students. So, this ongoing reduction is encouraging, and is likely to lead to a lower poverty attainment gap in academic outcomes. However, the reduction in 2020 and 2021 is “false” to some extent, based mostly on a sudden increase in the number of pupils officially classed as poor, rather than an improvement in their distribution or evenness. It is, therefore, important to retain Pupil Premium funding or something like it for the time being to see what happens to the attainment gap. And the apparent success of this funding scheme could have implications for school systems worldwide that value fairness in the provision of national opportunities for education.


Grade retention is a commonly used intervention for children who struggle in school. However, empirical research does not unequivocally support its efficacy. Of particular interest are the prevalence, predictors, and outcomes of students who are retained more than once in elementary school. To date, limited research examines students who are held back multiple times in school. We examined multiple retentions within a large, ethnically diverse (52.7% Latinx, 43.7% African American/Black, 3.6% White/Asian/Other) sample of students who had been retained at least once (N = 5,490). Most of these students (90.3%) were receiving free/reduced-price lunch. This sample of retained students was derived from a larger dataset (N = 32,551; 58.3% Latinx, 34.5% African American/Black, 7.2% White/Asian/Other). Results indicate that twice-retention was rare in this sample, with only 460 (1% of all students; 8% of students who were retained) being held back more than once. When twice-retention did occur, the second retention happened most often in 3rd grade, likely due to the state-wide promotional gate. In this sample, students who were retained twice performed more poorly early on in school and
were much more likely to be Black and receive free lunch. Students who were retained twice had poorer outcomes on 5th grade GPA, even after controlling for poverty and initial school performance with small effect sizes. Students who were retained twice performed more poorly on 5th grade standardized reading with a small effect size, but no differently on math tests. These results suggest that, within this predominantly low-income, ethnically diverse sample, multiple retentions in elementary school does not appear to benefit struggling students, and this practice disproportionately affects Black children. These findings suggest retention policies should be more closely examined.


There is debate over whether Asian American students are admitted to selective colleges and universities at lower rates than white students with similar academic qualifications. However, there have been few empirical investigations of this issue, in large part due to a dearth of data. Here we present the results from analyzing 685,709 applications from Asian American and white students to a subset of selective U.S. institutions over five application cycles, beginning with the 2015–2016 cycle. The dataset does not include admissions decisions, and so we construct a proxy based in part on enrollment choices. Based on this proxy, we estimate the odds that Asian American applicants were admitted to at least one of the schools we consider were 28% lower than the odds for white students with similar test scores, grade-point averages, and extracurricular activities. The gap was particularly pronounced for students of South Asian descent (49% lower odds). We trace this pattern in part to two factors. First, many selective colleges openly give preference to the children of alumni, and we find that white applicants were substantially more likely to have such legacy status than Asian applicants, especially South Asian applicants. Second, after adjusting for observed student characteristics, the institutions we consider appear less likely to admit students from geographic regions with relatively high shares of applicants who are Asian. We hope these results inform ongoing discussions on the equity of college admissions policies.


Remediation reform is an influential policy movement in U.S. higher education that aims to increase college completion rates. College first-year reading and writing course requirements have been a major focus of this movement, particularly prerequisite “developmental” course sequences for entering students who are deemed underprepared for college. However, the policy implications of this movement remain unclear for the growing number of multilingual students entering U.S. colleges and universities, and particularly for multilingual learners (MLLs) who are still in the process of developing college-level English proficiency. Accordingly, this paper examined the policy discourse on websites of three prominent remediation reform movement (RRM) organizations to identify explicit and implicit ideologies about language, multilingualism, and literacy that underlie reform policies. Using a Critical Discourse Studies approach to language education policy analysis (Barakos, 2016) and focusing specifically on lexical choice, we find that RRM organizational websites discursively maintain and promote English monolingualism as the normative medium and goal of college literacy instruction.
Using a California-based RRM organization as an example, we also suggest that the prevailing English monolingual ideology of the RRM may be moderated by context. Based on these findings we suggest further research and consider implications for RRM college language and literacy education policies for MLL and other multilingual students.


Le département d’éducation spécialisée du Cégep de Jonquière assure quotidiennement la formation d’étudiants en situation de handicap (ÉSH), qui représentent le quart des étudiants qui le fréquentent. Nous avons mené une recherche dans une perspective biocéologique afin de brosser un portrait des caractéristiques des ÉSH inscrits en techniques d’éducation spécialisée (TES) et de connaître les attitudes, les rôles et les stratégies pédagogiques privilégiés pour les soutenir. Dans ce contexte, nous avons réalisé une analyse qualitative d’entrevues individuelles semi-dirigées menées auprès de sept enseignantes. Nos résultats révèlent que leur point de vue sur les besoins des ÉSH est, somme toute, positif et empreint d’espoir pour leur réussite scolaire.


Purpose: Educational leadership traditionally has defined school leadership as an adult-only space. An emerging group of scholars is expanding the field to challenge who should be considered an educational leader and whose voices should be centered in change processes. Examining the ways in which students serve as leaders in schools, student voice scholarship has expanded rapidly over the last two decades. However, it has not cohered around a shared understanding of the central components of the practice of student voice in classrooms and schools. Research Methods: Our process drew upon two different data sources in parallel—a systematic literature review and interviews/focus groups with students, teachers, and school leaders. We designed our process in this format to draw upon what has been done before and to understand whether the past still aligns with current practice. We hope that in addition to articulating student voice constructs, this article also can offer methodological contributions as demonstrating ways to understand educational practices based on past and new research. Findings: This article presents a framework of the core components of student voice in classrooms and schools: structures (setting, focus, and intent) and relationships (access, representative, roles, and responsiveness). Implications for Research and Practice: This framework provides a roadmap for students, teachers, school leaders, and academic scholars to understand how leadership at the school and classroom levels can envision and design student voice practices. Further, it offers a starting point for articulating the range of possibilities for student voice in classrooms and schools.


The study aim was to scope research into student outcomes of co-teaching models to promote inclusive school education for students with disability. A systematized search was conducted of studies addressing models of co-teaching involving two teachers and
student outcomes published from January 2008 to June 2019. Each study was appraised for quality. Most of 21 studies that met inclusion criteria were conducted in the United States (n = 17). Fourteen studies followed quantitative approaches, six followed qualitative and one included both. Although the benefits of co-teaching for students were demonstrated, it was difficult to determine comparative effectiveness across models, with only one study providing a systematic comparison. There was some evidence of differential effects across factors such as disability type, grade level, and outcome types, but heterogeneity across study aims, participants characteristics, extent to which co-teaching models were described or implemented, and outcomes targeted precluded meaningful comparisons. Limitations were found in study designs, with appraisal scores ranging from 0.6% to 89%. Hence, the research into student outcomes for various models of co-teaching was found to be limited both in number and quality. Findings point to the need for greater attention to what occurs in classrooms to support positive student outcomes of inclusive education through co-teaching.


How instructional sequences guide learning processes are often regarded as a neutral act. However, does designing instruction carry a politics? This investigation explores how instruction is made as a pedagogical object. The purpose is to explore the epistemological principles and conceptual framework that produce instruction’s formalized pedagogical processes, each of which carries uncontested cultural and political aspects. Through textual analysis, the article considers theoretically and historically the problem of how instruction’s design entangles people, power, and technology to operate as social technology, making up human kinds when instruction is designed as rule-bound programming—as an algorithm. Such algorithms engineer cultural action to engineer more harmonious human relations, embodying a greater political project that closes a technocultural lag, ameliorating human deficiencies while producing social exclusion and inequality.


Leadership is one of the skills necessary for the career of future health professionals. The purpose of this study is to get an insight into developing leadership skills in online learning as well as ways to deal with various management issues. The methods used in this study include a survey, quantitative and qualitative analysis, and statistical data processing. The research conducted among medical students suggests that a leader is identified by
behavioral, cognitive personality traits, and physical qualities. Online learning creates an inclusive environment, as well as directly prepares the ground for gaining leadership. Such format of learning reduces society’s pressure regarding the molding of personality. The implications of the study are based on the development of tools for addressing leadership and management issues in online learning. It aims to demonstrate the benefits of online learning and show facets of leadership that are worth paying attention to.


Animating equity in teaching and learning depends on teacher dispositions—orientations to self, others, and society that underlie how we think and act. Teacher dispositions are virtues or qualities of moral character that modify the ways we interact with students and educator colleagues. Although interest in “measuring to improve” teaching and teacher education has grown recently, most measures lack validity evidence for practical usefulness. Integrating Messick’s “unified validity framework” with Janssen et al.’s notion of “practicality” (as face validity), we find through an iterative, mixed-methods analysis of interviews with equitable educators and survey responses from teacher candidates that incorporating recognizability, relevance, and feasibility concerns of equity disposition concepts (i.e., Social Awareness, Meekness, Advocacy for Students) within survey items enhances item-to-factor structure of a self-report measure. We discuss implications (a) to develop and appraise formative measures and (b) to support teacher learning and development to become equitable educators.


Using a large-scale school readiness survey in Thailand, this paper presents empirical evidence of learning losses from school closure due to the COVID-19 pandemic for kindergartners. Overall results indicate that school closure during the outbreak of COVID-19 causes significant learning losses in cognitive skills, especially in mathematics and working memory. The negative impact is heterogeneous across several dimensions, including child gender, special needs, wealth, private tutoring, caregiver education, and parental absence. This paper also estimates daily learning gains, of which significant results confirm that going to school has significantly benefited young children, especially in receptive language, mathematics, and working memory.


This portraiture-informed study by Taeyeon Kim challenges the dominant discourse of accountability, which often focuses on high-stakes policies at the expense of relational aspects of accountability in schools. Building on working theories of accountability, humanizing leadership, and paradox theory, Kim theorizes the “human side of
accountability,” where leaders simultaneously address the tensions of multiple demands and implement policy mandates in ways that attempt to mitigate their unintended harm to students, particularly minoritized students. Using interviews, shadowing, photo-elicited focus groups, and artifacts generated from a yearlong qualitative study of three US elementary school principals, Kim explores how school principals make meaning of accountability in their daily practices and how they address dilemmas created by competing demands. The analysis suggests that leaders' enactment of accountability can be understood as a daily balancing act of promoting equity to provide missing and overlooked support in policy mandates. This article thus challenges existing policy approaches and provides strategies for rethinking how processes of accountability can be imagined in school settings.


While children’s rights to play is stated in the UNCRC, this study investigates children’s rights in play through an analysis of narrative play in preschool. Play-responsive early childhood education and care (PRECEC) is a recently developed theory that provides analytical tools for investigating participants’ communicative coordination and reorientation in mutual activities. By empirically trying out four interrelated elements – space, voice, audience, and influence from Lundy’s rights discourse, the aim is to further develop the theory of PRECEC by differentiating the meaning of responsivity. Video-recorded data from an early childhood education and care setting provide the empirical foundation for the study. What we find analytically is how responsiveness in narrative play affords children to express themselves, be heard and be responded to, and what this entails. In the activity, children are included and recognised as contributing participants, having agency to co-narrate the development of the play.


Le nombre d’enfants scolarisés en langue basque ne cesse d’augmenter. Qu’ils soient fraîchement installés au Pays basque de France ou qu’ils ne l’aient jamais quitté, qu’ils en soient originaires ou pas, de plus en plus de parents font le choix de l’école en basque pour leurs enfants. Pourquoi vouloir scolariser son enfant en basque, une langue dont la pratique locale recule et qui n’a pas de dimension internationale ? Quelle que soit la filière scolaire choisie, quel sens ces parents donnent-ils au choix d’apprendre et de faire apprendre en basque ? Leurs motivations nous dévoilent un rapport à la langue basque, à l’identité et au territoire particulièrement moderne. Loin d’une nostalgie folklorique, de velléités communautaires ou d’une énième tendance alternative, ce choix personnel se révèle porteur d’un projet social collectivement partagé. Les logiques d’action de ces parents se combinent et dessinent une expérience sociale commune, une volonté de faire société qui prend un sens bien particulier au Pays basque de France compte tenu de son histoire contemporaine.

We use comparable, survey-based literacy tests for repeated cross-sections of men and women born between 1950 and 2000 to study education outcomes across cohorts in 87 countries. We find that education quality, defined as literacy conditional on completing five years of schooling, stagnated across the developing world over half a century, including absolute declines in both South Asia and sub-Saharan Africa. Shifts in student composition clearly explain part of the downward trend we observe, but the decline predates the abolition of school fees in most countries, and anthropometric data suggest students in later decades were healthier and wealthier than those in earlier cohorts. Globally, increases in schooling outpaced the decline in education quality, leading to a large increase in unconditional literacy.


Teachers receive increasing attention as change agents within education reform policy discourses positioning their professionalism, identity, and agency as critical to implementation of reforms. However, identities either claimed by teachers or assigned by reform policies involve serious (re)negotiations on the part of teachers as they make practicality judgements in contexts changed by reforms. Using a temporal perspective of language teacher agency and dialogic conceptions of teacher identity, we explore a group of English teachers’ (re)negotiation of claimed and assigned identities in attempts to transform traditional educational culture through implementation of the New English Syllabus of the People’s Republic of China (PRC). The agency of teachers was clear in unfolding dialogic negotiation of tensions between a reform-driven identity of the effective English teacher, identities assigned by other interested groups and the community, teachers’ individual claimed identities, and the possibilities of projected imagined identities. We conclude that when curriculum reform policies disrupt cultural and structural settings of the work of English teachers, temporal dimensions of dialogic (re)negotiation of professional identities play a pivotal role in reform enactment, and that policy makers must acknowledge and respond to these processes of (re)negotiation of teachers’ professional identities.


Delivery of vocational education in schools is a controversial issue around the world and attempts to improve it have been tried for decades. A substantive innovation in vocational education provision came about in 2010 in England when a new form of hybrid schools was introduced that combine general and vocational education: University Technical Colleges (UTCs). This paper adopts an instrumental variable approach to evaluate the causal effect of attending a UTC on academic and vocational education, and on student short-term workforce outcomes. The research design takes advantage of geographic and cross-cohort variation in exposure to UTCs,
and of different enrolment ages. For pupils entering UTCs at the unconventional age 14, enrolment in these schools dramatically reduces academic achievement on national exams at age 16. By contrast, for students who enter at the conventional age of 16, UTCs boost vocational achievement without harming academic achievement. UTCs also improve achievement in STEM qualifications, enrolment in apprenticeships, employment prospects (by age 19) and probability of going on to study STEM at university. The paper concludes that there has been both promise and disappointment in what the technical education offered by these new forms of hybrid schools has delivered to date. These mixed conclusions are important for refining the design of school based vocational education around the world.


In 2013, on the occasion of the 50th anniversary of its establishment, the journal «Nuovo bollettino CIRSE», offered a first picture of a scenario in full development of institutional, historical-scholastic, historical-pedagogical and historical-cultural studies on the subject. The current issue is in continuity with that study and wants to take into account, at the same time, how much approaches and methodologies have been enriched since then, offering new perspectives open to international and interdisciplinary suggestions that, especially in recent years, have contributed to the advancement of the history of education.


Des vacances d’été raccourcies ? Des semaines à quatre ou quatre jours et demi ? Dix ans après la réforme instaurant la semaine de quatre jours et demi d’école, la France a toujours autant de mal à trouver la bonne formule sur les rythmes scolaires.


Background: Whilst little is known about the experience and needs of autistic students in France, limited research has explored the experiences of autistic students in French higher education. The current study sought to fill this gap in the literature using a qualitative research design to ask: how do autistic students experience higher education in France? Method: Semi-structured interviews were conducted with 15 autistic students (8 female, 2 male & 5 ‘other’). Results: Thematic analysis identified four themes: Searching for belonging, Autism identity and disclosure, Managing anxiety and fatigue, and Working with others. The analysis describes the complex journey that participants faced when accessing and completing higher education in France. Whilst the journey was often characterized by intense anxiety and fatigue, the experience of university could
also facilitate access to new academic interests, and the opportunity to connect with likeminded individuals perhaps for the first time. Conclusions: Results from the current study can contribute to the development of policy and practice that aims to better support autistic students in higher education. Of note, autistic students highlighted their elevated risk of drop-out owing to anxiety and fatigue caused by: difficulties planning and managing workload, sensorial overwhelm and administrative stress. Participants therefore highlighted the need for proactive personalized support and the need for supportive peer relationships.


Publicly available generative AI (GenAI) tools are rapidly emerging, and the release of iterative versions is outpacing the adaptation of national regulatory frameworks. The absence of national regulations on GenAI in most countries leaves the data privacy of users unprotected and educational institutions largely unprepared to validate the tools. UNESCO’s first global guidance on GenAI in education aims to support countries to implement immediate actions, plan long-term policies and develop human capacity to ensure a human-centred vision of these new technologies. The guidance presents an assessment of potential risks GenAI could pose to core humanistic values that promote human agency, inclusion, equity, gender equality, linguistic and cultural diversities, as well as plural opinions and expressions. It proposes key steps for governmental agencies to regulate the use of GenAI including mandating the protection of data privacy and considering an age limit for their use. It outlines requirements for GenAI providers to enable their ethical and effective use in education. The guidance stresses the need for educational institutions to validate GenAI systems on their ethical and pedagogical appropriateness for education. It calls on the international community to reflect on their long-term implications for knowledge, teaching, learning and assessment. The publication offers concrete recommendations for policy-makers and education institutions on how the uses of GenAI tools can be designed to protect human agency and genuinely benefit students, teachers and researchers.


Cet article présente les résultats d’une recherche qualitative qui s’intéresse aux critères de qualité de l’évaluation certificative dans une approche par compétences (APC) tels que véhiculés par des politiques institutionnelles d’évaluation des apprentissages (PIEA) en enseignement collégial. Dix politiques sont analysées afin de cerner si elles sont un moteur ou un frein à la qualité de l’évaluation certificative au collégial. Les résultats obtenus démontrent par les qualités véhiculées et les caractéristiques associées à l’évaluation certificative que les PIEA sont encore teintées de l’approche par objectifs (APO) et constituent un frein au déploiement de pratiques évaluatives alignées selon l’approche par compétences.
In response to concerns about the additional costs and time-to-degree associated with traditional developmental education programs, several states and postsecondary systems have implemented corequisite reform where academically underprepared students take both a developmental education course and college-level course in the same subject area within a single semester. Texas is one of the first and most diverse states to require all public institutions to scale-up corequisite developmental education. In this study, we use longitudinal survey data from the population of public two-year and four-year colleges and universities in Texas to examine heterogeneity in institutional responses to implementation of a statewide corequisite developmental education reform throughout the 4-year scale-up timeline. We provide insight into how challenges, costs, and data-informed efforts differ for postsecondary institutions that were compliant versus non-compliant with the annual statewide targeted participation rates for corequisite enrollment. We conclude with implications for policy and practice to better support statewide corequisite developmental education reform.


A growing movement towards inclusive education worldwide means more children with autism are being educated in mainstream classrooms. However, integration does not equate to inclusion, and peer stigmatisation of autism is commonplace. This systematic review explores the merit of school-based peer education interventions targeting the stigmatisation of children with autism spectrum disorders. Relevant records published from 1994 were identified through systematic searches of five electronic databases: EBSCO, Medline, PsychInfo, PsychArticles and ERIC. Thirty-one documents pertaining to 27 studies met the pre-specified eligibility criteria and were included for data-extraction. A narrative synthesis highlighted significant flaws in the available literature, most notably poor methodological quality and a narrow research focus with regards to age, the gender of target child and implementation methods. Nevertheless, this study reports on evidence tentatively supporting the efficacy of ASD de-stigmatisation interventions when targeting ignorance and prejudice. Although no one approach can be determined as most effective, manualised programmes combining different types of information about ASD and delivered using various mediums seem to hold the most promise.


This Policy Discourse Analysis (PDA) explores 19 state legislative documents focused on the teaching of disability history in K-12 schools. Framed through critical perspectives on constructions of disability and race, alongside discourse theory, we iteratively analyzed these legislative documents to understand (a) how disability and disability history are constructed (particularly in relation to whiteness); and (b) the stated purpose of the legislation and who is meant to benefit materially as a result of the laws. We find the legislation upholds dominant notions of whiteness and ability as part of school curriculum, while simultaneously constructing disability history as in the past and disability justice as
already achieved, centering the learning and awareness of white, nondisabled students. We offer discussion and implications for research and practice surrounding policy implementation of teaching disability history.


Dans le cadre de la révision du programme du doctorat réseau en éducation, les besoins et les moyens de soutien aux étudiants doctorants ont été identifiés comme centraux dans la poursuite du cheminement scolaire. Appuyées des recommandations du rapport d’autoévaluation et de documents externes, des personnes professeurs et trois étudiantes ont proposé une enquête à l’ensemble des corps étudiant et professoral. L’article vise à décrire le processus méthodologique utilisé ainsi que la portée de la démarche dans la formation doctorale des étudiantes y ayant contribué en prenant appui sur le concept d’agentivité collective (Bandura, 2001; Brennan, 2012). Une carte conceptuelle des manifestations d’agentivité collective dans le cadre d’une implication étudiante est proposée ainsi que les questionnaires utilisés pour la démarche de consultation qui pourront soutenir la réflexion d’équipes de personnes professeurs et d’étudiantes dans le soutien à offrir à ces derniers.ères. La persistance aux études pourrait s’en trouver bonifiée.


