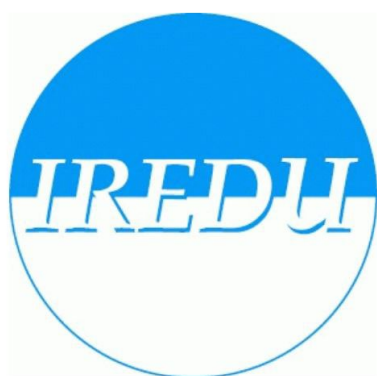


Veille de l'IREDU



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Acquisition de compétences

Ammar, A., Trabelsi, K., Boujelbane, M. A., Salem, A., Boukhris, O., Glenn, J. M., ... Schöllhorn, W. I. (2024). **The Effects of Contextual Interference Learning on the Acquisition and Relatively Permanent Gains in Skilled Performance: A Critical Systematic Review with Multilevel Meta-Analysis.** *Educational Psychology Review*, 36(2), 57. <https://doi.org/10.1007/s10648-024-09892-z>

The paradoxical effects of contextual interference (CI) assume that high CI practices hinder performances during the acquisition phase of learning, while providing more permanent enhancement during the retention phase. This meta-analysis evaluates the possible generalizability of the CI phenomenon in physical education (PE) and sports contexts, with regard to the acute and relatively permanent gains in performance outcomes. A total of 933 records from five electronic databases were screened using the PICOS criteria, of which 36 studies were selected. Outcomes evaluating the performance changes (Δ) from pre-post, post-retention, and pre-retention tests were included. Out of 183 overall pooled outcomes, Δ in only 37 performance outcomes (20%) agreed with the paradoxical CI effects on the acquisition or the relatively permanent gains. No statistically significant overall difference was detected for " Δ pre-post" between low (blocked) ($28.9 \pm 59.5\%$) and high (random/serial) ($27.9 \pm 52.8\%$) CI (effect size (ES) = 0.1, $p = 0.35$). An overall significant difference ($p = 0.001$) in favor of high CI practice was detected in " Δ post-retention." However, this difference was not large enough (ES = -0.35) to produce an overall greater long-term gain following high ($24.56 \pm 4.4\%$), compared to low ($21.9 \pm 9.8\%$) CI (ES = -0.13, $p = 0.18$). Out of 10 tested variables, only the age significantly moderated both CI effects ($p < 0.0001$ for both Δ pre-post and Δ pre-retention) and the female proportion significantly moderated only the first CI effect ($p = 0.009$ for Δ pre-post). These findings found very limited evidence supporting the recommendation to employ high CI practices to gain a longer-term performance