The Republic of Moldova considers education a national priority and has been making steady progress in reforming and modernising its education system. The Ministry of Education and Research (MoER) in 2023 launched its Education Development Strategy 2030 and requested the European Union (EU) to engage the OECD to undertake a deeper analysis of selected policy domains that are central to its education reform. This laid the foundation for the project “Support to the implementation of education policies in Moldova”, funded by the EU. The MoER expressed a keen interest to learn from international research evidence and relevant international examples to help advance its education reform agenda. This report is the first output of the project that presents an in-depth analysis of two of three selected policy domains: “professional development of teachers and other education professionals” and “curriculum and learning resources” and has been developed by the OECD in collaboration with the UNESCO International Institute for Education Planning. The report will be valuable for Moldova and other countries that are looking to strengthen their school systems.


Regards sur l’éducation est le rapport de référence sur l’état de l’éducation dans le monde. L’édition de 2022 porte plus particulièrement sur l’enseignement tertiaire et analyse l’augmentation de l’effectif diplômé de ce niveau et les retombées...

Ce Coup de projecteur résume les données et les analyses présentées dans Regards sur
l’éducation 2023 au sujet de l’enseignement et de la formation professionnels (EFP). L’EFP
constitue une composante clé du système d’éducation dans la plupart des...

OECD. (2023b). Spotlight on Vocational Education and Training: Findings from Education
This Spotlight presents data and analysis on vocational education and training (VET) from
Education at a Glance 2023. VET is a key component of most education systems in OECD
countries. About one in three 25-34 year-olds have a vocational...

Ogot, M., & Onyango, G. M. (2023). Does Universities’ Research Output Aligned to
Few studies on developing countries have investigated the alignment of research output
to a country’s development agenda and economic productivity. Using evidence from
Kenya, this study sought to empirically determine whether the country’s research output
is aligned to its development agenda in the first instance and to establish the output’s
relationship to economic productivity. Journal publications were used to measure
research output. From the analysis, 86% of the publications fell within one or more of the
national development priority areas, though 60% were in only 6 of the 35 areas. Several
areas had no publications at all during the period under investigation. Furthermore,
excluding the health and education sectors, a strong positive relationship was
established between the number of publications in different priority areas and those
areas’ contribution to Gross Domestic Product. The Government, therefore, needs to
avail research funding to research institutions, which, in turn, need to focus their research
effort on all identified national development priority areas if Kenya’s development
aspirations are to be achieved and the desired economic growth attained.

countries. Consulté à l’adresse Center for Universal Education at Brookings website:

Development website: https://econpapers.repec.org/paper/cgdwpaper/614.htm
Education is one of the most important public goods provided by modern governments.
Yet governments worldwide seldom perform well in the sector. This raises the question:
Why do governments preside over poor education quality? This paper answers this
question with evidence from Tanzania. Using data from surveys, administrative reports,
and policy documents, it analyzes changing goals of education policy and associated
impacts on access and learning over time. The main finding is that learning has not
always been the goal of schooling in Tanzania. Furthermore, for decades the
government rationed access to both primary and secondary schooling for ideological reasons. These past policy choices partially explain contemporary poor outcomes in education. This paper increases our understanding of the politics of education in low-income states. It also provides a corrective against the common assumption that governments always seek to maximize the provision of public goods and services for political gain.

This study drew on Chilean teacher survey responses from TALIS 2018 data on teacher motivation in order to examine the extent to which these data reveal different motivational profiles among Chilean teachers. Also, it explores the influence of those profiles on quality teachers’ instruction. As a conceptual scaffold, this article uses Agency Theory and Public Service Motivation theory to conceptualize and explore the data. Using latent classes analysis, multivariate regressions with survey methods, results showed three different motivational profiles: utility-laden, modal, and socially-laden. From these profiles, modal teachers seem to produce better teaching quality compared with the others profiles. These results suggest that the teachers’ profiles are more diverse when it comes to work motivation and teaching quality than what it is described in the literature. These findings give interesting insights for policymakers and school leaders to better understand the teaching workforce and think in diverse governance and teacher management tools. It also opens a set of interesting questions about how to motivate the teacher workforce in Chile.

Scientific production is fundamental in architecture schools for developing professionals with research capabilities involved in generating knowledge for society. The objective of this research was to analyze the scientific production of Peruvian architecture schools in the Scopus and Web of Science (WoS) databases until 2020. A bibliometric study was conducted considering the 37 schools of architecture recognized by SUNEDU. As a result, 131 documents were found (79 in Scopus, 30 in WoS, and 22 in both databases). The first publication was in 2005, and in the last two years (2019–2020), more than half (78) of the historical total of documents have been produced. A total of 190 authors were registered; 120 are of Peruvian affiliation, and 70 have an international affiliation. Articles were the most published type of document (56.4% in Scopus and 86.5% in WoS) and were published in more than 49 international journals. About half of the total publications were in English. This research shows that only 18 architecture schools have published at least one paper in Scopus or WoS. It is concluded that scientific production in Peruvian architecture schools is low, recent, and heterogeneous according to the university’s type of administration (public or private) and location. It is necessary to implement strategies to promote scientific production from the undergraduate level and consider the research lines of the architecture schools in Peru.


The present study developed a brief school-based intervention focused on raising awareness about Cerebral Palsy. To assess the effectiveness of the intervention, 91 classes from the fourth and fifth grades were randomly assigned to one of three conditions: Control, Focused on the Domain (Cerebral Palsy), and Non-Focused on the Domain (promotion of inclusion in general). Groups were assessed in three waves: pre-test, post-test, and follow-up. Data from this longitudinal cluster randomised trial showed the efficacy of this brief intervention in decreasing reported social distance and increasing positive attitudes towards individuals with Cerebral Palsy. Results from the Focused on the Domain Group were more positive than the Non-Focused on the Domain Group. Implications for educational practice are discussed.


In modern higher education, nurturing successful interdisciplinary collaboration is both an institutional priority and a grand organizational and cultural challenge. Recent scholarship describes the many and varied challenges inherent in the enactment of interdisciplinarity; it also explores how these challenges can be mitigated to spur successful interdisciplinary engagement. While much attention has been focused on interdisciplinary scholarship and pedagogy, might interdisciplinary service collaborations also play a role? This qualitative case study probes a particular type of interdisciplinary collaboration—a cross-disciplinary committee convened to hire interdisciplinary faculty members. Using interview and observational data to uncover the lived experiences of committee members across campus at one U.S.-based R1 institution, this study explores service-work as a potential site of positive experience and successful interdisciplinary collaboration. Illuminated by the Shared Cognitive-Emotional-Interactive (SCEI) platform for interdisciplinary research collaboration by Boix Mansilla et al. (2016), findings reveal myriad positive outcomes tied to faculty’s service participation, probe the multifaceted reasons that faculty choose to participate, and explore how they experience this work. Analysis also uncovers limited cognitive yet significant emotional and interactive markers of and factors that facilitate a successful interdisciplinary collaborative process. Evidence of these markers and factors serves to “reframe” interdisciplinary service as an instance of successful interdisciplinary collaboration, a site of faculty learning and a context that fosters campus connections among faculty. In uncovering these benefits of interdisciplinary collaborative service, this work suggests ways in which it may serve as a missing link to build and strengthen an interdisciplinary campus community.


Reimers, F. M. (Éd.). (2024). *Schools and Society During the COVID-19 Pandemic: How Education Systems Changed and the Road Ahead*. [https://doi.org/10.1007/978-3-031-42671-1](https://doi.org/10.1007/978-3-031-42671-1)

peut_on_faire_l_economie_de_la_formation_professionnelle_etude_sur_la_formation_professionnelle_en_suisse_isabel_voirol_rubido_hanhart_siegfried-9782806135766-77946.html

Cet ouvrage présente des méthodes et outils économiques permettant d'analyser l'efficacité et l'efficience de la formation professionnelle et de répondre à des questions telles que : la formation professionnelle est-elle valorisée sur le marché du travail ? Est-elle économiquement rentable pour les entreprises formatrices ? Comment se répartissent les charges entre les différents financeurs (pouvoirs publics, entreprises, associations professionnelles, individus en formation...) ?


Field experiences during teacher preparation programs support teacher candidates in forming and reforming teacher identities through real-world teaching situations. Trying out teaching approaches with children, reflecting on practice, and collaborating with cooperating teachers support teacher candidates in building a teacher identity. However, at the start of the COVID-19 pandemic in the United States, public schools closed in many states, requiring that field placements either end or change significantly. This is a study of five teacher candidates in an early childhood teacher preparation program. These candidates' field placement ended in March 2020, requiring that university faculty develop an alternative teaching placement. Using Bourdieusian theoretical concepts of habitus, field, and doxa, this study explores how the candidates perceived this change and how they were able to continue to reflect and build their teacher identities.


Using the nonparametric Mann–Whitney U-Test to analyze 128 survey responses from K-12 teachers, this paper considers how value-added measures (VAM) impact educators' decisions to include Latinx topics in their social studies lessons. The authors found that VAM teachers are more likely to rely on district/state curriculum standards whereas non-VAM teachers rely on curriculum resources to incorporate Latinx topics. When compared to non-VAM teachers, VAM teachers cover less Latinx content when it does not align with the standards, but higher coverage when the topics do align. The findings suggest that VAM can restrict teachers from implementing a diverse curriculum.


The COVID-19 pandemic has shaken not only the global economy but every development field, including all levels of the education sector and in every place in the world. The wide spread of this pandemic disaster has undoubtedly changed the education landscape worldwide. Online teaching and learning become the primary instruction method and the global world of schools, colleges and universities were forced to adapt this model. The first concern about online learning is whether this method is effective compared to traditional face-to-face lessons. In this paper, we carried out a quantitative analysis to explore variations in university students' feedback on learning
experience in the context of this new challenging situation caused by the COVID-19 pandemic. By adopting an IRT modeling, we compared the appreciation of some aspects of 41 courses taught at the University of Chieti-Pescara (Italy) during the educational emergency with that of the previous year. Overall, from the results of this study, it is arisen that students have given positive feedbacks on their learning experiences and their effectiveness.

Defined as the tendency for structures and groups to “grow more alike, to develop similarities” policy convergence is a recognized factor in policy analysis across fields. In the arts education sphere, this can mean adopting similar curriculum standards, imitating an after-school arts program, or even borrowing a large-scale metropolitan arts education partnership model. I argue that policy diffusion helps to illuminate policy convergence in the arts education milieu. In this policy analysis essay, I first detail the conceptual underpinnings of policy diffusion. Next, I offer specific examples from arts education and attempt to show how they exemplify mechanisms of diffusion. I then argue that there are specific contexts/structures within arts education policymaking that facilitate diffusion, and I conclude with discussion based on the analysis.

The Ontario College Advanced Diploma requires three years of post-secondary education and the attainment of learning outcomes like those of a three-year baccalaureate degree. Except for one other Canadian province, no similar academic credential is awarded by colleges in Canada or the United States. For these reasons it has been viewed by some as an anomalous academic credential. This article relates how Ontario colleges came to offer such a rare credential and how the credential survived for over half a century. Employing the concept of path dependence, the origins of the advanced diploma are traced back to the institutes of technology that were first established in Ontario in the 1940s. The article employs a mix of historical inquiry, document analysis, enrolment trend analysis, and literature review methodologies.

The number of early care and education centers that accept child care subsidies has declined, limiting access for children and families from low-income backgrounds. This statewide mixed methods study explores how centers make decisions about accepting subsidies in Arkansas. Quantitative results suggest that provider and community characteristics are important, while qualitative results help to enhance our overall understanding of the decision-making process by emphasizing the importance of a center’s overall operational and financial structure and state subsidy policies. Integrated findings suggest the importance of the combination of a variety of factors at the center, community, and state levels. Findings from this study point to ways that policymakers may encourage early learning programs to accept child care subsidies.

The Academic Freedom Index is the first conceptually thorough assessment of academic freedom worldwide and a times series dataset going back to 1900. While some previous datasets exist, they are geographically limited and methodologically or conceptually insufficient to offer a comprehensive picture of the levels of academic freedom across time and space. This paper introduces the new expert-coded dataset that includes the overall Academic Freedom Index alongside several specific indicators, to which more than 2050 country experts around the world have contributed and which is freely available as part of V-Dem’s time-series data releases. The paper discusses its advantages compared to other types of data on academic freedom, details the conceptualization of the new indicators, and offers a content and convergent validation of the results. The dataset provides ample opportunities for scholars to conduct in-depth research on academic freedom and its infringements, and for policymakers and advocates to monitor and analyze patterns and trends of academic freedom around the world.


Cette recherche a pour objectif d’analyser l’impact des dynamiques d’internationalisation sur les systèmes d’enseignement supérieur en Asie du Sud-Est au cours des cinquante dernières années, en se focalisant tout particulièrement sur Singapour et la Malaisie. En empruntant une grille d’analyse qui relève d’une approche sociohistorique et de la théorie des élites, elle analyse les processus sociaux, économiques, politiques ayant conduit aux reconfigurations de la structuration des formations d’enseignement supérieur dans ces deux États et au renouvellement des modes de fabrication de leurs élites. Elle invite également à prendre part aux discussions sur les dispositifs d’évaluation et de classement qui participent à mettre en place un marché de l’enseignement supérieur concurrentiel dans le monde. À partir d’une grille de lecture qui multiplie les niveaux d’analyse et sur la base d’une enquête de terrain qui repose sur un design de méthodes mixtes combinant matériaux qualitatifs (archives documentaires, entretiens auprès d’acteurs institutionnels, corpus de discours politiques, observations in-situ d’événements internationaux) et matériaux quantitatifs (analyses secondaires de données statistiques des flux de mobilité étudiante, enquête quantitative auprès d’étudiants internationaux), la thèse analyse l’internationalisation des systèmes éducatifs singapouriens et malaisiens selon deux dynamiques : une internationalisation de l’enseignement supérieur « orientée vers l’intérieur » (inward-oriented higher education internationalization) qui implique l’importation de connaissances, de cultures, de modèles et de normes d’enseignement supérieur étrangers dans le but de valoriser l’identité nationale et une internationalisation « orientée vers l’extérieur » (outward-oriented) destinée à attirer les étudiants internationaux les plus dotés scolairement et à occuper une place majeure sur le marché mondial de l’éducation pour valoriser l’image du pays à l’international. L’universalité de l’internationalisation est remise en question dans la thèse par les spécificités nationales et le polymorphisme institutionnel des organisations universitaires et d’enseignement supérieur. La plus grande complexité du sens des circulations étudiantes interroge globalement sur les transferts de savoirs dans
le monde au profit d’une reconfiguration multidimensionnelle imbriquant des logiques multiples (économiques, religieuses, ethniques, sociales, etc.) dépassant les homologies établies jusqu’alors. L’impact de l’internationalisation des formations sur la stratification interne au champ de l’enseignement supérieur à Singapour et en Malaisie montre ensuite une segmentation des publics entre universités publiques et universités privées donnant lieu à une distinction entre des élites publiques et des élites privées. Enfin, la recherche soulève la question du positionnement des deux systèmes d’enseignement supérieur sur le marché international de l’éducation. Les élites étatiques de ces deux pays se sont engagées dans une politique d’attractivité de leurs formations pour leur permettre d’accéder au nouveau statut de pôles mondiaux d’enseignement supérieur. Pour autant, les intérêts stratégiques et les positionnements nationaux des deux États divergent en matière de politiques publiques, de normes, de réglementations et de législations amenant à considérer deux modèles d’internationalisation différenciés qui conditionnent les circulations étudiantes entrantes dans ces pays : l’enseignement supérieur singapourien apparaît comme un modèle d’excellence à la croisée des « mondes » occidentaux et orientaux qui capte non seulement les élites talentueuses et fortunées asiatiques, mais également internationales ; l’enseignement supérieur malaisien représente un modèle hybride international participant à faire émerger des élites ethno-raciales et musulmanes.


In this article Sharon Stein and Jan Hare ask how higher education institutions might begin to confront the connections between climate change and colonization. To grapple with this question, they examine the dynamics through which climate action can reproduce colonial relations and reflect on the challenges, complexities, and possibilities that emerged in the context of one university’s Indigenous engagement efforts around a climate emergency declaration. The authors suggest that if universities seek to interrupt climate colonialism, they will need to commit to upholding Indigenous rights, knowledges, and self-determination and to accepting responsibility for repairing colonial harm and developing respectful, reciprocal relationships with Indigenous communities and lands. To fulfill these commitments, universities will need to avoid the common tendency to seek quick solutions and instead support the development of institutional conditions and individual capacities that would make it possible to have difficult conversations about the historical and ongoing ways that they have been complicit in social and ecological harm.


Grant funding is essential to the advancement of science, technology, engineering and math (STEM) fields with certain grants viewed as especially prestigious and career formative. The goal of this project was twofold: first to describe the gender demographics of the national winners of two prestigious grants and second, to document the impact of an educational program aimed at improving the success for women in STEM fields in a local setting. In Study 1, we analyzed publicly available national data to document gender gaps in National Science Foundation’s Faculty Early Career Development Program (CAREER) and National Institutes of Health’s K01 awards from 2008-2021. Results
showed that, while the ratio of K01 awards favored women, the ratio of men-to-women CAREER awardees favored men. In Study 2, we implemented a grant-writing program for CAREER awards based in self-determination theory at one university and analyzed its impact on funding success. Results comparing before the educational program and after showed that the average annual success rate increased for everyone from 11% to 33%. Women-identified faculty who participated in the program were awarded CAREER funding at a higher rate than would be expected from the number of women eligible to apply or submission rates. While the correlational and observational nature of this study make it impossible to conclude that it was only the educational programs that resulted in the benefits to women’s award success, we encourage other universities to consider adapting the program and enable faculty development around grant success.


Au Québec, l’éducation tente de s’adapter aux nouvelles réalités. Ainsi, la déconfessionnalisation de l’État et l’augmentation de l’immigration amènent un changement de paradigme au niveau éducatif. Pour favoriser la reconnaissance de l’autre et la poursuite du bien commun, le programme Éthique et culture religieuse voit le jour. Essuyant beaucoup de critiques négatives, le gouvernement met sur pied une équipe de rédaction et des comités consultatifs dans le but de faire une refonte. Le programme Culture et citoyenneté québécoise est donc présentement en construction. D’une part, le programme Éthique et culture religieuse axe sur le développement des compétences Réfléchir à une question éthique, Manifester sa compréhension du religieux et Pratiquer le dialogue. L’élève aborde des thèmes qui amènent des conflits de valeurs et tente de résoudre les situations de façon à favoriser le bien de tous. De plus, il apprend à comprendre l’influence des cultures religieuses dans son environnement et dans les coutumes d’autrui. D’autre part, le programme Culture et citoyenneté québécoise permet l’analyse de diverses situations d’un point de vue éthique et sociologique. D’ailleurs, les compétences à développer sont Réfléchir sur des questions éthiques et Étudier une réalité culturelle. Cela permet de réfléchir et de développer une pensée critique sur divers thèmes. Bien que l’éducation sexuelle et l’éducation numérique font désormais partie du programme, il existe un écart entre les deux programmes en ce qui concerne une composante importante du développement personnel, social et spirituel de l’élève : la culture religieuse. Donc, ce mémoire propose une nouvelle avenue dans la façon d’aborder la culture religieuse pour favoriser une réflexion dans une perspective éthique : l’utilisation de la théorie des trois pôles de Ricoeur. De plus, il est question de proposer des solutions à court et à moyen terme dans l’implantation du programme Culture et citoyenneté québécoise afin de répondre aux limitations reprochées à son prédécesseur.


In this paper, we critically examine the way in which scholars have traditionally defined and problematized attrition. Through a series of examples of large-scale intervention impact studies, we share insights about the sources and consequences of attrition that expand our notion of how and why attrition occurs. We also discuss potential steps for
anticipating, mitigating, and responding to attrition in the dynamic context of schooling. By expanding our understanding of attrition, we hope to engage the field in further dialogue that could lead to policies and practices that might lessen the potential impacts not only on our ability to conduct research, but also our ability to advance the learning of teachers and their students.


The role of unpaid and informal care is a crucial part of the health and social care system in Australia and internationally. As carers in Australia have received statutory recognition, concerted efforts to foster engagement in carer participation in work and education has followed. However, little is known about the strategies and policies that higher education institutions have implemented to support the inclusion of carers. To address this lack of information, existing higher education institution policies were located to canvas supports available to student carers and identify organisational representative participants. Semi-structured interviews were then undertaken with staff from five higher education institutions to discuss their institutions’ policies and their experiences as stewards of carer inclusion and support. Findings indicate difficulty in identifying carers, the infancy of inclusion policies, support measures that are similar to those for students with a disability and difficulties accommodating flexibility in rigid institutional settings. Findings were synthesised into a framework of strategies, policies and procedures of inclusion to support student carers in higher education.


College students across the United States are engaging in protests, sit-ins, and walk-outs, but when do these political acts result in tangible institutional policy changes? This paper draws on qualitative data from interviews and focus groups with 502 participants across the United States to examine when and why college student political behaviors influence institutional changes on college campuses. Findings from this study suggest that higher education institutions present different political opportunity structures for students to engage in activism. These political opportunity structures provide policy windows at the institutional level to affect campus wide change. To the extent that these changes promote diversity, equity, and inclusion though also depends on these varying structures. In this paper, a typology of these structures is presented to explain when student activism shapes institutional change and for whom.


English learner (EL) education is widely conceived as services for immigrant-origin students, however nearly one in ten American Indian, Alaska Native, and Native Hawaiian students are classified in school as EL. Title III of the Every Student Succeeds Act (2015) defines EL eligibility differently for Indigenous, compared to non-Indigenous, students with implications for who is identified as an EL and how best to serve their academic and linguistic interests. This study presents findings from a 50-state review of Indigenous EL identification policy. We find that states fall into four categories ranging
from no differentiation in Indigenous EL identification to clear differentiation. We describe each of these four categories and conclude with reflections on how this wide variation in state policies has implications for Indigenous students’ educational resources and experiences.


UNESCO. (2023b). *SDG 4 mid-term progress review: progress since 2015 has been far too slow* (p. 12). Consulté à l’adresse UNESCO website: https://unesdoc.unesco.org/ark:/48223/pf0000386852


This study utilizes semi-structured interviews to explore the status quo of teacher training of rural and urban public primary school teachers in Henan Province China. Our findings showed that both rural and urban teachers had very limited training opportunities available to them. Most of the participants did not find the current training opportunities useful in improving their teaching practices. Both rural and urban teachers desired training in pedagogy, educational psychology, and curriculum. Rural teachers particularly expressed the need for training in ICT and classroom management skills. Observing education experts’ demonstration classes is the most preferred training format. Policy implications are discussed.

This retrospective study investigated transitions in patterns of caregiver involvement before and during COVID-19 and their antecedents and consequences. A total of 504 young children (age: M ± SD = 49.92 ± 4.30 months) and their primary caregivers were recruited from the junior classes of 10 preschools in Zhengzhou City, Henan Province, China. Latent profile analysis identified three profiles characterized by (1) high levels of caregiver involvement (HCI), (2) average levels of caregiver involvement (ACI), and (3) low levels of caregiver involvement (LCI). Latent transition analysis showed that caregivers who belonged to the HCI or LCI latent status before COVID-19 tended to transition to the ACI latent status during COVID-19. Higher levels of caregiver depression contributed to a higher probability of transitioning from the HCI to the ACI latent status, while higher levels of household chaos predicted a higher probability of transitioning from the HCI to the ACI latent status and a lower probability of transitioning from the LCI to the ACI latent status. Finally, the transitions in patterns of caregiver involvement were associated with young children’s approaches to learning during the pandemic.


This study investigates the impact of slum upgrading programs on elementary school attendance, a strong predictor of dropout and adult outcomes. Slum upgrading programs are interventions in impoverished areas that involve building housing, roads, sewerage systems, and installing public lighting. Using administrative data on Uruguayan students, we examine the effects of slum upgrading programs on school attendance. The study employs a regression discontinuity design based on the eligibility rule that considers a slum eligible for the program when it has 40 or more dwelling units. The results show that students exposed to slum upgrading programs had 28 fewer absences (16 percent of the school year or 70 percent of the total missed days that qualify a student as having insufficient attendance), and lower probability of being recurrent absentees. This study provides insights into the impact of slum upgrading programs on human capital accumulation among low-income children.

Pratiques enseignantes


Dans ce texte, nous proposons d’interroger les pratiques de formation des enseignants de mathématiques et de dresser quelques orientations et perspectives pour leur étude. Nous proposons d’abord un rapide état des lieux très général de ces pratiques et de leur diversité. Par-delà ces différences, nous présentons ensuite, à partir d’éléments théoriques existants, une orientation pour mener des recherches sur le déroulement de certaines formations. Cela pourrait servir d’outils à la fois pour analyser et pour développer des pratiques pendant des séances de formation, comme l’illustrent deux exemples esquissés sur des formations collectives d’enseignants du secondaire. Des perspectives terminent ce texte, qui, soulignons-le, ne se base pas sur des analyses de
données effectives mais sur une hypothèse sur le développement des pratiques. Nous y voyons un agenda pour le chercheur et le formateur dans ce domaine naissant de la recherche en didactique.


In this paper, we present a feedback of active pedagogy with flipped teaching, carried out with undergraduate students in Life Sciences (second year of Bachelor’s degree; University Paris-Saclay, France). In a teaching context where Biology programs are very busy, our students are subjected to significant cognitive overload, associated with difficulties to sort out and mobilise information, and a global lack of methodological training. How combining the necessary assimilation of knowledge, vocabulary and basic concepts and the acquisition of higher-level cognitive skills (to describe, analyse, interpret, represent/model, link facts together ...) ? More generally, how can we motivate students, empower them in their learning and boost their work? Facing these questions, our educational team has been experimenting for several years with active and reverse learning in an optional Master course. We wanted to assay its applicability in a Bachelor’s degree, where the success of the greatest number of students is a major issue for the University, while constituting one of its main challenges (Annoot 2012). With the aim of reinforcing motivation, volition and cognition (Houart 2017), we designed and deployed for two consecutive years, a hybrid pedagogical device based on the alternation of distant assimilation phases and face-to-face applications (Charlier et al. 2006). Its analysis, carried out through questionnaires submitted to students, indicates a very strong support on their part to the process, increased motivation to work and a feeling of methodological progress.


As in other disciplines, we regularly reproach our Bachelor students in Life Sciences for their passivity: fear of asking questions or intervening during lectures, infrequent and/or inefficient work (mostly based on rote learning at the expense of a deeper understanding), exercises not prepared in advance, waiting for corrections rather than confronting the error...). We also note, a little more each year, their methodological difficulties. Are they the only ones to blame or should we see there the limits of our essentially transmissive pedagogy? In the era of higher education massification, where studying has become for many students a passport to social integration more than an aspiration to intellectual advancement, what levers can we use to improve their motivation and volition? How can we get them to replace surface for in-depth learning, so that they gradually become able to use their knowledge in concrete situations? Facing these questions, we aimed at assessing the impact of profoundly changing the teaching format on the engagement of our undergraduate students. To this aim, we radically restructured an undergraduate teaching unit in Biology (second year). The strategy: to suppress frontal lectures and propose instead a hybrid pedagogical device based on active and reverse learning. The later combined phases of knowledge acquisition and observation, and face-to-face sessions focused on questioning,
methodology and problem solving. After a promising pilot test in 2018-2019, where only 23 students were offered this teaching format, we decided to extend the experiment to the whole 2019-2020 promotion. In order for the analysis to be comparative and controlled, half of the students received instruction in the reverse format (cohort of interest). The other half constituted the control cohort. At the end of the semester, participants were invited to answer a self-reported questionnaire adapted from previously published models and aimed at measuring four dimensions of engagement (behavioral, emotional, agentic and cognitive). Preliminary data revealed a significant intergroup difference in emotional, agentic and cognitive engagement, with higher scores for students in the interest group. It would now be interesting to deepen these analyzes by evaluating the degree of correlation between self-reported engagement scores and academic success in this module. Overall, this work highlights the benefit of the hybrid and reverse device tested. Beyond that, it provides the biology teaching community with a tool for measuring engagement in a flipped classroom situation at the University.


This critical reflection presents the major challenges faced while studying a doctorate through distance education. The challenges faced are explored in relation to the research literature to devise a framework for underpinning the practice of distance education doctoral advisers to ensure effective working relationships are developed and maintained throughout the candidature. The primary aim of the framework, known as CONNECT, is to reduce feelings of isolation for distance education doctoral students, while promoting a sense of connection to advisers, peers, and the wider university environment to reduce attrition rates in this population.


With or without pandemics, successful knowledge transfers and instilment of critical thinking in learners are strategic to teaching delivery. To revolutionize teaching practice and profession, the specific needs of every group of learners (such as gifted and talented, depressed, attention deficit hyperactivity disorder students, minority ethnic pupils, and low attaining) must be met. Therefore, a new paradigm that employs the right teaching styles for the right student at the right time should be adopted. A plethora of research has shown that enhanced understanding, retention, and critical thinking are better promoted in active learning strategies as compared to conventional passive learning. On the other hand, students’ critical thinking is most effectively enhanced by instructional approaches that incorporate constructivist, active-learning, and student-centered philosophies, in addition to other concepts like biosocial, psychological, psychosocial, emotional, motivational, and sociocultural perspectives. The execution of such a holistic perspective would inevitably require concerted efforts from all relevant key players and stakeholders.

Young children in the United States, particularly Black boys, are being suspended and expelled from early childhood education programs and primary schools at alarming rates. Teachers describe children’s “disruptive” or “challenging” behavior as the most common reason for suspending or expelling a child. For this reason, common efforts to reduce exclusionary discipline target teacher behavior to change child behavior (e.g., improve use of evidence-based practices) or child behavior directly (e.g., learn self-regulation skills). In this paper, we argue that improving the quality of the teacher-child relationship is an alternative mechanism for addressing exclusionary discipline and mitigating racial disparities in the early childhood years. We propose and provide support for a transactional, relational model to account for exclusionary discipline. The proposed conceptual model intentionally names how teachers’ racial bias and children’s stereotype threat, resulting from racialized classroom experiences, exacerbate coercive teacher-child interaction cycles for Black children. We apply this model to review and evaluate select teacher-child relationship interventions to identify opportunities and challenges these interventions present to reduce exclusionary discipline and mitigate racial discipline disparities. We end the paper with recommendations for future research to advance relationship-based solutions to the exclusion crisis in early childhood education.


Cet article s’appuie sur la définition de la vigilance didactique des enseignants pour penser les conditions de celle du formateur en formation initiale des enseignants du premier degré, affectés en maternelle. Nous associons l’exercice d’une certaine vigilance du formateur à l’amélioration au lien entre théorie et pratique chez les formés. L’exercice de la VDF exige des conditions particulières pour saisir les besoins des formés. À cette fin, nous avons mis au point un scénario de formation que nous décrivons. Nous analysons les données produites par sa mise en œuvre.


Amid the COVID-19 lockdown many countries have replaced traditional learning with remote or mobile one. It was noted that students’ motivation has become much less with the transition to distance learning. This study analyzes how motivational processes influence mobile learning quality and aimed to analyze the factors boosted the motivation of students to learn in modern conditions of isolation and identify the major demotivating factors affecting the quality of mobile learning. Motivation is considered a key factor in improving students’ involvement in distance learning. The author surveyed 200 students and 46 teachers of The University of Jordan and Jordan University of Science and Technology regarding the factors that influenced their motivation in terms of mobile learning. The results revealed that 178 out of 200 participants agreed that intrinsic motivation impacted their interest in mobile learning. Some 78% of the students approved of mobile learning, while the remaining 22% believe it is necessary to return to the traditional face-to-face education format. The importance of feedback and communication with teachers and its impact on the process of mobile learning is
The role of built-in mechanisms in information systems and the positive role of gamification is equally important. Plug-ins compatible with the convenient WordPress system, i.e. applications that help organize the educational process were examined in the scientific work. The specific recommendations for raising the motivation of students in the learning process, which can be used by relevant institutions worldwide, presented.

Amor, F. B. (2023). Implementing didactic engineering development as part of a collaborative researcher/teacher effort during the conceptualization of Analysis objects at the start of the higher education curriculum. Consulté à l'adresse https://hal.science/hal-04214190

At the start of the higher education curriculum, the conceptualization of local approximation objects of a function requires the articulation of knowledge and skills from Functional Analysis and Topology. The aim of this article is to present an experiment in preparatory classes designed to help students appropriate and make reasoned use of the concept of the Taylor-Young formula. Our methodology for analyzing student work is based on a model of reasoning analysis within the framework of didactic situation theory. This model has played an essential role in the development of didactic engineering, in the identification of students' conceptions, forms and functions of reasoning. It has also enabled us to identify obstacles to learning the concept of local approximation of a function, resulting either from a paradigm shift during the transition from secondary to higher education, or from working within the Infinitesimal Analysis paradigm when conceptualizing this mathematical concept.


Previous literature on the effect of tenured and tenure-track vs. non-tenure-track professors on students’ performance at university finds contrasting results. Our paper is the first to test whether tenured/tenure-track and non-tenure-track teachers differently affect students’ performance at school. We use data on standardized test scores of a representative sample of primary and secondary school students in Italy and information on their Italian and mathematics teachers’ labor contracts. Controlling for class- and subject-fixed effects, we find that non-tenure-track teachers decrease students’ performance by 0.21 standard deviation. This detrimental effect is fully explained because non-tenure-track teachers are less experienced. In line with previous findings on the adverse effects of teachers’ absences, non-tenure-track teachers are also associated with 0.1 standard deviation worse student performance when their contracts last less than a year.


Les travaux didactiques dont l’objet d’étude concerne les pratiques de formation se sont appuyés sur les outils développés pour l’analyse des pratiques enseignantes en les spécifiant au contexte de la formation (Houdement & Kuzniak, 1996 ; Emprin, 2007 ;
Sayac, 2012). Dans ce travail, nous réutilisons et croisons ces outils méthodologiques dans le but de comprendre les pratiques de formation en algorithmique et en programmation à destination des professeurs des écoles stagiaires. Cette étude de cas nous permet de mieux cerner les enjeux de cette seconde année de formation initiale par la mise en évidence des savoirs de formation, des stratégies utilisées ainsi que des postures épistémologiques convoquées.


Au Québec, les programmes de formation à l’enseignement prévoient des activités de stage caractérisées par une alternance d’expériences d’enseignement et d’analyse de ces situations de classe par la stagiaire, l’enseignante associée et la superviseure universitaire. Notre implication dans les stages nous a amenées à nous intéresser à ce qui est discuté lors des entretiens post-leçon au sujet de l’enseignement des mathématiques. De l’analyse des deux triades de formation étudiées émergent, d’une part, les enjeux révélateurs de ce qui fonde un enseignement mathématique jugé pertinent et viable par les formatrices et les stagiaires et d’autre part les dynamiques convergentes, complémentaires ou divergentes des échanges caractérisant l’articulation de leurs perspectives.


L'article s’attache à décrire l’articulation entre deux dispositifs : l’un institutionnel, le LéA « ICARE » situé à Besançon, l’autre didactique, la lecture Pas-à-pas, qui propose une démarche pour apprendre à comprendre. L’étude présentée analyse les liens qui se tissent entre ces deux niveaux. Le dispositif institutionnel, par sa structure même, permet d’élaborer, de tester, de reconfigurer les manières de travailler des enseignants, grâce à la dynamique d’une recherche collaborative. Le dispositif didactique est, quant à lui, réajusté à partir de l’analyse du travail réel des enseignants. Les deux niveaux, institutionnel et didactique, par leurs interactions, agissent plus particulièrement sur la formation des enseignants et contribuent à la production de données pour la recherche.


Advancements in artificial intelligence are rapidly increasing. The new-generation large language models, such as ChatGPT and GPT-4, bear the potential to transform educational approaches, such as peer-feedback. To investigate peer-feedback at the intersection of natural language processing (NLP) and educational research, this paper suggests a cross-disciplinary framework that aims to facilitate the development of NLP-based adaptive measures for supporting peer-feedback processes in digital learning environments. To conceptualize this process, we introduce a peer-feedback process model, which describes learners’ activities and textual products. Further, we introduce a terminological and procedural scheme that facilitates systematically deriving measures.
to foster the peer-feedback process and how NLP may enhance the adaptivity of such learning support. Building on prior research on education and NLP, we apply this scheme to all learner activities of the peer-feedback process model to exemplify a range of NLP-based adaptive support measures. We also discuss the current challenges and suggest directions for future cross-disciplinary research on the effectiveness and other dimensions of NLP-based adaptive support for peer-feedback. Building on our suggested framework, future research and collaborations at the intersection of education and NLP can innovate peer-feedback in digital learning environments. Practitioner notes What is already known about this topic There is considerable research in educational science on peer-feedback processes. Natural language processing facilitates the analysis of students’ textual data. There is a lack of systematic orientation regarding which NLP techniques can be applied to which data to effectively support the peer-feedback process. What this paper adds A comprehensive overview model that describes the relevant activities and products in the peer-feedback process. A terminological and procedural scheme for designing NLP-based adaptive support measures. An application of this scheme to the peer-feedback process results in exemplifying the use cases of how NLP may be employed to support each learner activity during peer-feedback. Implications for practice and/or policy To boost the effectiveness of their peer-feedback scenarios, instructors and instructional designers should identify relevant leverage points, corresponding support measures, adaptation targets and automation goals based on theory and empirical findings. Management and IT departments of higher education institutions should strive to provide digital tools based on modern NLP models and integrate them into the respective learning management systems; those tools should help in translating the automation goals requested by their instructors into prediction targets, take relevant data as input and allow for evaluating the predictions.


Artificial intelligence (AI) is increasingly integrating into our society. University education needs to maintain its relevance in an AI-mediated world, but the higher education sector is only beginning to engage deeply with the implications of AI within society. We define AI according to a relational epistemology, where, in the context of a particular interaction, a computational artefact provides a judgement about an optimal course of action and that this judgement cannot be traced. Therefore, by definition, AI must always act as a ‘black box’. Rather than seeking to explain ‘black boxes’, we argue that a pedagogy for an AI-mediated world involves learning to work with opaque, partial and ambiguous situations, which reflect the entangled relationships between people and technologies. Such a pedagogy asks learners locate AI as socially bounded, where AI is always understood within the contexts of its use. We outline two particular approaches to achieve this: (a) orienting students to quality standards that surround AIs, what might be called the tacit and explicit ‘rules of the game’; and (b) providing meaningful interactions with AI systems. Practitioner notes What is already known about this topic Artificial intelligence (AI) is conceptualised in many different ways but is rarely defined in the higher education literature. Experts have outlined a range of graduate capabilities for working in a world of AI such as teamwork or ethical thinking. The higher education literature outlines an imperative need to respond to AI, as underlined by recent commentary on ChatGPT. What this paper adds A definition of an AI that is relational: A particular interaction where a computational artefact provides a judgement about an
optimal course of action, which cannot be easily traced. Focusing on working with AI black boxes rather than trying to see inside the technology. Describing a pedagogy for an AI-mediated world that promotes working in complex situations with partial and indeterminate information. Implications for practice and/or policy Focusing on quality standards helps learners understand the social regulating boundaries around AI. Promoting learner interactions with AI as part of a sociotechnical ensemble helps build evaluative judgement in weighting AI’s contribution to work. Asking learners to work with AI systems prompts understanding of the evaluative, ethical and practical necessities of working with a black box.


Digital literacy games can be beneficial for children with reading difficulties as a supplement to classroom instruction and an important feature of these games are the instructional supports, such as feedback. To be effective, feedback needs to build on prior instruction and match a learner’s level of prior knowledge. However, there is limited research around the relationship between prior knowledge, instruction and feedback in the context of learning games. This paper presents an empirical study exploring the influence of prior knowledge on response to feedback, in two conditions: with or without instruction. Thirty-six primary children (age 8–11) with reading difficulties participated: each child was assessed for their prior knowledge of two suffix types—noun and adjective suffixes. They subsequently received additional instruction for one suffix type and then played two rounds of a literacy game—one round for each suffix type. Our analysis shows that prior knowledge predicted initial success rates and performance after a verbal hint differently, depending on whether instruction was provided. These results are discussed with regards to learning game feedback design and the impact on different types of knowledge involved in gameplay, as well as other game design elements that might support knowledge building during gameplay. Practitioner notes What is already known about this topic Instructional supports, such as elaborative feedback, are a key feature of learning games. To be effective, feedback needs to build on prior instruction and match a learner’s level of prior knowledge. Prior knowledge is an important moderator to consider in the context of elaborative feedback. What this paper adds Providing additional instruction (eg, pre-training) may act as a knowledge enhancer building on children’s existing disciplinary expertise, whereas the inclusion of elaborative feedback (eg, a hint) could be seen as a knowledge equaliser enabling children regardless of their prior knowledge to use the pre-training within their gameplay. Highlights the importance of children’s preferred learning strategies within the design of pre-training and feedback to ensure children are able to use the instructional support provided within the game. Possible implications for pre-training and feedback design within literacy games, as well as highlighting areas for further research. Implications for practice and/or policy Pre-training for literacy games should highlight key features of the learning content and explicitly make connections with the target learning objective as well as elaborative feedback. Pre-training should be combined with different types of in-game feedback for different types of learners (eg, level of prior knowledge) or depending on the type of knowledge that designers want to build (eg, metalinguistic vs. epilinguistic). Modality, content and timing of the feedback should be considered carefully to match the specific
needs of the intended target audience and the interaction between them given the primary goal of the game.


Children from underserved, minoritized, and immigrant families have less access to early out-of-school STEM learning opportunities. Playful Learning Landscapes increase the accessibility of early STEM learning in everyday public spaces (e.g., bus stops, grocery stores) by merging principles of guided play and STEM learning goals with local community’s values. We used community-based design research to (1) identify Latine families’ funds of knowledge related to play, science, and math learning, and (2) create designs for playful environments merging families’ values and practices with guided play and STEM learning principles. Our design partners were 32 parents, primarily Spanish-speaking immigrant mothers from Mexico, and two directors of a local community organization. The design process consisted of co-design sessions, interviews, inductive thematic analysis, elaboration, playtest and feedback, and iteration. Our findings showed that familismo, heritage representation, and the meaning of community spaces influenced the ways families engaged in STEM learning and the learning environments they desired in their community. Moreover, families’ STEM practices were rooted in everyday experiences of playing cultural games, family food routines, and outdoor activities. Incorporating Latine parents in the design process and leveraging their funds of knowledge resulted in culturally situated designs aligned with playful and STEM learning principles. This study contributes to knowledge of Latine families’ values and practices that can help create home-community connections to strengthen children’s learning.


We study the effects of two dimensions of teacher quality, subject knowledge and didactic skills, on student learning in francophone Sub-Saharan Africa. We use data from an international large-scale assessment in 14 countries that include individual-level information on student achievement and country-level averages of teacher subject knowledge and teacher didactic skills in reading and math. Exploiting variation between subjects in a student fixed-effects model, we find that teacher subject knowledge has a large positive effect on student achievement, whereas the effect of teacher didactic skills is comparatively small but imprecisely estimated. Differences in teacher subject knowledge account for 37 percent of the variation in average student achievement across countries.

Depuis quelques dizaines d’années, l’observation de la nature par les scientifiques nous révèle que les relations entre espèces fonctionnent davantage sous un mode altruiste, solidaire et d’entraide que compétitif. Ce changement de regard sur les modes d’organisations naturels et spontanés du monde vivant nous a amenés à concevoir une unité d’enseignement à l’attention des étudiant.es de 1ère année de licence biologie, chimie et science de la terre à l’Université Paris-Saclay, laquelle a pour vocation de faire vivre aux étudiant.es une expérience collective autour de problématiques de sciences et société (S&S) en utilisant l’outil théâtre forum. La formation comportait sept ateliers de mutualisation, durant lesquels les étudiants ont pu co-construire des saynètes autour de problématiques de S&S sur la base de leurs vécus. Ont suivi une séance publique de théâtre forum puis une étape bilan. Ce dispositif a permis à nos étudiant.es de concevoir un espace de négociation et d’acquérir par ce biais des compétences en termes d’écoute et d’ouverture à l’altérité, essentielles à un travail en équipe collaboratif. Ce dispositif pourrait être proposé à d’autres acteurs tels que celles et ceux de la recherche scientifique qui souhaiteraient développer leurs qualités d’écoute et d’ouverture à l’altérité au service de la réalisation de programmes de recherche interdisciplinaires.


In light of the dramatic rise in mental health disorders amongst adolescents seen in the past decade across the world, there is an urgent need for robust evidence on what works to combat this trend. This paper provides the first robust evaluation of the impacts on school outcomes of 6-year funding programme (HeadStart) for area-level mental health interventions for adolescents. Exploiting educational administrative data on ten cohorts of state-educated secondary school students, we use the synthetic control method to construct counterfactual outcomes for areas that received the funding. We show that the funding did not affect students’ absenteeism or academic attainment, but it prevented around 800 students (c. 10% of students typically excluded yearly) from being excluded in its first year. The transient nature of this effect suggests that sustained funding for intervention may be a necessary but not sufficient condition to maintain programme effectiveness over time.


Gamified learning is an instructional strategy that motivates students to learn, and the use of multiple representations assists learning by promoting students’ thinking and advanced mathematical problem-solving skills. In particular, emergency distance learning caused by the COVID-19 pandemic may result in a lack of motivation and effectiveness in learning. This study designed an online gamified learning activity incorporating multi-representational scaffolding and compared the differences in the learning achievement and motivation for the gamified activity and general synchronous distance learning. In addition, for the group that conducted the gamified learning activity, we measured the participants’ flow, anxiety, and emotion during the activity. A total of 36 high school students participated in the experiment. The results indicated that...
the gamified learning activity was not significantly effective in terms of enhancing learning achievement. In terms of learning motivation, a significant decrease in motivation was found for the group using general synchronous learning, while a significant increase in motivation was found for the group using synchronous gamified learning. This indicates that despite the negative impact of the pandemic on learning, gamified learning still enhances students’ learning motivation. The results of flow, anxiety, and emotion showed that the participants had a positive and engaged experience. Participants provided feedback that the multi-representational scaffolding facilitates learning.


Manipulatives are often used to help children master mathematical concepts. The present study investigated whether concreteness of the object and concreteness of the language used to describe it mattered for effectiveness. Two hundred and twenty-five kindergarten children were taught how to solve equal sharing problems with one of the four methods: concrete-object-concrete-language, concrete-object-generic-language, generic-object-concrete-language, generic-object-generic-language. Their knowledge of equal sharing was pre- and post-tested. Results of the 2×2×2 mixed-design ANOVA suggested that there was a significant interaction effect between the concreteness of object and concreteness of language on the differences in equal sharing knowledge across the two tests. Follow-up analysis revealed that children showed greater improvement in knowledge when incongruent methods (i.e., concrete-object-generic-language, generic-object-concrete-language) were adopted. These findings suggest that when teaching mathematics with manipulatives, early childhood educators should use generic language to label concrete manipulatives, but concrete language to label generic manipulatives.


This study examines university faculty members’ successful behaviours and the factors influencing these behaviours, when dealing with the issues posed by emergency remote teaching during the COVID-19 pandemic. Data was gathered through interviews with 12 carefully chosen instructors who competently prepared and implemented their first online classes despite various challenges encountered during the crisis. Interview transcripts were analysed by applying the theoretical concepts of the positive deviance approach to identify exemplary behaviours in the face of crisis. The results revealed that the participants performed three unique but effective behaviours, called ‘positive deviance behaviours’, in their online teaching: philosophy-driven decision making informed planning and ongoing performance monitoring. These behaviours were affected by individual factors (e.g., community engagement and emotion management during different phases of emergency remote teaching) and organisational factors (e.g., networks/hardware and training/support). By examining the positive deviance behaviours of instructors who delivered effective classes, this study offers online teaching and faculty development strategies in both crisis and non-crisis situations.

Cet article rend compte d’une recherche menée par un enseignant-chercheur et des formateurs intervenant dans la formation initiale de professeurs de mathématiques. Il s’agit d’étudier les effets des choix réalisés en formation par les formateurs sur les pratiques des professeurs débutants. Les analyses se situent dans le cadre théorique de la double approche didactique et ergonomique (Robert, 2008). Elles permettent de préciser en termes de composantes des pratiques l’influence non négligeable des pratiques des formateurs sur les pratiques en construction des professeurs de mathématiques débutants.


In this paper, Indigenous and local understandings of the role of storytelling for children (nthanu) are contrasted with the didactic understandings of children’s stories that permeate the formal education frameworks of Malawi; frameworks which are deeply entangled in a colonial and (post)colonial history. For Chitonga speakers, the majority of whom live in rural communities along the northern lakeshore of Malawi, nthanu form a crucial part of what might be considered ‘education’ – as core components in the construction of the social-self, these oral stories play a critical role in the ontoepistemological formation of the young person. This storytelling is seen as marginalised by formal school systems. Through thick ethnographic material, the paper shows how people who are part of the ethno-linguistic group of the Tonga understand the role of story-telling for children as creating ontological notions of what it means to be human, to live in this world, and the sociality of being human that is seen as necessary for living a good life. In an examination of villagers’ fears about the disappearance of their stories, the paper locates the tensions between the literacy-oriented use of stories in formal schooling and the socio-ontological importance ascribed to stories in local learning modalities.


Au tournant des années 2000, l’équipe du baccalauréat d’éducation préscolaire et d’enseignement primaire de l’UQAC a élaboré une progression des apprentissages pour les douze compétences du référentiel (MÉQ, 2001). Le niveau de maîtrise attendu a été défini selon les quatre stages. Dans la foulée de ce travail d’envergure et d’une récente modification de programme, le modèle d’accompagnement et d’évaluation ainsi que
les outils ont été revisités. L'article présente les changements réalisés au début des
années 2000, la vision de l’accompagnement revue entre 2016 et 2019, des dispositifs
pour mieux l’arrimer à l’évaluation, et propose quelques perspectives de
développement pédagogique.

education: Predicting teachers’ workplace experiences over time. Early Childhood

Guided by social capital and diffusion of innovation theories and K-12 social network
research, we describe instrumental advice network ties among diverse staff (n = 374) in
a representative sample of early childhood education (ECE) programs (n = 43) in one
large urban school district. We investigate across-time links between advice network ties
and teachers' job satisfaction, orientation to innovation, and efficacy beliefs. Results
indicate that administrators are the most sought source of advice; lead teachers are
advice sources for more colleagues than are assistant teachers; and, specialized staff
are advice sources in content areas aligned with their role. In support of a social influence
model, ECE teachers with a higher proportion of advice ties in the fall reported higher job
satisfaction, teaching efficacy, and collective efficacy in the spring. No relationship was
found between advice ties and teachers’ orientation to innovation. Findings generate
hypotheses on diffusion processes and inform ECE professional development.

formation en enseignement des mathématiques. Annales de Didactique et de Sciences
Cognitives. Revue internationale de didactique des mathématiques, (Thématique 1),

Cet article a pour objet de présenter une synthèse des textes précédents pour réfléchir
aux nouvelles perspectives qui se dégagent du paysage général des recherches en
didactique des mathématiques. Les dix articles de ce numéro thématique permettent
de constater d’abord que le contexte de la formation professionnelle à l’enseignement
des mathématiques et celui dans lequel se réalise le développement professionnel de
cet enseignement, semblent déterminants. En particulier, plusieurs questions sur la place
de la formatrice et du formateur, sur les formations elles-mêmes et sur leurs spécificités
émergent de ces travaux. Dans ces conditions, la didactique des mathématiques peut
être mobilisée de plusieurs façons et ce, de façon non exclusive.

Demangeon, A., & Tazouti, Y. (2023, septembre 26). La pédagogie Montessori est-elle
efficace ? Ce que nous disent les recherches scientifiques. Consulté 27 septembre 2023,
at l’adresse The Conversation website: http://theconversation.com/la-pedagogie-
montessori-est-elle-efficace-ce-que-nous-disent-les-recherches-scientifiques-209697

L’engouement pour la pédagogie Montessori ne se dément pas. Mais va-t-il de pair avec
son efficacité ? Une méta-analyse s’est penchée sur la question.

mathématiques: comment se diffusent, en formation, les résultats de la recherche ?
Annales de Didactique et de Sciences Cognitives. Revue internationale de didactique
des mathématiques, (Thématique 1), (315-339). https://doi.org/10.4000/adsc.1910
En s’appuyant sur le cadre d’analyse de la transposition mèta-didactique (Arzarello et
al., 2014) et plus précisément sur les concepts de courtage en connaissances et d’objet
frontière, cet article étudie la manière dont les connaissances pour enseigner l’algèbre
sont échangées dans le cadre d’un programme de formation réunissant neuf enseignants de mathématiques et deux chercheurs spécialisés en didactique de l’algèbre. Organisé en trois séances d’une demi-journée, ce programme s’articule autour d’un problème pointé dans la littérature de recherche comme particulièrement riche pour développer la pensée algébrique des élèves. Les documents exploités en formation sont en outre directement issus des classes des enseignants participant au programme. En ce sens, le programme valorise des connaissances ayant du sens tant dans la recherche que dans la pratique enseignante. L’analyse des interactions entre les chercheurs et les enseignants met en évidence trois types d’activités de collaboration entre les deux groupes d’intervenants et questionnent le potentiel d’un tel dispositif pour favoriser une appropriation, par les enseignants, de résultats de recherches.


This study asks, “How do instructors successfully engage students in learning about controversial issues of race without hitting the common tripwires of low trust, stereotyping or racial microaggressions?” To address this question, I conducted a study of two courses on race that were focussed on difficult issues, yet were consistently highly rated by students in evaluations. What I found led me to an emerging theory about how instructors can foster classroom cultures in which learning about race is challenging but edifying and empowering for students. Drawing from data from one course, I show that the instructor does this by establishing and sustaining what I call academic grounding, a mix of academic content and academic culture. This grounding, in turn, allows students to become braver and more empathetic in their learning. I named this process Brave Community to highlight that this dynamic tension between bravery and empathy is integral to meaningful learning about racism in racist societies.


There is high turnover among child care teachers in the United States. Center directors could play an important role in reducing this turnover, but to date, research on how leaders in child care support workforce stability typically has not been conducted beyond small, selected samples. This study links survey responses from 1,114 teachers working in 152 publicly funded child care centers to examine how leader support (as reported by teachers) is associated with teachers’ intentions to stay and observed retention at their center eight months later. Results suggest leader support is positively associated with observed teacher retention, above and beyond a set of teacher, leader, and center characteristics. Our findings suggest child care leaders may be important in promoting workforce stability and quality improvement.


In order to strengthen the emergence and the diffusion of pedagogical innovation, a physical space was designed at the Institut Villebon - Georges Charpak. This space
aimed at welcoming teachers from the Institute wishing to reflect and experiment on their teaching, as well as their collaborators. This article depicts how this place, the Center for Pedagogical Innovation of the Institut Villebon - Georges Charpak, was designed in order to support pedagogical innovation, and describes the preliminary results in terms of space use.


Previous studies have shown that peer victimization causes a great variety of severe adverse effects on children’s development, and it is necessary to explore the influential factors and mechanisms of peer victimization. This study examined the associations between teacher–student relationships and peer victimization, as well as the roles of peer status and gender in China. The participants were 734 primary school students from Grades 5-6. Structural equation models were conducted to test the roles of peer status in the associations between teacher–student relationships and peer victimization, as well as the gender differences in the above associations. The findings showed that teacher–student closeness negatively predicted peer victimization, and teacher–student conflict positively predicted peer victimization. It was also found that teacher–student conflict but not closeness could negatively predict peer status, which was in turn negatively associated with peer victimization. The above associations did not vary across genders. The findings indicated that both teacher–student closeness and conflict were directly associated with children’s peer victimization, and teacher–student conflict was indirectly associated with peer victimization via peer status. This implies that interventions for decreasing children’s peer victimization should not only focus on improving teacher–student relationships but also target peer status.


This paper is the result of an inter-university educational innovation project developed between the University of La Laguna (Spain) and the Autonomous University of Baja California (Mexico). Students from both institutions, studying at the equivalent level to become future primary education teachers, analysed the way in which primary school textbooks approach the topic of heritage in the Canary Islands and in Mexico. Flipped classrooms and project-based learning were the main teaching methodologies, culminating in a final assignment: a written report by students. The results enable us to re-evaluate the knowledge transmitted through textbooks in the light of this history, and their facilitation in teaching and learning processes, with attention to their epistemological biases. Several topics were highlighted as core concerns in the use of textbooks for teaching heritage: the need to question the role of the textbook in the teaching process, and the importance of Indigenous heritage when teaching and holistic concept of heritage. In outlining the inter-university teaching project, the article also shows how the analysis of textbooks in both contexts, and their subsequent comparison, has made possible a reformulation of how students of education in the Canary Islands and Mexico are taught to teach history.

Fidan, M. (2023). The effects of microlearning-supported flipped classroom on pre-service teachers’ learning performance, motivation and engagement. Education and
Flipped classroom (FC) has recently attracted researchers’ interest in teacher education thanks to its potential for promoting pre-service teachers’ (PTs) professional development. However, some of major issues are the lack of interactivity, disengagement, and amotivation of PTs for pre-class activities due to poor online instruction design. This explanatory sequential mixed study explores the effects of the microlearning-supported FC on PTs’ learning performance for professional development, motivation, and engagement. A total of 128 PTs participated in this study from a university in Turkey. In the quantitative phase, a quasi-experimental pretest-posttest design was conducted and the treatment lasted for 14 weeks. The PTs were divided into two experimental groups and one control groups using random sampling technique. In first experimental group (m-FC, n=43), the participants learned with microlearning-supported (by using a-bit sized learning chunks outside the classroom) FC model. In the second experimental group (t-FC, n=39), the participants learned with traditional FC model. A control group (non-FC, n=46) was not taught using FC model and teacher-centered approach was adopted in this group. The findings indicated that FC model (in both experimental groups) increased learning performance, intrinsic motivation, emotional, and behavioral engagement compared to a group that was not used to FC. Moreover, m-FC group had better intrinsic motivation and engagement than both t-FC and non-FC groups. Semi-structured interviews showed that two major themes emerged regarding benefits and challenges of microlearning-supported FC. Most of PTs had positive perceptions that it enhances the willingness to participate in pre-class activities.


Equity-centered preparation builds novice teachers’ capacity to make meaningful instruction accessible to all students, particularly those historically excluded from high-quality learning experiences. Drawing on social learning theory, we examined Teacher Study Groups as a model for supporting preservice special educators’ development of equity-centered practices. We examined 60 preservice teachers’ instruction prior to and following study group participation, embedded in a fieldwork support course, alongside related artifacts shared during weekly sessions. Using a convergent mixed-methods approach, we analyzed quantitative and qualitative data separately and then integrated findings using joint display analysis; in doing so, we generated meta-inferences regarding how teachers’ attitudes mediated growth in practice. We uncovered salient participatory experiences that influenced—and hindered—professional growth. Our findings have implications for programs interested in structuring professional learning in a manner that builds foundations for an equity-centered practice.


Les enfants qui fréquentent la maternelle 4 ans temps plein en milieu défavorisé (TPMD) bénéficient d’une structure éducative qui leur permet de développer, entre autres, leurs
habiletés langagières. Dans ce contexte, l’activité pédagogique de la causerie présente plusieurs caractéristiques qui favorisent le développement du langage oral. Cependant, les stratégies d’intervention à privilégier lors de l’animation de cette activité semblent parfois peu connues des enseignantes. Cette étude, à laquelle ont participé trois enseignantes de la maternelle 4 ans TPMD, dresse le portrait des différentes stratégies d’intervention pouvant soutenir le développement du langage oral lors de l’animation de la causerie dans ce contexte.


Drawing on life history interviews, this paper seeks to explore the lives of a group of eight teachers, all with working experience in England, who self-identify as committed to a more socially just education system. Drawing on Levitas’ Utopia as method, this article examines these teachers’ perspectives on and practices around social justice in education, such as aiming to eradicate exclusion policies and processes, and organising with like-minded colleagues. We also explore the significant professional and emotional labour that goes into such kinds of work towards a socially just education system, and the satisfaction that comes from ‘making a difference’. Their perspectives also provide insight into what a vision of socially just education might look like for those in the teaching profession.


There is rich literature on the predictive role of the caregiver’s language richness in child development outcomes during caregiver-child interaction. However, it is unclear whether this is true in rural China, where many young children are still not developing to their fullest potential. Our study supplements the current evidence in rural China by answering three questions. First, is the rural caregiver’s language richness associated with child development outcomes? Second, do different child characteristics, caregiver characteristics, and household poverty status affect the relationship between caregiver language richness and early child development outcomes? Third, does the caregiver’s language suitability moderate the association between language richness and child development outcomes? We observed and recorded 10-minute-long videos of 591 rural children aged 6–30 months and their primary caregiver dyads in a free toy play session and collected their social-demographic information. Trained coders coded videotaped interactions to obtain measurements of the caregiver’s language richness and suitability. Children were assessed for cognitive, language, motor, and social-emotional development. A multivariate linear regression model adjusted for covariates was used to estimate the association between the caregiver’s language richness and child development outcomes. Interaction terms were then added to the adjusted model to explore the moderating role of caregivers’ language suitability, child characteristics, caregiver characteristics, and household poverty status. The caregiver’s language richness is positively associated with the child’s cognitive, language, motor, and social-emotional development. The association is more pronounced for children who are boys, in later toddlerhood, or from registered poverty households. In addition, we found that the caregiver’s language suitability could enhance the association between language richness and child development outcomes.

Following the tradition of Chicana/Latina feminist nuevas teorias and methodologies, I offer walking pláticas as a qualitative research methodology that honors the brown body and facultad to examine our relationship to the spaces we traverse, live within and mutually shape. Walking pláticas is a reclamation of research methodologies that dismantle the white colonial gaze through a recentering of the brown body as a critical corporeal, political, and geographic site of analysis. In this article, I propose to move beyond the understandings of space as the neutral and apolitical backdrop on which life occurs. The strengths of walking pláticas include the consideration of spatiality as key to exploring how people make sense of, are influenced by, and shape space—a great methodological tool for critical educational researchers seeking to understand the role of geography and the physical and social places and spaces on Communities of Color.


L'article est issu d'une ingénierie coopérative impliquant trois professeur·e·s des écoles et une chercheuse, menée dans le cadre d'une recherche doctorale visant à concrétiser l'égalité des sexes au CP dans et par des situations d'écriture. Il tente de mettre en évidence le lien entre égalité et temps didactique. Il s'agit de montrer que la mise en œuvre de l'égalité filles-garçons dans les situations d'écriture suppose de repenser la temporalité de celles-ci au regard d'un temps didactique déplié en un temps long du brouillon. Pour explorer cette proposition, le texte présente deux situations en contraste au CP : une situation ordinaire d'écriture inscrite dans un temps didactique classique, et une coécriture en binôme mixte via la bande-brouillon ancrée dans le temps long du brouillon en particulier celui de « l'arrêt ».


SES- and ethnicity-related disparities in teacher-child relationships are prevalent. An important cause may be that children of color and children from low-SES backgrounds are often perceived by their teachers to have lower social-emotional behavioral (SEB) competence. Besides the impact of poverty on SEB development, likely explanations for such gaps are cultural mismatch theory and teacher bias theory. Both frameworks point to a divergence between teachers' and students' expectations of classroom norms as well as their practice of them. Such incongruence can manifest in the extent to which teachers and parents (dis)agree on children’s SEB skills. The greater the divergence between parents and teachers, the larger the discontinuity in socialization experiences a child may encounter during kindergarten transition. Using the Early Childhood Longitudinal Study data, the current study investigates the relationship between socialization discontinuity and children's demographic backgrounds, and whether disparities in teacher-child relationships can be predicted by the degree of socialization discontinuity. The results show higher divergence between teachers' and parents' assessment of children’s SEB skills for children from low-SES backgrounds, non-English
speaking households, and those who are identified as Black or Hispanic. Higher socialization discontinuity predicts both a more conflictual and a less close teacher-child relationship in general. Meanwhile, children from a non-English household tend to have less conflict with their teachers. Other factors that may affect teacher-child relationships, future research directions, and implications for policymakers and education practitioners are discussed.


The outbreak of the COVID-19 pandemic in Singapore has resulted in the adoption of home-based learning (similar to remote or distance learning worldwide) due to periodic school closures in Singapore. The media and academia have diverse views on the effectiveness of this alternative mode of education. This study draws data from teachers' interviews and students' focus group discussions of an ongoing large-scale baseline study on mother tongue education to reveal teachers' and students' perceptions of home-based learning. Findings showed that the participating teachers generally mimicked physical lessons online during home-based learning, and they faced difficulties in monitoring students' tasks online. Though students enjoyed the freedom of doing their learning tasks at their own pace, they were concerned with the lack of teachers' support and the social-emotional support from peers. With the feedback and reflections from teachers and students, it was observed that despite the availability of technology and online infrastructure, teachers need readiness for transiting between physical teaching and online instruction, whereas students need readiness for self-directed learning. From students' feedback, it was also noted that parents need readiness for educational technology and support for their children. To better prepare teachers, students, and parents for home-based learning, it is recommended that the developers provide more dedicated resources that take into consideration the different characteristics (e.g. orthography) of each language subject. Parents should also assume a greater role in monitoring their children's learning on behalf of the teachers for better effect in home-based learning.


The article discusses Indigenous caring relations in everyday practices involving children, in which co-learning approaches, as well as peer-to-peer learning processes, are grounded in territory. We revisit a set of learning encounters that unfolded as part of the Intercultural Training Programme for Indigenous Educators in Southeast Brazil. The course is part of the Minas Gerais Federal University's (UFMG) Faculty of Education where, since 2006, it has trained and qualified Indigenous teachers to deliver Primary and Secondary education. In the text we argue in favour of the ‘school for many’, highlighting the pedagogical possibilities that emerge from the course’s ethnographic focus and, more specifically, from two care-taking learning scenarios with and among children. The records of these activities allow us to envision an educational agenda that includes such topics, respecting and dialoguing with Indigenous cosmologies and traditions; one that assumes this dialogue to be a fundamental part of Indigenous peoples’ resistance and respect for life.

Dans un travail précédent, nous avions conçu, mis en œuvre et analysé un scénario de formation basé sur le dispositif du Jeu de Rôles, qui plonge les futurs professeurs des écoles dans une situation d’aide à un élève (Lajoie et al., 2019). Nous avions fait ressortir des potentialités offertes au formateur pour faire émerger, chez de futurs enseignants, des connaissances d’ordre mathématique, didactique et pédagogique mais nécessitant un travail exigeant de la part du formateur. C’est cette dimension que nous interrogeons dans ce texte, en nous plaçant dans le cadre de la théorie de l’activité, plus précisément la manière selon laquelle une formatrice qui n’a pas participé à la conception du scénario le met en œuvre, notamment la manière dont elle gère les phases de discussion collective.


The increasing range and pervasiveness of network channels allow the continuous availability of information. The fact that we are permanently exposed to this flow of information means that it is necessary to monitor the quality of the resources and to avoid those without sufficient guarantee of reliability. This competence, which can via a deliberate diagnosis, confirm or deny a judgment, is called critical thinking. Teaching young people about critical thinking is a major issue of our education system. With the aim of strengthening critical thinking of 3468 students recorded in 41 distinct first year curricula, a multi-disciplinary collective and three institutional actors of the Paris Saclay University developed a small private online course (SPOC) called “Critical Thinking/Science in Societies. This project was the fruit of two years of and of many interactions. The SPOC proposes five sessions on various themes over a ten-week period. The various activities are distinct from each other (texts, YouTube videos, and others) and aim at the development of different objectives in transversal learning. At the end of the sessions, it is of particular importance that each student is able to differentiate these discourses from others with regards the conception of non-stabilised scientific expertise or with regards more complex socio-scientific controversies. At the end of each session, students completed an assessment survey. They were also invited to complete an optional survey, indicating, on self-assessed Likert-scales and via open comments, their feelings about the session and their degree of satisfaction. The SPOC was related to a teaching unit and targeted different learning goals that students tried to validate across the lessons. A large majority (i.e. n = 2419) of students completed the SPOC and validated targeted competences; a sign of the educability of critical thinking. Only 174 students received a final mark under the average, which meant they didn’t validate the course. The last fourth did not complete the assessment surveys. Furthermore, students seemed to appreciate this SPOC, both on the whole and individual sessions. Open comments also point to the interest of the youths towards the project. This analysis brings to light the beneficial virtue of our educational dynamic and the numerous benefits of a close collaboration between disciplines, professions and different institutional actors, collected
by and for a common action. This project seeks to expanded, equally in terms of audience and of activities (e.g. cultural events).


In this paper, I explore how pláticas allowed for my former high school students and I to conceptualize love. This work is a response to overwhelming statistics regarding child trauma and literature that named loving relationships as a pivotal but under-conceptualized intervention. Specifically, we participated in three different iterations of pláticas: communal, peer, and individual. Through our plática structures and commitments to safety, accountability, and joy, we were able to conceptualize love and ultimately argue that based on the similarities between the five tenets of Chicana Feminist pláticas and our definition of love, that pláticas can not only serve as a methodological praxis that challenges centuries of epistemological and methodological harm but also serve to foster the type of love that is integral to the well-being of our communities.


Le département d’éducation spécialisée du Cégep de Jonquière assure quotidiennement la formation d’étudiants en situation de handicap (ÉSH), qui représentent le quart des étudiants qui le fréquentent. Nous avons mené une recherche dans une perspective bioécologique afin de brosser un portrait des caractéristiques des ÉSH inscrits en techniques d’éducation spécialisée (TES) et de connaître les attitudes, les rôles et les stratégies pédagogiques privilégiés pour les soutenir. Dans ce contexte, nous avons réalisé une analyse qualitative d’entrevues individuelles semi-dirigées menées auprès de sept enseignantes. Nos résultats révèlent que leur point de vue sur les besoins des ÉSH est, somme toute, positif et empreint d’espoir pour leur réussite scolaire.


As critical posthumanist and (new) materialist scholarship become more established in educational research, a reconsideration of methodological approaches suited to a radical relational onto-epistemology is required. A popular figuration adopted by researchers to help think and do such research is the Deleuze-Guattarian “rhizome.” Coming to terms with how rhizomic styled research (rhizo research) is undertaken and what it can yield however, can be challenging. In this paper, a study involving a Zombie Apocalypse Survival Course run at a human pathology museum becomes an animated example of rhizo research. Through it we demonstrate how infusing this research with an “analytic of lines” (derived from Deleuze-Guattarian rhizomatics) provides for a practice of research that has the power to shift the ontological and epistemological positions that continue to define qualitative research in education and bring understudied, ethico-political dimensions of it into view.

Nous nous trouvons dans une classe d’école enfantine. Une élève est un peu désœuvrée car, comprenant l’activité proposée par son enseignant comme un jeu, le « jeu de la marchande », elle ne saisit pas qu’il faut mettre un biscuit dans chaque ramequin à sa disposition, c’est-à-dire les apprêter. Il est trop tard pour elle, le « jeu » s’achève sur un constat d’échec : « Elle n’est pas invitée à recommencer, elle a essayé, elle a perdu. […] La fillette ne dit rien et regarde son quatrième biscuit qu’elle tient entre ses deux mains. » Cette scène, décrite dans l’ouvrage, constitue, avec d’autres, un point de départ des réflexions des auteur·e·s sur les inégalités d’apprentissage et sur les moyens d’y remédier. Souvent conçues au niveau macrosociologique et associées à des indicateurs comme la profession des parents, ces disparités semblent fatales, hors de portée des enseignant·e·s, qui seraient alors réduits à les reproduire ou à les accompagner. Or, si l’on prête attention aux gestes pédagogiques du quotidien, on s’aperçoit qu’il existe de nombreuses possibilités pour les contrer. L’ouvrage, réunissant les contributions d’une quinzaine de spécialistes, porte à la fois sur la sensibilisation et la formation des enseignant·e·s aux inégalités sociales d’apprentissage et sur les moyens d’agir concrètement dans les classes et les établissements scolaires.


Sense of success and self-efficacy regarding technology integration in teaching are among the most important factors that influence teachers’ well-being and professional development, and may have a substantial impact on student learning. In this quantitative study (N = 735 K-12 teachers in Israel), we explored the factors contributing to sense of success in emergency remote teaching and self-efficacy for integrating technology in teaching following the experience of teaching during COVID-19 days. We use decision-tree models to look at nuanced relations. Overall, our findings highlight the crucial—albeit not surprising—role of experience in teaching with technology as an important factor that promotes sense of success and self-efficacy. Going beyond this factor, we emphasize that emotional difficulties in times of emergency may serve as an important risk factor, and that taking a leading role in school may serve as an important protective factor. We also found an advantage to STEM and Language teachers, compared with Social Sciences and Humanities teachers. Following our findings, we conclude with a set of recommendations that could enhance school-based teaching and learning at large.


Based on the Teaching Through Interaction (TTI; Hamre et al., 2013) framework and the observational tool Classroom Assessment Scoring System (CLASS; Pianta, La Paro, et al., 2008), some professional development (PD) programs combined with video-based coaching had been developed. Previous studies have well-documented the effects of these PD programs on in-service teachers’ mastery of interactional skills; however, little
research has been done on the effects for preservice teachers. In the current study, we aimed to explore: (1) if video-based coaching improves preservice teachers' interactional skills, and (2) how the personal characteristics of teachers (whether they attend coaching or not) predict the change of interactional skills during their practicum.

Using an experimental approach, the study recruited 56 preservice teachers from a Chinese university to participate in the assessment and intervention. Results showed that preservice teachers in the coaching group who received one semester of sustained and individualized coaching support demonstrated a greater improvement in teacher-child interaction skills in the Emotional Support domain than those in the control group. Further, preservice teachers' higher levels of child-centered beliefs and initially lower levels of knowledge of effective teaching, ability of identifying effective teaching behavior, and teacher-child interactional skills related to a greater increase in interactional skills during the internship. These findings shed light on how to design effective preparation programs for preservice teachers during their practicum.


As part of the reform of the bachelor’s degree program, we have implemented a program-based approach for ecology courses. On this occasion, we explored how the members of the teaching team perceive their role in the teaching and how their knowledge in pedagogy has evolved with the implementation of a program-based approach. Analysis of the responses to a questionnaire shows that the evolution of pedagogical knowledge and the development of the program-based approach, accompanied targeted pedagogical training, are very much linked and that collegiality is a determining factor.


Le tutorat auprès de jeunes en situation de handicap est une action solidaire et pédagogique concrète utile tant pour la réussite des jeunes aidés que pour l’acquisition de compétences transversales chez les tuteurs. La communication tire le bilan d’un programme déployé à CentraleSupélec depuis 7 années scolaires et délivre un retour d’expérience quant aux leviers et freins pour sa mise en œuvre. L’expérience apparaît porteuse de sens et d’apprentissages et participe à une société plus inclusive.


The study aim was to scope research into student outcomes of co-teaching models to promote inclusive school education for students with disability. A systematized search was conducted of studies addressing models of co-teaching involving two teachers and student outcomes published from January 2008 to June 2019. Each study was appraised for quality. Most of 21 studies that met inclusion criteria were conducted in the United
States (n = 17). Fourteen studies followed quantitative approaches, six followed qualitative and one included both. Although the benefits of co-teaching for students were demonstrated, it was difficult to determine comparative effectiveness across models, with only one study providing a systematic comparison. There was some evidence of differential effects across factors such as disability type, grade level, and outcome types, but heterogeneity across study aims, participants characteristics, extent to which co-teaching models were described or implemented, and outcomes targeted precluded meaningful comparisons. Limitations were found in study designs, with appraisal scores ranging from 0.6% to 89%. Hence, the research into student outcomes for various models of co-teaching was found to be limited both in number and quality. Findings point to the need for greater attention to what occurs in classrooms to support positive student outcomes of inclusive education through co-teaching.


Animating equity in teaching and learning depends on teacher dispositions—orientations to self, others, and society that underlie how we think and act. Teacher dispositions are virtues or qualities of moral character that modify the ways we interact with students and educator colleagues. Although interest in “measuring to improve” teaching and teacher education has grown recently, most measures lack validity evidence for practical usefulness. Integrating Messick’s “unified validity framework” with Janssen et al.’s notion of “practicality” (as face validity), we find through an iterative, mixed-methods analysis of interviews with equitable educators and survey responses from teacher candidates that incorporating recognizability, relevance, and feasibility concerns of equity disposition concepts (i.e., Social Awareness, Meekness, Advocacy for Students) within survey items enhances item-to-factor structure of a self-report measure. We discuss implications (a) to develop and appraise formative measures and (b) to support teacher learning and development to become equitable educators.


Teachers’ classroom management practices are an essential aspect of supporting student engagement, yet they often vary in response to changing conditions in the classroom. This study explored the variability within middle school teachers’ observed practice and their students’ engagement as a function of contextual factors. Observers visited teachers (n = 278) on three occasions, typically over the course of two consecutive school days using two consecutively-administered observational tools (n = 1582 total observations). Multilevel regression models and multiple comparison adjustments suggested teachers’ emotional support and student cooperation declined over time during the morning hours. Small group work, individual seat work, and “other” instructional groupings were often associated with less desirable outcomes than whole group instruction. Finally, most teacher practice and student engagement outcomes were rated more favorably when observers perceived a larger proportion of the students in the classroom to be White. Implications are discussed for observational measures in
research and practice and for improvements in teachers' classroom management practices, particularly when working with students of color.


Using Virtual Reality (VR) in educational contexts is becoming increasingly common. The ability of VR to provide authentic learning experiences is making it a particularly promising platform for language learning, but the research on its acceptance among language teachers is scarce. This paper reports the results obtained from a large-scale (N = 2,176) survey on language teachers' beliefs toward the use of VR for education. The survey explored the relationships between language teachers' beliefs about using VR in a classroom and their teaching experiences, such as previous use of VR for teaching, their stages of VR technology integration, and their preferred teaching approaches. Furthermore, the survey yielded answers on the relationship between the availability of information technology (IT) personnel in language teachers' schools. We found that practical knowledge and past experiences of incorporating VR in teaching were crucial determinants of teachers' positive beliefs, showing that teachers were motivated to adopt VR technology in their classrooms if they had previously used it. Language teachers' favorable beliefs were also positively correlated with the availability of IT personnel in their schools.


Malgré l'importance que revêt, au Québec, le métier de conseiller pédagogique (CP) pour la formation continue des enseignants, peu de travaux de recherche se sont attardés à comprendre ce métier, de l'intérieur de sa pratique. C'est en particulier le cas en enseignement des mathématiques où les CPs sont pourtant confrontés à des défis de taille, en lien notamment avec la résolution de problèmes. À travers une recherche collaborative menée avec des CPs intervenant au primaire, nous nous sommes intéressées à cet accompagnement. Trois cas contrastés présentant des accompagnements différents sont ici développés. Prenant appui sur le cadre de la didactique professionnelle et sur le concept de logique d’action, une analyse émergente permet d’expliciter l’activité professionnelle que ces CPs mettent en œuvre et les raisons qu’ils ont d’agir en situation.


Cette recherche s’intéresse à la formation des adultes suivant une remise à niveau des «compétences clés» dans le cadre de dispositifs régionaux des Hauts-de-France. Elle vise à comprendre et à analyser la double précarité des formateurs et des stagiaires ainsi que son impact sur la relation pédagogique créée. Ayant personnellement fait le constat d’une précarité relative aux deux types d’acteurs dans le cadre professionnel, nous nous sommes posé une double question dans une visée compréhensive : Comment se traduit la précarité chez les formateurs et les stagiaires ? Dans quelle mesure la double précarité...
du formateur et des stagiaires impacte-t-elle leur relation pédagogique et la construction de leur identité professionnelle respective ? Notre méthode de recherche qualitative et abductive s’appuie sur la réalisation d’entretiens semi-directifs, d’observations directes ainsi que d’un atelier d’écriture et d’échange sur l’activité au sein de cinq centres de formation. Les données recueillies ont fait l’objet d’une analyse thématique de contenu. Les résultats obtenus ont permis de caractériser la précarité des formateurs et des stagiaires ainsi que la nature de la relation d’accompagnement créée entre eux qui oscille entre asymétrie et symétrie et tend vers une réciprocité. Cette relation instaurée participe à la (re)construction identitaire des deux acteurs. Les formateurs ont une image globalement positive de leur activité, malgré une identité professionnelle qui reste assez floue, assortie d’un manque de reconnaissance socioprofessionnelle. Concernant les stagiaires, la plupart ont une image d’eux-mêmes assez négative lors de leur entrée en formation. Toutefois, celle-ci apparaît bénéfique pour eux, car elle leur permet de se projeter davantage, de s’identifier les uns par rapport aux autres, et surtout de gagner en autonomie, en assurance. Enfin, de la rencontre entre ces deux acteurs aux profils précaires se profile une relation d’accompagnement constructive à différents niveaux.


Collecting and organizing data to understand and answer real-world questions is an increasingly important skill in our current world. Fostering data collection and analysis (DCA) skills in young children leverages key mathematics skills as well as the data representation, visualization, and interpretation skills of computational thinking (CT), culminating in a problem-solving approach with data. As such, the intervention, comprising investigations and a digital app, supported preschool teachers and children to answer data-focused questions by engaging in each step of the DCA process in order to foster CT and math skills. Teachers appreciated that the app offers a new way for children to visualize data and noted that the app provided learning opportunities for children that would not otherwise be possible or easy to implement. Results also suggest that the app provides a systematic process for data collection, entry, and interpretation. Children in classrooms that completed the intervention had significantly higher scores at post-intervention compared to children in classrooms that did not complete the intervention, controlling for pre-intervention scores, B(SE) = 0.13(0.05), t (6) = 2.48, p = .048.


The system of music education is directly attributed to arrangements that improve theoretical and working knowledge. Purpose of the article: the features of interactive methods that improve music literacy skills among students majoring in preschool education at teacher training universities, based on the Kodály method. Achievement of the set goal was possible as a result of involvement of 100 students and 55 preschoolers. Using the method of observation, the authors developed the following principles to improve the musical literacy of students: setting the voice with Erol Singer’s Studio; vocal performance of songs using active movements; learning from national vocal art, as well
as academic foreign compositions; application of the soliloquy principle using the Sing Sharp app. In this study, using the calculation of the coefficient of effectiveness, the level of knowledge of students after the training was established. It was found that voice production without the involvement of a musical instrument and vocal performance of songs using active movements were developed to a greater extent (at a high level), because interactive technology was involved, promoting the assimilation of knowledge (Erol Singer’s Studio). Calculation of the knowledge efficiency of preschool children who were trained according to the developed principles showed that the greatest number of preschool children received a high level of knowledge, which is associated with their interest in learning. The paper’s practical implications are attributed to the possibility of applying the developed education principles for musical literacy improvement based on interactive teaching methods and the Kodály method. Further studies might measure the effectiveness of the developed teaching principles for a broader age group of students, which will help to track the positive (negative) effects of the curriculum on musical literacy skills.


This study explored the relationships among regulated learning, teaching presence and student engagement in blended learning. A two-level model was designed based on contextual factors (teaching presence) and individual factors (regulated learning), and experience sampling method was employed to collect intensive longitudinal data on 139 participants across three universities over 13 weeks in a blended course. Furthermore, multilevel regression analysis were conducted to examine the effects of teaching presence, self-regulated learning (SRL), co-regulated learning (CoRL) on intra- and interindividual variance in student engagement. The findings were as follows. 1) Perceived teacher support and instructional design fit had a significant positive effect on cognitive and emotional engagement and were crucial contextual factors that influenced intraindividual variance in learning engagement. 2) SRL and CoRL were copredictors of student engagement in blended learning. CoRL was more related to emotional engagement, while SRL was more related to cognitive engagement. 3) Modality had a significant effect on cognitive engagement but not on emotional engagement. 4) SRL and CoRL positively moderated the relationship between perceived teaching presence and cognitive engagement, while they negatively moderated the relationship between teacher support and emotional engagement, i.e., the relation between teacher support and emotional engagement was stronger in situations of low SRL or CoRL. Implications for teaching practice on blended learning were also discussed.


This study explores the effects of pre-service teachers’ digital literacy and self-efficacy on their perception of AI education for young children in early childhood education settings. Digital literacy refers to the ability to communicate with others by using digital technology, including the ability for sharing knowledge and information after user’s creation. A survey was conducted on 212 pre-service early childhood teachers at two
Universities located in the eastern United States, and the collected data were analyzed by descriptive statistics, correlation analysis, and hierarchical multiple regression. As a result of the study, first, pre-service teachers had high critical thinking among the sub-factors of digital literacy, but relatively low problem-solving skills. Second, the relationship between digital literacy, self-efficacy, and the perception of AI education for young children showed a positive correlation. Third, among the sub-factors of digital literacy of pre-service early childhood teachers, technical application, learning interaction, and problem-solving with teachers’ self-efficacy were found to have a significant effect on the perception of AI education for young children. This study proposes that developing a pre-service teacher education program that can improve their digital literacy and self-efficacy is necessary for guiding early childhood teachers to use artificial intelligence technology with young children in early childhood education classrooms in educationally meaningful ways.


With the rapid development of Artificial Intelligence, automatic writing evaluation (AWE) has received much attention from English Foreign Language (EFL) writing teachers. However, the obstacles and potential problems of integrating AWE in EFL writing instruction have yet to be explored. Scholars have indicated that the effectiveness of AWE in EFL writing instruction depends on the learners’ depth of reflection. Hence, this study proposes a learning approach that integrates AWE and peer assessment (PA) based on the knowledge-building theory, with the expectation that learners will be able to strengthen their reflections on AWE feedback through PA, and thereby improve their EFL writing performance. To examine the effectiveness of the proposed approach, a quasi-experiment was conducted in a university EFL writing class. One of the classes (33 students) was the experimental group using the PA-AWE approach, and the other class (31 students) was a control group that studied using the conventional AWE approach (C-AWE approach). Findings revealed that the PA-AWE group outperformed the C-AWE group regarding EFL writing performance, learning motivation, critical thinking, and reduced EFL writing anxiety. In addition, a thematic inductive qualitative analysis of the interview data indicated each approach’s benefits and learning conceptions.


This study aims to explore participation in the Effective Classroom Interactions for Toddler Educators (ECI-TE) course and if doing so was associated with changes in their noticing and implementing effective educator-child interactions. Sixty-one center-based toddler educators were randomly assigned to control or participation in ECI-TE, an online content and coaching professional development course. Findings showed that participants who engaged in the course were highly satisfied with ECI-TE and found the experience helpful. Both groups showed low noticing skills and quality of educator-child interactions; however, participants in the treatment condition showed greater noticing skills and higher quality of educator-child interactions with a medium effect size. Nonetheless,
educators’ participation in the course raises concern about the workforce stability. Specifically, during the course, many educators either left the field or had difficulty engaging due to competing demands, limiting the stability in the field and potential to transform early care quality at scale. Results have implications for how we consider and support the professional development needs of toddler educators to foster children’s positive development and future school readiness.

Comment accompagner le développement d’un programme d’insertion professionnelle au sein d’une équipe-école ? Cet article s’adresse aux personnes conseillères pédagogiques qui se posent cette question. Nous présentons une démarche et des outils d’accompagnement, appuyés théoriquement, pour soutenir l’élaboration et la mise en œuvre collaboratives d’un programme d’insertion professionnelle avec et pour les membres d’une équipe-école. Les personnes conseillères pédagogiques pourront ainsi planifier un soutien collaboratif, différencié et rigoureux du personnel novice accueilli dans les établissements scolaires du Québec.

Blended teaching (BT) has the potential to prepare preservice teachers with lifelong learning capabilities that are essential for the constantly changing teaching profession. However, little is known about its effectiveness in this field. This review evaluated the effectiveness of BT in preservice teacher education, compared to conventional teaching approaches. A total of 15 experimental studies were included in the meta-analysis. Standardized differences in mean were chosen to compute the pooled effect size at 95% confidence interval (CI). The results demonstrate that BT outperformed the conventional teaching approaches in influencing preservice teachers’ academic performance (d = 0.922 (95% CI [0.403, 1.436], p < 0.001)), anxiety (d = −0.27 (95% CI [−0.537, −0.003], p = 0.048)), attitude (d = 1.302 (95% CI [0.008, 2.595], p = 0.049)), and self-efficacy for teaching (d = 0.54 (95% CI [0.203, 0.877], p = 0.002)). Implications and suggestions for future research are discussed.

Depuis plusieurs années, les jeux de rôles (JdR) sont exploités comme dispositif pour la formation initiale à l’enseignement dans des cours de didactique des mathématiques. Bien que le potentiel des JdR dans la formation ait été étudié, le rôle de la personne formatrice lors des JdR reste peu documenté. Dans cet article, à partir de récits de pratiques de formation rédigés par les personnes auteures de ce texte et en s’appuyant sur un cadre de référence, nous décrivons les postures et gestes professionnels adoptés par les personnes formatrices dans les différentes phases du dispositif des JdR. En dépit
de différences liées au pilotage du dispositif, d’importantes similitudes se dégagent dans ces postures et gestes dans les quatre phases du dispositif des JdR.


Le propos de cet article est d’étudier le rôle des facilitateurs dans des formations adaptées des Lesson Studies, dénommées LSa. Cela nécessite une approche systémique, permettant de prendre en considération de multiples acteurs du dispositif évoluant dans des collectifs et institutions variés. Après avoir brièvement décrit le dispositif LSa et précisé le cadre théorique et la méthodologie de cette recherche, nous mettons en évidence la diversité des rôles endossés par les facilitateurs et les franchissements de frontières associés, en nous centrant plus particulièrement sur la circulation de trois objets frontière identifiés (l’avatar, la vidéothèque et la feuille de route) au cours de l’élaboration et d’implémentations successives du dispositif LSa.


This article documents the process I, as a teacher educator at UCLA’s History Geography Project, went through to develop my lesson for centering Salvi history, “Reclaiming Our Stories Con Pláticas y Fotos: Pláticas as Pedagogy In K-12 History Classrooms.” Inspired by the scholarship of feminist women of color who have shaped and informed my teaching practice and my views on the purpose of history education, I make the case for why Salvi communities in Los Angeles need a lesson like this to intervene in the erasures of Salvi communities in the history-social science framework for California public schools. These overt silences that I, and an entire generation of Salvi students, have faced at home and in school motivated this lesson, in which I use pláticas as pedagogy in an effort to move towards healing in our community. Specifically, I narrate how my lesson draws on the five principles outlined in the Chicana/Latina feminist plática methodology as well as the ways my lesson aimed to meet the specific needs of my Salvi community and history instruction. I conclude by reflecting on how I made this lesson accessible to educators through various professional developments and reflect on the process of working with educators.


Although previous research suggests the use of classroom management strategies can support student engagement and learning, gaps in the literature still exist including the frequency of classroom management strategies in small-group instruction. The purpose of this descriptive study was to measure the frequency of paraprofessionals’ (n = 94) classroom management strategies within the context of a small-group intervention for kindergarteners at-risk of reading difficulties. This study contributes to the field by finding that trends described in previous studies continue to be demonstrated in this targeted instructional setting, in particular, regarding the infrequent use of praise with students at-risk of academic failure. The results of paired-sample sign tests suggest that when providing corrective feedback, paraprofessionals were more likely to specifically label
the behavior being reprimanded. However, paraprofessionals infrequently labeled the specific behavior being reinforced when praising students.


L’objectif général de la recherche est de déterminer les différentes stratégies pédagogiques et numériques qui favorisent la création d’une relation pédagogique à distance en enseignement supérieur. Les concepts clés de la relation pédagogique qui ont été retenus pour la recherche sont le climat de classe, la présence et la qualité relationnelle de Cosmopoulos (1999). Ce type de recherche se caractérise par le fait qu’elle découle de la vie quotidienne et cherche à fournir une image précise d’un phénomène commun dans l’objectif d’éventuellement agir sur ce dernier. La vision de la réalité est construite par les acteurs faisant partie de la situation puisque c’est la dynamique du phénomène de la relation pédagogique à distance qui est étudiée. La nature même du savoir est donc intimement lié au contexte dans lequel il se produit. Afin d’expliquer le phénomène et de comprendre les sous-tenants, l’expérience de l’enseignant qui offre des cours à distance devient alors primordiale. À cet effet, un questionnaire et des entrevues semi-dirigées ont été conduits pour relever les principales stratégies pédagognumériques utilisées pour favoriser la relation pédagogique dans un contexte de mise à distance de la formation.

**CLÉS DE L’AUTEUR** : relation pédagogique, enseignement, formation à distance, formation en ligne, technopédagogie, stratégies pédagognumériques, COVID-19, climat de classe, présence, qualité relationnelle, Québec


This paper proposes to evaluate learning efficiency by implementing the flipped classroom and automatic source code evaluation based on the Kirkpatrick evaluation model in students of CS1 programming course. The experimentation was conducted with 82 students from two CS1 courses; an experimental group (EG = 56) and a control group (CG = 26). Each student in each group completed 15 programming tasks. The level of knowledge of the participants acquired between the two groups is measured using the Kirkpatrick model, taking as a source a pre-test of previous knowledge, the grade assessment, the time of the activities, and a post-test of learning achieved. When comparing the submits time between the experimental and control group, it is observed that the value of the means is similar for the EG and CG; in this case, time is not a factor for comparison between the groups. However, in the grading, the value of the means is different for the EG and CG; EG students scored better than CG students. The evaluation of the Kirkpatrick model shows that the strategy implemented, on the one hand, does not improve the time of the activities; on the other hand, it improves the grades in the CS1 course.

Data-driven learning (DDL) has been demonstrated to be an operative strategy for assisting learners to handle a range of writing-related problems. Several studies have been conducted to compare the pedagogical effectiveness of DDL in English as a foreign language (EFL) writing. However, only a few studies have identified key factors that may affect learning outcomes when designing DDL activities. To bridge this gap, the present study looked at the medium-term effects of DDL activities in EFL writing. A pre-post quasi-experimental research design and semi-structural interviews were arranged to collect data from 64 Arab EFL undergraduate students. The DDL was carried out with the aid of BNCweb and offered the assessment of the findings by contrasting the efficiency of BNCweb with that of Sketch Engine, which is employed as a reference tool by EFL learners. The quantitative results showed that the experimental group’s use of BNCweb inspired their writing to be more fluid and consistent in the posttest as compared to the control group, which employed the Sketch Engine tool. However, no significant difference was detected between the groups in writing intricacy. The qualitative results indicated that students had positive attitudes toward using BNCweb, despite the challenges of implementing corpora in the writing process. It was recommended that integrating corpora with other types of reference sources would be a viable solution to overcome any potential obstacles for EFL learners.


In this article, we reflect on our experiences teaching and learning in a digital course for PhD students, Oxford-UNISA Decolonising Research Methodologies. The aim of the course was to ‘gesture’ beyond the coloniality of knowledge by thinking ‘otherwise’ about research methodologies. As a decolonial teaching praxis, gesturing embraces experimentation, humility and becoming as we pursue decolonial being/thinking and seek/create coexistence, well-being and dignity beyond its constraints. We conceive of co-teaching as co-learning and co-becoming. Teaching as becoming, we argue, means engaging with students without a rigid structuring telos. We revisit video footage from the class, course materials and review insights from our students to reflect upon the substance and configurations of our co-teaching. We analyse the significance of ‘keeping the fire’ of our shared intellectual projects, even as we remain situated within colonial institutions. Three interrelated challenges emerged while teaching decolonial geographies and decolonising methodologies in this online course. These dynamics include: (a) the challenges of cultivating student-teacher trust in digital exchanges; (b) the aspiration to embolden transdisciplinary engagements in the face of logistical, temporal and practical constraints, including ‘settler time’ and our ties to stated disciplines; and (c) the significance of co-presence and shared commitment to challenge academic hierarchies.


This study examines the entanglement of affects that occurred during a short episode at a science museum. The episode involved a small number of children and a teacher who had come to the museum in the context of a school field trip. It took place inside an exhibit called ‘Hmong House’, which reproduced various components of a traditional
house of the Hmong people. A key aim of this paper is to trace, via the microethnographic analysis of a brief video recording, an affective journey meshing mathematical tessellation and Hmong shamanism. In addition, we elaborate on ways in which disparate themes, such as tessellation and shamanism, became interwoven in the life of those visiting the Hmong House at the time. The episode of the Hmong House may inspire other activities in which students or visitors, with life trajectories partially rooted in Indigenous cultures, can share practices that are foreign to other students. The most important qualities of these activities, we suggest, are the respectful dignity with which they are demonstrated and engaged with, and the freedom to undertake interdisciplinary journeys – without subjection to artificial disciplinary boundaries – in which improvisation and surprising turns are expected and ever-present.

Nicolas-Noir, B., & Dias, T. (2023, juillet). *Using manipulatives for teaching mathematics: how creative are the teachers?* Consulté à l’adresse https://hal.science/hal-04208987

The project aims to explore teachers’ practices on the use of manipulatives for mathematics education. To this intend, a group of teachers is expected to design a teaching sequence based on manipulatives. The manipulatives are to be created by the teachers and tested in their classes.


Pendant ce parcours doctoral, nous avons travaillé à la mise en place de modalités d’accueil et d’accompagnement du personnel enseignant débutant au Cégep Limoilou au régulier et à la formation continue. Lors de la première partie du parcours doctoral, nous avons mis en lumière le processus d’insertion professionnelle vécu par les enseignantes et enseignants qui débutent au collégial et cerné les besoins de soutien ressentis pendant leurs premières années de pratique. Contrairement à l’ordre préscolaire, primaire et secondaire où les enseignantes et les enseignants doivent obtenir une qualification à l’issue d’une formation spécifique en enseignement, où les tolérances d’engagement sont balisées, au collégial, particulièrement dans les programmes techniques, il faut avoir une expertise disciplinaire (reconnue par l’obtention d’un baccalauréat disciplinaire) pour être considéré apte à enseigner. Aucune formation pédagogique n’est requise. Au collégial, qu’une personne enseignante soit novice ou expérimentée, la convention collective (Fédération nationale des enseignants et enseignantes du Québec [FNEEQ] [CSN], 2022a) prescrit que les cours doivent être distribués en fonction de l’ancienneté, sans égard au contenu du cours à enseigner. Comment sont accompagnées ces personnes enseignantes qui débutent au collégial dans la transition entre leur rôle d’experte ou d’expert disciplinaire à leur nouveau rôle d’enseignante ou d’enseignant? Quels besoins de soutien ont ces personnes en débutant et quelles modalités sont en place afin de les accompagner? Comment sont outillées les personnes enseignantes afin de développer des pratiques pédagogiques favorisant la réussite éducative des étudiantes et des étudiants du collégial? Dans la première partie du parcours doctoral, soit dans le projet 1, trente-trois (n = 33) personnes ont été rencontrées lors de vingt-et-un (n = 21) entrevues semi-dirigées et sept (n = 7) groupes de discussion afin d’identifier les besoins de soutien et le processus d’accompagnement en insertion professionnelle vécu au Cégep Limoilou. Les résultats qualitatifs ont mis en évidence la disparité dans l’accompagnement reçu à la formation.


In view of school closures due to the COVID-19 pandemic, this paper examines how a Home-Based Learning program affects learning outcomes of children in under-resourced communities. To overcome limited internet connectivity, the program provides remote instructions via phone calls and simple text messages along with automated voice calls to engage children enrolled in grades one to five in activity-based learning content. This intervention was conducted in three districts in the state of Odisha in India. Using a difference-in-differences framework, we find that the intervention led to a statistically significant improvement in basic number recognition and arithmetic operations, and language learning scores of children by 4.69 percentage points and 5.52 percentage points, respectively. Our results are robust to alternative methods of estimation and
application of Lee bounds, thus indicating that well-designed low cost interventions could be a useful supplement for continued learning in the face of sudden shocks in low income countries. With a rise in hybrid format of teaching and learning, such interventions have the capability to cushion the decline in learning levels and provide a safety net in the event of school closures.


Mechanisms translating initial impacts of early childhood education (ECE) programs into longer-term effects are poorly understood. This article posits that the temporality of unobserved mediated effects are integral to our understanding of the pathways underlying ECE programs’ long-term impacts. Leveraging panel data, we examined the patterns of indirect effects from two ECE programs on educational attainment via bundled mediators measured at age 8 or 10, 12, and 15 (the Abecedarian Project: N = 107; 97% Black; 3% White; 52% girls. Head Start: N = 1,251; 44% Black; 25% Hispanic; 31% White; 50% girls). Accounting for up to 50% of the impact, indirect effects in both studies revealed stable patterns of direct effects, suggesting that impacts on unmeasured mediators were present throughout the duration of the period after the end of ECE programs and before later outcomes were observed. These findings indicate that some of the mechanisms involved in Abecedarian’s and Head Start’s long-term impacts were substantial and independent from those typically captured by commonly used measures of cognitive and socioemotional or behavioral skills, which points to the need for new approaches to studying child-environment transactions.


The purpose of this study was to develop an invention instruction program based on the Theory of Inventive Problem Solving (TRIZ) for preservice invention teachers and test the effects of the program on teachers’ creativity beliefs, creativity, and invention teaching self-efficacy. The subjects of this study were preservice teachers who were enrolled in a four-week (eight sessions) TRIZ invention course at a university in South Korea. A quasi-experimental method was used to incorporate TRIZ instructional strategies into an invention course that taught invention principles and hands-on activities. Results showed that the TRIZ instructional method significantly increased creativity beliefs, creativity, and invention teaching self-efficacy in preservice teachers. Interestingly, the TRIZ program had different effects on subdimensions of creativity. Results of the study suggest that TRIZ is an effective instructional method that can be used to increase teachers’ creativity, change their beliefs about creativity, and boost confidence in their invention teaching ability. Limitations and suggestions for future study are also discussed.


Research on how teachers become culturally responsive tends to focus on preservice teachers or on the professional development activities that are associated with change for inservice teachers. Little is known about how the various elements of culturally
responsive teaching—including knowledge, skills, and fundamental orientations—interact with one another as teachers change. This case study followed 19 educators across four schools and over 2 years as they conducted action research to enhance their cultural responsiveness. We found four zones of development that characterized the teachers’ change: consciousness-raising, consciousness- and relationship-building, knowledge- and practice-building, and practice-refining. Within each zone, two or three elements of culturally responsive teaching appeared to change most dramatically and to mutually reinforce one another as teachers developed. Professional development experiences should attend to these different zones and to the gradual nature of this process.


How can we help all students to reach their full potential? If we want each student to be in their zone of proximal development, we must find ways to differentiate by playing on the format as much as on the diversity of the content and the explicitation of expectations. This article presents what has been set up in a mathematics course aimed at facilitating the transition from high school to university in a Science and Technology undergraduate program. A number of actions have already been taken to differentiate and support the students with most difficulties in this course. The most at ease students were capped and could validate by relying largely on their high school prior knowledge. A system of evaluation was completed to increase differentiation, leading to more explanation and a higher level of requirement for the most advanced students. These students were able to validate exercises of greater difficulty than in previous years with the help of the teacher and their classmates, demonstrating a greater proximity to their zone of proximal development. It remains to be seen how to better support them while maintaining the support provided to the students with the most difficulties and how to manage the widening gap between the academic performances of the different students in the same class..


The purpose of this study was to look into how Information and Communication Technology (ICT) is used in teaching English language from the point-of-view of English language teachers in Palestine. A quantitative approach was employed to collect data from 780 language school teachers from 260 schools who participated in a course project utilizing ICT in English as a Foreign Language teaching (TEFL). These participants responded to a questionnaire survey about the effects of the Covid-19 epidemic on language education and how they dealt with these. We statistically analysed the responses through four domains: the use of ICT in students’ lives; the use of ICT in education generally; the use of ICT to support learning and teaching in EFL; and teachers’ perceived skills for using ICT in education. Results indicated that English language teachers in Palestinian public schools believed that ICT has clear potential to
support the learning of English, but that there remain barriers to its implementation. Teachers feel equipped to use ICT but would like to see a greater emphasis on training in order to maximise their teaching.


This article provides a descriptive account of the workings of an Indigenous-led teacher training initiative in the Peruvian Amazon (Formabiap) and considers the extent of its transdisciplinary pedagogic approach, with a special focus on the ontological and epistemological stakes of intercultural knowledge exchanges in the context of contemporary global challenges. The article evaluates the extent to which Indigenous pedagogical projects can sustain inter-species relationships that promote a good life in which diverse species, including both humans and plants, can flourish. To extol the potential of Formabiap’s 35 year plus Indigenous rights initiative, the authors forward the notion of biosocial pedagogy, a heuristic device that helps value the consubstantial, and relationally entangled epistemologies of Indigenous Life-worlds.


In England, Pupil Premium Plus is additional funding to help address the educational attainment gap experienced by looked after children. This paper explores the experiences of virtual school heads and designated teachers (n = 140) as they access Pupil Premium Plus-related information, guidance and training to support their practice; navigate the complexities of the Personal Education Plan (PEP) process; and measure the impact of Pupil Premium Plus-funded interventions. We explain professionals’ experiences using insights from social practice theories, and argue that the process of supporting the educational outcomes of looked after children via Pupil Premium Plus is made up of context- and audience-dependent ‘social practices’. When the social practices are aligned, virtual school heads and designated teachers may be effectively able to support looked after children, whereas barriers may emerge when social practices become disjointed. We conclude this paper by arguing that for Pupil Premium Plus to support educational outcomes of looked after children effectively, professionals need to reflect on their own cultures and practices.


Manifestations of educational inequity in diversifying societies have led to a wide acknowledgement of the need to develop all teachers’ competencies to work in the context of diversity. The domain of beliefs and attitudes is generally included as one key component of teachers’ intercultural competence, but there is little consensus over what the core beliefs shaping teachers’ intercultural competencies are. This mixed methods study draws from social psychological research on inter-group relations and explores the role of polyculturalist beliefs and group malleability beliefs in shaping teachers’ orientation to teaching for diversity and social justice. A hypothesized model was tested
on survey data from Finnish comprehensive school teachers (N = 231) with structural equation modeling. Findings indicate that polyculturalism, in particular, strongly explains teachers’ teaching for social justice beliefs and enthusiasm for teaching in the context of diversity. Furthermore, we present a case analysis, based on classroom observations and stimulated recall interviews, of how polyculturalism actualizes in one Finnish elementary school teacher’s pedagogical thinking and practice, and discuss the implications of our findings for teacher education and further research.


In contribution to a body of scholarship that examines teaching as a form of learning, the paper addresses a central question: What can be learnt from organised mobilisation to educate in communities eager to strengthen their unique biocultural heritage? The question is explored through an examination of two grassroots education projects in Latin American provincial locations rich in history. Studied ethnographically over a period of fifteen years from the point of view of the educators who run them, these two projects offer a unique opportunity to examine the formation and the mobilisation of value in education. I show how popular education and agroecology methods are used in both cases to face socio-ecological conflicts and refocus developmental tensions. I conclude with a short reflection on UNESCO’s 2020 approach to education and its vital role in radically reconfiguring humanity’s place and agency on planet Earth.


In this paper, we present a novel approach to defining, teaching, and assessing creativity by examining its origins and delineating the processes involved. The rationale for introducing this framework developed from studying existing thinking and questioning the current metrics for measuring creativity, which we posit are unfit for purpose. We reach this conclusion because rather than accepting the existing focus on outcomes, we perceive creativity as a process based on different types of logic. Drawing upon the earlier work of De Bono and Kolb, we explore the creative process through the lenses of humour and systems engineering to reveal and develop a range of demonstrable skills and key techniques that can be learned, taught and assessed. By using the identified system inputs of creative logic, dialectic conflicts (dualities), alternate narratives, and abstraction, we ultimately present a possible framework for evaluating creativity without relying on subjective assessment. This methodology and framework can be applied in all educational contexts, from cross-curricular mainstream learning to a focus on excluded and hard-to-reach learners.


This study discusses the role of teachers in improving students’ cognitive competency in Islamic education lessons.
Depuis une vingtaine d’années, définir le vocabulaire scolaire est devenu un enjeu important pour les besoins de la recherche et ceux du milieu scolaire. Différentes typologies ont été proposées par les théoriciens sans aboutir à un réel consensus sur les critères permettant de délimiter ses catégories. Dans ce contexte scientifique, l’objectif du présent article est de proposer une typologie basée sur des critères explicites de discrimination entre les catégories de vocabulaire scolaire. À cet effet, sont décrits la démarche de conception de la nouvelle typologie ainsi que ses apports pour la recherche et les milieux pratiques.

Math anxiety has become an alarming social justice concern, as it results in negative academic consequences, contributes to disinterest and lack of persistence in STEM programs for underrepresented students, and limits their opportunities in STEM careers. According to research, this fear of math occurs long before students begin working on math problems. When high-math anxious students encounter math situations, anticipation anxiety consumes working memory capacity, inhibits learning, and causes them to severely underperform on mathematical tasks. However, very few studies have been conducted to embed psychological interventions in the classroom in an effort to mitigate both anticipation and execution anxiety. Findings from preliminary research suggest that a combined mindfulness and growth mindset intervention, designed to address both anticipation and execution anxiety, was effective in reducing math anxiety in students in a semester-long statistics course. The current research, a replication of the successful pilot study, investigated the generalizability of the mindfulness and growth mindset approach (MAGMA) in decreasing math anxiety in students in various STEM-related courses, and with different instructors. Results indicate that overall, students' self-perceived math anxiety decreased significantly compared to their control counterparts. Furthermore, considerable anxiety reduction was found for female students. However, no differences were found for final exam scores between the intervention and control group. Nevertheless, the MAGMA intervention appears to be an effective, inexpensive approach in alleviating math anxiety, and increasing mathematical resilience in community college students as they take STEM-related courses.

Learning analytics is a fast-growing discipline. Institutions and countries alike are racing to harness the power of using data to support students, teachers and stakeholders. Research in the field has proven that predicting and supporting underachieving students is worthwhile. Nonetheless, challenges remain unresolved, for example, lack of generalizability, portability and failure to advance our understanding of students’ behaviour. Recently, interest has grown in modelling individual or within-person behaviour, that is, understanding the person-specific changes. This study applies a novel method that combines within-person with between-person variance to better
understand how changes unfolding at the individual level can explain students' final grades. By modelling the within-person variance, we directly model where the process takes place, that is the student. Our study finds that combining within- and between-person variance offers a better explanatory power and a better guidance of the variables that could be targeted for intervention at the personal and group levels. Furthermore, using within-person variance opens the door for person-specific idiographic models that work on individual student data and offer students support based on their own insights. Practitioner notes What is already known about this topic Predicting students’ performance has commonly been implemented using cross-sectional data at the group level. Predictive models help predict and explain student performance in individual courses but are hard to generalize. Heterogeneity has been a major factor in hindering cross-course or context generalization. What this paper adds Intra-individual (within-person) variations can be modelled using repeated measures data. Hybrid between–within-person models offer more explanatory and predictive power of students’ performance. Intra-individual variations do not mirror interindividual variations, and thus, generalization is not warranted. Regularity is a robust predictor of student performance at both the individual and the group levels. Implications for practice The study offers a method for teachers to better understand and predict students' performance. The study offers a method of identifying what works on a group or personal level. Intervention at the personal level can be more effective when using within-person predictors and at the group level when using between-person predictors.


Social Justice Pedagogies provides a diverse and wide perspective into making education more robust and useful in light of global injustices and new challenges posed by new media and communication practices, media manipulation, right-wing populism, climate crisis, and intersectional discriminations. Meant to inspire readers to see learning and teaching from a wider perspective of justice, inclusion, equity, and creativity, it argues that relational and mindful approaches to teaching and learning in specific contexts, settings, and place-based experiences are essential in how we determine the value of education. The book draws on contributions from scholars and experts who incorporate social justice into their teaching practices in different disciplines in universities across Canada, the US, and Europe. Social Justice Pedagogies uniquely presents a wide interdisciplinary perspective on social justice in education practices in order to speak to the ways in which we all want to make our research, our classrooms, and our institutions more just. It argues that pedagogy, and specifically teaching and learning, constitutes a process of building relationships between people and knowledge by fostering a learning community.


Teacher education/training often incorporates observable examples of focal teaching practices - models. Yet, there is little causal evidence on the benefits of models or how best to design them. We used a classroom simulator experiment to test the effects of
video models on trainee teachers’ skills, knowledge, and self-efficacy in relation to using retrieval practice at the end of a primary school science unit. Results showed that models improved participants’ skills, but not their knowledge or self-efficacy. Adding annotations to the models had no additional benefit. Incorporating models in initial teacher training can help new teachers make better use of evidence-based teaching practices.


This paper investigates the experiences of Western teacher expatriates in a Shanghai international schooling organization. We explore the risks and benefits associated with transnational mobility and how teacher expatriates, as part of the global middle-class (GMC), maintain and reaffirm their middle-class status. Focusing on adaptation and constraint in professional contexts, the data illustrates how the teachers respond to new discourses and the rules of exchange in the rapidly changing Chinese education market. We operationalise transnational habitus, as a conceptual tool, to explore how certain identities are sustained and negotiated in various moments of unsettlement. As these teacher expatriates navigate new professional contexts, we see how their habitus remains heavily influenced by class and previous professional experiences in their country of origin as they engage in new work environments, in order to secure an advantageous position.


The contrast between student-centred and knowledge-centred teaching is explored through a qualitative case study exploration of the pedagogies (Bruner’s ‘folk pedagogies’) of six teachers of Jewish studies. These teachers, based in orthodox Jewish schools in the UK and Australia, discussed their roles as teachers in the context of their responsibility for inducting students into the Jewish community. They appear to overcome (or at least mitigate) the tensions between being student-centred and knowledge-centred through understanding both students and knowledge in communal terms. This communally-focused approach, drawing on the philosophers of ‘personal’ knowledge such as Polanyi, and of personalist approaches to schooling such as those of Macmurray and Noddings, is then proposed as of value in debates on schooling and the curriculum in general, well beyond the religious context of this particular research.


This paper reports results of an experimental study that assessed the efficacy and teachers’ perception of feasibility of a set of structured games for promoting curriculum learning goals in 12 prekindergarten and kindergarten classrooms in Chile. We developed four structured games aligned with the Chilean curriculum learning goals, and that were adequate to the material and human conditions of low-income classrooms in Chile. Six classrooms implemented the games in the course of 6 months, and the other six received them at the end of the intervention. One-hundred-and-
twenty-one children were evaluated in letter-word identification, math problem solving, phonological awareness, and science word knowledge at the beginning and end of the school year. Head teachers were interviewed about the games’ feasibility in their classrooms and their ability to engage the children. Multilevel regression results show that children in classrooms that implemented the games increased more than children in no-game classrooms in their letter-word identification, math problem-solving, and phonological awareness scores, controlling for grade level, entry receptive vocabulary, and entry executive function. Head teachers found the games engaging and fun for the children. They reported few difficulties in implementing the games in authentic classroom conditions. Results are analyzed regarding contributions to extant literature on playful learning and games, as well as implications for the successful use of playful methodologies for the promotion of academic learning goals in preschool classrooms in low- and middle-income countries.


In Western societies, school pedagogies tend to be biased in favour of talk and emphasise the links between talking, thinking and learning. Thus talk is often privileged over silence as the basis for learning activities in classrooms, sustained by theories of learning which afford priority to talk. Such cultural bias towards talk means that by contrast, silence can be perceived negatively and construed as a form of ‘non-participation’. Through a systematic literature review of journal articles relating to silence as a pedagogical approach published between 2000 and 2021, this article reappraises the role and value of silence in school education. Some of the apparent paradoxes of silence as a pedagogical approach, different types and uses of silence in the classroom, cultural dimensions of silence and the relationships between silence, power and critical pedagogy are examined. The pedagogical importance of silence as a participatory approach to learning emerges as a significant point for educators and the paper offers some suggestions for potential applications in classroom practice.


Purpose: The purposes of this study were to (1) meta-analyze the effects of teacher trust, and of each trust dimension on student learning in aggregate and in each of the six learning subjects; (2) meta-analyze the effect of school leadership, of each leadership domain, and of different leadership styles on teacher trust; and (3) examine whether school level, subjects, trust dimensions, and leadership styles moderate these abovementioned effects. Research Methods/Approach: Standard meta-analysis techniques were used to review 83 studies and examine the multiple relationships between school leadership, teacher trust, and student learning mentioned above. Heterogeneity analysis was conducted to identify moderators. Publication bias in these analysis results was also examined. Findings: The study shows that teacher trust had a moderate effect on student learning. School leadership had a large effect on teacher trust. Teacher trust in students and parents contributed to student learning more than the other dimensions of trust. All five domains of school leadership were related to teacher trust, with the effect sizes being large or moderate. Supportive, collegial types of school
leadership had the largest effect on the teachers' trust. Implications for Research and Practice: To improve student learning, school leaders need to enlist all effective practices in order to build trust in schools and pay equal attention to improving teachers’ trust as they do other efforts to improve instructional programs and teaching practices. More efforts are needed from principals to help build teachers’ trust in parents and students.


Alors que la recherche en didactique des mathématiques a investi de nombreuses questions liées à la formation des enseignants, la prise en compte du rôle du formateur reste peu développée. Il s’agit notamment d’interroger les pratiques du formateur, leurs effets possibles sur le développement professionnel des formés (étudiants, stagiaires, …), les connaissances ou conceptions qu’il mobilise, les contraintes auxquelles il est confronté, ses interactions avec d’autres acteurs, etc. Ce numéro thématique rassemble des études originales mobilisant des approches variées témoignant de questions émergentes et mobilisant divers outils théoriques et méthodologiques, visant à contribuer au développement de ce champ de recherche.


Mastery of mathematical content is essential for scientific studies. This study deals with limited developments (LD), a particularly challenging subject because students need to retain a high number of formulas. In order to support students in their learning, a teaching support was designed, based on our knowledge about the natural process of memory. The display was itself inspired from nature and depicts a famility tree. A combination of colors, shapes and symbols have been created to optimize the encoding. A context with a high emotional charge has also been envisaged to foster the binding. A blank and fillable version has been elaborated for a retrieval practice. This support has been distributed during a 1st year of a Bachelor’s degree, to 26 students. At the end of the semester, student performance were assessed. Those who used this course material were able to restitute the LD, reaching a quasi-maximal grade whereas the others obtained a low score. Furthermore, students who trained with the blank version are better than those who did not. Also, the degree of satisfaction in students was very high (M=3.9/4). Interestingly, a long-term retention is also found among students in their final year.


L’enseignement à la formation générale des adultes (FGA) se pratique dans un secteur éducatif très ouvert qui propose aux apprenants adultes une diversité de voies pour réaliser leur projet de formation. La FGA comporte toutefois plusieurs particularités – approches d’enseignement, fonctionnement en classe, diversité de services, précarité d’emploi du personnel – qui en influencent la pratique. Cet ouvrage s’appuie sur nombre
de travaux de recherche et sur six récits d’enseignantes qui révèlent les défis propres à
leur contexte d’enseignement. À partir de ces récits qui traduisent certains enjeux
typiques de la FGA, des propositions pour dénouer les difficultés sont formulées.
L’ouvrage offre également plusieurs ressources utiles pour la pratique.Préparé pour le
personnel enseignant de la FGA de toutes disciplines, cet ouvrage est aussi d’intérêt pour
les personnes conseillères pédagogiques, les directions d’établissement, les équipes de
recherche et les personnes qui offrent de la formation universitaire. Il se veut utile autant
pour l’intervention auprès des adultes que pour la réflexion et l’adoption d’une pratique
éthique.

Given the varied quality of massive open online courses (MOOCs), it is necessary to
construct a MOOC evaluation framework to guide teachers’ online teaching practices.
Based on the Quality Matters online course evaluation framework and studies on
effective online teaching practices, a MOOC evaluation framework was constructed
through literature analysis and expert interviews. Finally, an evaluation framework with
eight dimensions and 42 secondary indicators was constructed. To examine its validity,
five MOOCs were evaluated with this framework. Results show that the evaluation
framework is helpful for evaluating MOOCs and providing implications for online
instructors. They revealed the common limitations of MOOCs: single method for
knowledge introduction, traditional evaluation methods, insufficient attention to student
initiative, and inadequate copyright concerns. Corresponding suggestions are provided
to improve the quality of MOOCs. Theoretical and practical implications for the
improvement of MOOCs are discussed along with avenues for further research.

Teacher education programs play a crucial role in developing teachers’ equity/social
justice mindsets and technology integration knowledge and expertise. Scholars have
advocated for merging these two areas to support common curricular goals and access
unique learning benefits. However, little is known about how equity pedagogy and
technology integration intersect in preservice teacher (PST) education. This scoping
review aims to expand knowledge and understanding at this intersection with the goal
of developing a foundation for future research and practice. Findings revealed that
relevant studies focused on two main styles of pedagogy: (a) leveraging technology to
teach about equity and social justice (i.e., tech-infused equity pedagogy), and (b)
adopting a critical stance toward technology’s roles in schools and society (i.e., digital
equity pedagogy). We provide a detailed description of these pedagogies and present
useful systems of classification for related studies. We also present key implications of this
work for PST education practice, policy, and scholarship.

Teachers are gatekeepers of technology integration in the classroom. Pre-service teachers’ attitudes, confidence, and competence in exploring emerging technologies play a critical role in teachers' adoption of technology in teaching. This study examined the effects of a gamified technology course on pre-service teachers’ confidence, intention, and motivation in integrating technology into teaching. A sample of pre-service teachers (N = 84) at a Midwestern university in the United States in the academic year of 2021–22 was surveyed. The regression results revealed that the gamified course significantly and positively influenced pre-service teachers’ confidence in using technology in education, intention to adopt gamification, and motivation to explore more emerging technologies for teaching, after controlling for gender. In contrast, gender did not affect pre-service teachers’ confidence, intention, and motivation in integrating technology into instruction after controlling for the gamified course effects. Suggestions on gamifying course design while leveraging quest-based learning and active learning principles to enhance student positive attitudes and motivation to explore technology integration are discussed.


Teaching and learning of foundational math have emerged as concerns in India, and might be connected with the problems of large classroom sizes and inappropriate curriculum resources. To address these problems of practice, ABC School explored the use of blended learning in three Grade 2 mathematics classrooms (n = 108), while a control group of three Grade 2 classrooms (n = 113) received traditional instruction and curricular resources. A quasi-experimental mixed-methods design was used to determine the differences in teaching, student engagement, and learning after eight months. Standardized test scores showed a significantly higher increase in the performance of the treatment group compared to the control group. Also, the treatment group experienced higher levels of learner-centered pedagogy, measured in terms of the
extent of differentiated instruction, timely and precise feedback, and student engagement. This study contributes to the small pool of international experimental studies on blended learning in elementary grade classrooms, and supports a growing belief among researchers that the approach holds promise for school reform in developing countries.

**Relation formation-emploi**


How do college students and postsecondary institutions react to changes in skill demand in the U.S. labor market? We quantify the magnitude and nature of response in the 4-year sector using a new measure of labor demand at the institution-major level that combines online job ads with geographic locations of alumni from a professional networking platform. Within a shift-share setup, we find that the 4-year sector responds. We estimate elasticities for undergraduate degrees and credits centered around 1.3, generally increasing with time horizon. Changes in non-tenure-track faculty allocations and the credits they teach partially mediate this overall response. We provide further evidence that the magnitude of the overall response depends on both student demand and institutional supply-side constraints. Our findings illuminate the nature of educational production in higher education and suggest that policy efforts that aim to align human capital investment with labor demand may struggle to achieve such goals if they target only one side of the market.


We evaluate the education and labour impact of vocational education and training (VET). Identification draws on a reform to reduce early school leaving, which involved a large-scale, staggered introduction of VET courses. Drawing on comprehensive student-school matched panel data, we find that VET increased upper secondary graduation rates considerably: our LATE estimates are as large as 50 percentage points. These effects are even stronger for low-achieving students and welfare recipients; and also hold when exploiting the large gender differences of VET, with many courses selected almost only by either boys or girls. Moreover, we find evidence of regional youth employment growth and VET wage premiums following VET expansion.


Financial aid decreases the cost of acquiring additional education. By using Italian administrative and survey data on financial aid recipients and exploiting sharp discontinuities in the amount of aid received, this paper identifies the causal effect of aid generosity on college performance and labor market outcomes. The results show that students facing a higher cost of college earn more credits each year than those receiving higher financial aid. This gap generates a significant difference in the overall graduation time. No differences emerge in the GPA level or the probability of graduating from college.


Successful transition from universities to the industry is essential for engineering students. The transition becomes comfortable to the students if employers find them to be equipped with the necessary employable skills. However, employability has hardly been prioritized in the research of engineering education. To this end, a sequential explanatory mixed methods research design was employed in two phases to explore the factors of employability and their roles in the engineering streams of civil, architect, computer, electrical, electronics, mechanical, and environmental. In the first phase, a survey was administered to a sample of 314 students. A principal components analysis revealed the following four factors of employability: personal attributes, core attributes, self-management and process attributes, and career guidance. Among these factors, career guidance was more robust in architecture than in the other streams. The second phase of the qualitative case study revealed that the opportunities for exposure, mentorship, internship, and project works in the architecture were greater than that of the computer, civil, and mechanical streams. Consequently, the students from the architecture stream do not face the level of transition to find a job after completing their education compared to students from the other streams.


This study aims to employ the supervised machine learning algorithms to examine factors that negatively impacted academic performance among college students on probation (underperforming students). We used the Knowledge Discovery in Databases (KDD) methodology on a sample of N = 6514 college students spanning 11 years (from 2009 to 2019) provided by a major public university in Oman. We used the Information Gain (InfoGain) algorithm to select the most effective features and ensemble methods to compare the accuracy with more robust algorithms, including Logit Boost, Vote, and Bagging. The algorithms were evaluated based on the performance evaluation metrics.
such as accuracy, precision, recall, F-measure, and ROC curve, and then validated using 10-folds cross-validation. The study revealed that the main identified factors affecting student academic achievement include study duration in the university and previous performance in secondary school. Based on the experimental results, these features were consistently ranked as the top factors that negatively impacted academic performance. The study also indicated that gender, estimated graduation year, cohort, and academic specialization significantly contributed to whether a student was under probation. Domain experts and other students were involved in verifying some of the results. The theoretical and practical implications of this study are discussed.


Previous literature on the effect of tenured and tenure-track vs. non-tenure-track professors on students’ performance at university finds contrasting results. Our paper is the first to test whether tenured/tenure-track and non-tenure-track teachers differently affect students’ performance at school. We use data on standardized test scores of a representative sample of primary and secondary school students in Italy and information on their Italian and mathematics teachers’ labor contracts. Controlling for class- and subject-fixed effects, we find that non-tenure-track teachers decrease students’ performance by 0.21 standard deviation. This detrimental effect is fully explained because non-tenure-track teachers are less experienced. In line with previous findings on the adverse effects of teachers’ absences, non-tenure-track teachers are also associated with 0.1 standard deviation worse student performance when their contracts last less than a year.


Multigrading represents the practice of mixing children of different ages in the same classroom. This paper examines the effect of attending a multigrade class in Grade 2 on students' academic achievement in Grades 2, 5, and 8, respectively, considering Italy as a case study. To address the issue of endogeneity of multigrading (and class size), we adopt an IV identification strategy based on a law that disciplines class composition. We show that multigrading has a positive (16 percent of a standard deviation) short-term effect on academic achievements. However, this effect diminishes over time and becomes negative (-10 percent of a standard deviation) if students spend several years in a multigrade class. Mechanism analysis indicates the fundamental role of teachers and suggests that the negative long-term effect of multigrading is not statistically different from zero when multigrade classes are taught by more experienced teachers. These findings, based on longitudinal data, reconcile contrasting results in the literature, which are based on cross-sectional data and on the short-term effects of multigrading.

We study the distributional effects of remote learning. Our approach combines newly collected data on parental preferences with administrative data from Los Angeles. The preference data allow us to account for selection into remote learning while also studying selection patterns and treatment effect heterogeneity. We find a negative average effect of remote learning on reading (–0.14 SD) and math (–0.17 SD). Notably, we find evidence of positive learning effects for children whose parents have the strongest demand for remote learning. Our results suggest an important subset of students who currently sort into post-pandemic remote learning benefit from expanded choice.


This study employs Chilean administrative data to investigate the impact of School Starting Age (SSA) on the characteristics of students' initial enrolled schools. Employing minimum age requirements and an RD-design to mitigate endogeneity concerns, we identify benefits linked to commencing school at a later age. Our findings demonstrate that children starting school at an older age enroll in institutions with higher average scores in standardized tests and interact with older peers whose parents have higher education levels. Furthermore, they display a heightened likelihood of entering schools employing academic selection methods, a greater proportion of fulltime teachers, and a larger percentage of instructors with a 4-year college degree. The analysis by level of education of the parents and gender reveals that most of our results are driven by parents with lower levels of education and girls.


In light of the dramatic rise in mental health disorders amongst adolescents seen in the past decade across the world, there is an urgent need for robust evidence on what works to combat this trend. This paper provides the first robust evaluation of the impacts on school outcomes of 6-year funding programme (HeadStart) for area-level mental health interventions for adolescents. Exploiting educational administrative data on ten cohorts of state-educated secondary school students, we use the synthetic control method to construct counterfactual outcomes for areas that received the funding. We show that the funding did not affect students’ absenteeism or academic attainment, but it prevented around 800 students (c. 10% of students typically excluded yearly) from being excluded in its first year. The transient nature of this effect suggests that sustained funding for intervention may be a necessary but not sufficient condition to maintain programme effectiveness over time.

Education plays a central role in social mobility. Using data from the OECD's PISA program, this paper sheds light on: (i) the role of socioeconomic status on the cognitive performance and future plans of Greek high-school students, (ii) intertemporal trends in light of the recent economic crisis and, iii) differences with other countries on the effect of socioeconomic and other drivers on intergenerational educational mobility. We find large and significant associations between student outcomes and educational resources at home, cultural possession at home, parental emotional support and private school attendance. Parental education and occupation effects are also important but differ by domain and between parents. The association between basic socioeconomic characteristics and adolescent educational performance is significant and rather stable before, during, and after the Greek economic crisis, which points to the need to produce a coherent strategy against educational disparities according to the socioeconomic status.


Despite being the poorest or second poorest participant, Vietnam outperformed all other developing countries, and many wealthier countries, on the 2012, 2015, and 2018 PISA assessments. We investigate Vietnam’s strong performance, evaluating several possible explanations for this apparent exemplary achievement. After correcting for potentially non-representative PISA samples, including bias from Vietnam’s large out-of-school population, Vietnam remains a large positive outlier conditional on its income. Possible higher motivation of, and coaching given to, Vietnamese students can at most only partly explain Vietnam’s performance. The child-, household- and school-level variables in the PISA data explain little of Vietnam’s strong PISA performance relative to its income level. At most, they explain about 30% of Vietnam’s exceptional performance in math and reading. Further research is needed to understand the exceptional performance of Vietnamese students.


Academic agency is recognized as an important predictor of higher education attainment among the general population during the school-to-work transition. However, there is little evidence on whether (a) academic agency is associated with higher education attainment among young people facing education difficulties (i.e., lower attainers), (b) academic agency is associated with a smooth entry in a meaningful job among lower attainers, and (c) these associations vary across educational contexts. This study draws on longitudinal data from lower attainers in the province of Québec (Mage = 16.31, SD = 0.98; 48% females) and in England (Mage = 15.86, SD = 0.72; 42% females), two regions with similar education systems, yet different vocational training provision. In both samples, fewer than one in four participants reach higher education by age 20. Also, in both countries academic agency is associated with a greater likelihood of being in higher education compared to other employment and education outcomes at age 20, but not with rapid entry into meaningful employment. Thus, focussing on higher education attainment and academic-related factors such as academic agency is of
limited relevance for understanding lower attainers’ success over school-to-work transitions. For them, understanding this transition also requires considering rapid entry in meaningful employment, as well as non-academic forms of agency supporting such work-oriented outcomes.


Student attendance at school is a necessary condition for learning and for other schooling benefits, yet absenteeism is a significant issue for students in many countries. Policies, programs, and research seeking to reduce absenteeism need to measure it accurately. This article describes seven different methods to measure student absenteeism, all used in at least one of 27 recently published studies in low- and middle-income countries. It also synthesizes evidence on the advantages and disadvantages of different methods, drawing on 17 studies that compare methods. We find that official school attendance records—a relatively cheap, nonintrusive method—often result in similar statistics as unannounced spot checks, but there are enough exceptions that policymakers and researchers may initially need to complement school records with spot checks. Student reports often understate absenteeism, and caregiver reports even more so. We discuss implications for researchers and for policymakers to improve measurement in education systems.


The pursuit of overall well-being has become increasingly vital in our fast-paced and demanding world. Understanding the complex interplay between the mind and body is essential for realizing our full potential and living a healthy and satisfying life. Physical activity is one effective way to foster this relationship. Regular exercise has a plethora of benefits that extend beyond physical health, immediately benefiting our mental and emotional well-being. Students will feel competent in their performance if they have the freedom to engage in activities based on their sense of autonomy, competence, and relatedness. This article looks at the synergy effect of self-determination and Maslow’s theory in creating a link between physical activity and student academic achievement. Students can develop strong social connections with their peers and professors through effective discipline and incentive, leading to more engagement in learning and better study habits.


Using a large-scale school readiness survey in Thailand, this paper presents empirical evidence of learning losses from school closure due to the COVID-19 pandemic for kindergartners. Overall results indicate that school closure during the outbreak of COVID-19 causes significant learning losses in cognitive skills, especially in mathematics and working memory. The negative impact is heterogeneous across several dimensions,
including child gender, special needs, wealth, private tutoring, caregiver education, and parental absence. This paper also estimates daily learning gains, of which significant results confirm that going to school has significantly benefited young children, especially in receptive language, mathematics, and working memory.


Collaborative programming can develop computational thinking and knowledge of computational programming. However, the researchers pointed out that because students often fail to mobilize metacognition to regulate and control their cognitive activities in a cooperation, this results in poor learning effects. Especially low-achieving students need more metacognitive support. Therefore, this study proposed a metacognition-based collaborative programming approach (M-CPA) to improve students’ performance in collaborative programming. To evaluate the effectiveness of the method for students with different levels of learning achievement, a 7-week experiment was conducted. A total of 222 middle school students were divided into the experimental group with the M-CPA learning and the control group with the conventional collaborative programming approach (C-CPA). The results showed that learning methods and learning achievement had interactive effects on computational thinking tendency, critical thinking tendency, and metacognition tendency. M-CPA could significantly improve students’ computational thinking tendency, critical thinking tendency, and metacognition tendency. Moreover, the proposed approach is more effective for low-achieving students. The results also showed that M-CPA could improve the students’ achievement in program analysis questions.


There is a growing interest on the role of noncognitive factors such as personality traits and implicit beliefs in accounting for individual differences in academic performance. Autonomy support from primary socializing agents too is an important tool for enhancing student motivation and other learning outcomes. In this study, we tested a model hypothesizing that the broad personality traits of conscientiousness and openness, growth mindset, and perceived teacher and parent autonomy support would be distal predictors of academic performance, with self-determined motivation proximally accounting for performance outcomes. Middle school students (N = 234) completed an online Qualtrics survey. Students’ year-end grade point averages for all subjects were used as an indicator of their academic performance. We found that conscientiousness had direct and indirect effects (through autonomous motivation) on academic performance. Openness, growth mindset, and parent autonomy support were indirectly associated with academic performance through their effects on autonomous motivation. The effect of teacher autonomy support on academic performance was mediated by both controlled motivation and autonomous motivation.

This paper provides the first estimates of the contemporaneous effect of drinking water quality violations on students’ academic achievement. Using student-level test score data with residential addresses, geographic information on water systems, and drinking water violations from North Carolina, I estimate the within-student impacts of poor water quality on student test scores. Exposure to a bacteria violation during the school year decreases math scores by about 0.037 standard deviations when the public is uninformed. Results suggest that poor water quality may impact retention or comprehension of material throughout the school year.


Many studies have assessed students' motivation through surveys, but only a few studies systematically investigated through students’ own words the reasons and aims of their achievement striving. In the present study, we rely on the Goal Complex Perspective (Sommet and Elliot in *J Educ Psychol* 109(8):1141–1162, 2017. https://doi.org/10.1037/edu0000199; Vansteenkiste et al. in *Educ Psychol* 49(3):153–174, 2014. https://doi.org/10.1080/00461520.2014.928598) to uncover qualitative differences in achievement motivation. Content analysis of 1303 statements made by 597 Greek secondary students revealed (i) more autonomous motivation than controlled motivation statements, (ii) spontaneously generated statements of mastery-learning and outcome goals but rarely of performance-normative goals, (iii) mastery-learning goals being coupled with both autonomous and controlled motivation, providing ecological support for the conceptualization of mastery goal complexes. Logistic regression analyses verified our classification, as students’ statements were predicted by corresponding types of motivation assessed by close, Likert-type questions. These findings, which align with the Goal Complex Perspective, are discussed in terms of the operational definition of autonomous and controlled motivation and achievement goals.


New technologies have led to digital educational tools to improve learning. Game-Based Learning makes it possible to test whether there is a positive impact on official grades. We have collected the scores of the Kahoot! games, the marks of the continuous assessment, the final exam, and the final mark of the subject, to create an ad-hoc database. Finally, we have analyzed a database consisting of 392 marks of higher students from the first semester of the 2018/2019 academic year. We have calculated a correlation matrix, tested a hypothesis for differences in mean paired samples, and proposed three regression models to obtain that there is a positive influence of the games on the official marks. Therefore, Kahoot! is a didactic tool that improves students' learning and is reflected in their official marks.

This study examined the relationships between first-year university students’ academic motivation, retrospective evaluation of school experiences, subjective well-being, engagement and intention to drop out. Self-determination theory, the SinAPSi model of academic engagement, the hedonic approach, and the retrospective judgment process were used to frame the study. A final sample of 565 first-year Italian students enrolled in Science-Technology-Engineering-Mathematics (STEM) courses (Biology, Biotechnologies, Chemistry, Computer Science, Physics, Mathematics) was included. Three mediation models based on structural equations were tested to analyse the relationships between the proposed variables: motivation as an antecedent of dropout intention with only commitment as a mediator (model 1); model 1 + subjective well-being as a second mediator (model 2); model 2 + retrospective judgement as an antecedent (model 3). The results showed that in all models the more autonomous motivational styles predicted students' engagement, which in turn directly and indirectly influenced their intention to drop out. In model 2, subjective well-being acted as a mediator of the relationships between motivation, engagement and dropout intentions. In model 3, we found that subjective well-being also fully mediated the relationships between retrospective judgement and engagement. Overall, our findings provide new insights into the mechanisms underlying student engagement and dropout at university and may inform university policy.


School discontinuation in Finland is more common among the Finnish Roma than among the population as a whole. We lack knowledge of the perspective of those of the Roma, representing a minority inside a minority, who have left compulsory school without a leaving certificate. Within a study about school experiences of imprisoned early school leavers in Finland we had six participants with a Finnish Roma background, whose experiences of relatedness, and frustration of it, we examine in this paper. We conducted narrative interviews with the participants, applying a co-operative narrative interpretation to the meanings of what was told. After the field process, we interpreted the narrative accounts focusing on experiences of relatedness, and how relationships with people in the school environment affected the participants’ sense of belonging together with the people in the school environment. Frustration of relatedness was identified at three levels. Firstly, at a general, life condition level, cultural prejudice manifested itself as a sense of not being accepted and respected as an equal with other people, the situation creating a constant need to cope with outspoken prejudices. Secondly, at a contextual-specific level in the school environment, we identified experiences of being rejected by peers and their parents, as well as some of the teachers. This was linked with a sense of loneliness and detachment from other people in the school environment. Thirdly, at a situational level, the participants described both positive relationships, such as momentary friendships, and negative experiences of being excluded from the peer group. Pathways for further inquiries are discussed.
This study explored how self-control and eudaimonic orientation are associated with learning burnout and internet addiction risk (IAR). Our results demonstrate that learning burnout has a significant and positive impact on IAR. The impulse system and control system play parallel mediating roles in the relationship between learning burnout and IAR. The relationship between learning burnout and IAR is moderated by eudaimonic orientation. Finally, the mediating role of the impulse system on learning burnout and IAR is moderated by eudaimonic orientation. With these findings, our study clarifies the mediating roles of the impulse system and control system in learning burnout and IAR and the moderating effects of hedonic orientation and eudaimonic orientation. Our study not only offers a new perspective for IAR research but also has practical implications for intervening in middle school students' IAR.

The present study investigated whether the socioeconomic achievement gap in academically at-risk students varied as a function of students’ perceived classroom goal structures. We hypothesized that low socioeconomic status (SES) students would be more susceptible to the various classroom goal structures. Specifically, we hypothesized that high levels of perceived mastery classroom goal structure would mitigate, while high levels of perceived performance goal structures would exacerbate, the negative effects of low family SES on achievement development. To test these hypotheses, we analyzed a secondary dataset from a sample of 784 (53% male) low-achieving students who were assessed annually from grades 4 to 9. The patterns of adaptive learning scale was used to assess perceived classroom goal structures. Woodcock Johnson III tests of achievement or Bateria III (for students who primarily spoke Spanish) were used to examine academic achievement. Socioeconomic status was determined by highest education and occupation in household and child qualification for free/reduced lunch. We conducted latent growth models to examine the predictive effects of the interactions between family SES and classroom goal structures on achievement growth trajectories. Overall, our findings did not support our main hypotheses. Specifically, perceived classroom mastery goal structure was positively associated with academic growth among all students regardless of their SES backgrounds. Perceived classroom performance goal structures negatively predicted academic growth more strongly in higher SES students than in lower SES students, stressing the negative effects of performance classroom goal structures on achievement development for low-achieving high SES students.

Financial aid decreases the cost of acquiring additional education. By using Italian administrative and survey data on financial aid recipients and exploiting sharp discontinuities in the amount of aid received, this paper identifies the causal effect of aid generosity on college performance and labor market outcomes. The results show that
students facing a higher cost of college earn more credits each year than those receiving higher financial aid. This gap generates a significant difference in the overall graduation time. No differences emerge in the GPA level or the probability of graduating from college.


Depuis quelques années, les enseignantes et les enseignants de la technique en éducation spécialisée (TES) du Cégep de Jonquière constatent que le premier stage représente un lot de défis pour leurs stagiaires. Ce constat est à l’origine de la conception d’un module d’activités par le département TES et le centre ÉCOBES-Recherche et transfert pour favoriser la réussite et la persévérance scolaires de leurs étudiantes et de leurs étudiants dans le cadre de ce stage. Cet article présente le processus collaboratif mis en place entre les chercheuses et les praticiennes pour concevoir le module et décrit les principales activités conçues.


This study examines how family socioeconomic status (SES) shapes the early achievement gap among preschool children aged 3 to 6 (N=2,940, 52% boy, 68% Chinese) in an Asian context. Results based on the Singapore Longitudinal Early Development Study highlight several factors in early childhood that can contribute to the diverging achievement by family SES — parents’ value, investment in children, and children's self-regulation. Higher-SES parents have a higher emotional value and educational expectations of their children, set more boundaries, and are more likely to provide an organized and stimulating home environment and plan for their children’s future. Children’s self-regulation measured by their ability to delay instant gratification at a young age is positively associated with early cognitive development.


Adolescents face many academic pressures that require good coping skills, but coping skills can also depend on social resources, such as parental support and fewer negative interactions. The aim of this study was to determine if parental support and parental negative interactions concurrently and longitudinally relate to adolescents’ ways of academic coping, above and beyond the impact of three types of academic stress, students’ achievement at school (i.e., grades in school), and age. Survey data were collected from 839 Australian students in grades 5 to 10 (Mage = 12.2, SD = 1.72; 50% girls). Students completed measures of support and negative interactions with parents; academic stress from workload, external pressure (teachers/parents) to achieve, and intrapsychic pressure for high achievement; and ways of academic coping that were grouped into two positive and two negative types. Hypothesized associations were
tested concurrently and from one year to the next using path modeling. Beyond the numerous significant influences of academic stress and achievement on coping, and control for age and COVID-19 timing, adolescents with more parental support reported more use of engagement coping (e.g., strategizing) and comfort-seeking, whereas those who reported more negative interactions with parents reported more use of disengagement coping (e.g., concealment) and escape. In the longitudinal model, parental support predicted an increase in engagement and comfort-seeking and a decrease in disengagement coping, whereas negative interaction with parents predicted an increase in disengagement coping. Overall, the findings support the view that coping with academic stressors will continue to depend on parent-adolescent relationships even into the teen years.


In this essay Tatiana Geron argues that classroom “crowdedness”—the spatial, temporal, and group dynamics of many students interacting in a shared space—shapes teachers’ everyday ethical decision-making and should be essential to an ethical theory of teaching. Drawing from Philip K. Jackson’s ethnographic work and her own teaching experience, Geron identifies features of the classroom that contribute to its ethical complexity—size, compulsory closeness, diversity, temporal pressures, and group dynamics—and lead to three types of challenges for teachers: linear challenges, or ethical difficulties that scale up with classroom size; second-order challenges that arise from the unintended consequences of teacher decisions; and integral challenges that arise from the group dynamic as teachers and students interact as ethical agents. Geron uses a case study of teacher decision-making to explore these features and the potential they create for novel resolutions to ethical dilemmas in the classroom.


There is no consensus on definitions of educational or academic integrity, and their philosophical relationship with the notion of responsibility is complex. Here, we aim to i) disentangle these three notions. We lean on a philosophical framework of ethics and our method involves different kinds of reasoning and the modeling of complex thinking. We combine this frame with a three-level epistemic dimension to allow us ii) to model the psycho-epistemic (level 1), epistemological (level 2), and phenomenological (ground 0) ways in which subjects interact with their own norms and knowledge and with those of the surrounding institutions. Finally, iii) we also aim to propose concrete educational means by which to implement educational integrity. Our theoretical findings lead us i) to consider responsibility as a process that consists of establishing a dialogical relationship between one’s inner and outer worlds, which relies on an epistemic decentering. Based on this, we argue that education for responsibility founds a new, expanded definition of educational integrity. Moreover, ii) empirical evidence suggests that this model can be operationalized by psychological indicators such as critical and complex thinking, cognitive flexibility, contextual relativism, and decentering, all of which are skills that can be fostered in spite of simplifying thinking, dogmatism, naive epistemology (and dualism).
and cognitive fusion, respectively. It points to iii) the benefits of an educational approach in which subjects are encouraged to practice different types of meditation and to feel free to break institutional rules. Therefore, promoting educational integrity may require methods that lie beyond the obvious choices. After discussing the scope and limitations of our results, we propose a new research agenda for educational integrity, which could ground a field of research broader than just academic integrity, but complementary to it.

The article is available here: https://edintegrity.biomedcentral.com/articles/10.1007/s40979-023-00134-3


In the context of heightened worldwide migration, emotion-based discourses portraying migrants as fearsome and dangerous continue to regulate nation-state boundaries. This paper reports on a critical visual research study in which migrant youth living in New York City were given digital cameras and asked to take pictures of places they thought were important in their school, neighborhood, and family. The study’s research methodology was designed to explore the role of emotion in how migrant youth enacted citizenship and used photography to construct visual counternarratives. In order to challenge emotion-based discourse that excluded migrants, the youth in this study mobilized feelings of care and cultivated transnational affective ties to assert their right to belong in public spaces. Implications for participatory qualitative research methods and school-based civic education practices are explored.


Dans les programmes français actuels de géographie des cycles 3 et 4 (fin d’école primaire et collège), les concepts relatifs à l’environnement et au développement durable sont analysés sous l’angle d’une démarche comparatiste (avec les programmes de sciences en école primaire et de sciences de la vie et de la Terre en collège), épistémologique et historique. L’accent est mis sur les concepts que ces disciplines ont en partage et sur les circulations de concepts entre elles. L’objectif est d’identifier les formes d’hybridation des savoirs et les potentialités en termes de démarches interdisciplinaires. Le constat est que les concepts partagés sont de plus en plus nombreux sous l’effet de l’entrée en force de questionnements socio-politiques dans les prescriptions et qu’ils ont des référents épistémiques multiples, issus d’une longue histoire de circulations des savoirs ou des questionnements (entre sphère sociale et école ; entre disciplines scolaires).


Au Québec, l’éducation tente de s’adapter aux nouvelles réalités. Ainsi, la déconfessionnalisation de l’État et l’augmentation de l’immigration amènent un
changement de paradigme au niveau éducationnel. Pour favoriser la reconnaissance de l’autre et la poursuite du bien commun, le programme Éthique et culture religieuse voit le jour. Essuyant beaucoup de critiques négatives, le gouvernement met sur pied une équipe de rédaction et des comités consultatifs dans le but de faire une refonte. Le programme Culture et citoyenneté québécoise est donc présentement en construction. D’une part, le programme Éthique et culture religieuse axe sur le développement des compétences Réfléchir à une question éthique, Manifester sa compréhension du religieux et Pratiquer le dialogue. L’élève aborde des thèmes qui amènent des conflits de valeurs et tente de résoudre les situations de façon à favoriser le bien de tous. De plus, il apprend à comprendre l’influence des cultures religieuses dans son environnement et dans les coutumes d’autrui. D’autre part, le programme Culture et citoyenneté québécoise permet l’analyse de diverses situations d’un point de vue éthique et sociologique. D’ailleurs, les compétences à développer sont Réfléchir sur des questions éthiques et Étudier une réalité culturelle. Cela permet de réfléchir et de développer une pensée critique sur divers thèmes. Bien que l’éducation sexuelle et l’éducation numérique font désormais partie du programme, il existe un écart entre les deux programmes en ce qui concerne une composante importante du développement personnel, social et spirituel de l’élève : la culture religieuse. Donc, ce mémoire propose une nouvelle avenue dans la façon d’aborder la culture religieuse pour favoriser une réflexion dans une perspective éthique : l’utilisation de la théorie des trois pôles de Ricoeur. De plus, il est question de proposer des solutions à court et à moyen terme dans l’implantation du programme Culture et citoyenneté québécoise afin de répondre aux limitations reprochées à son prédécesseur.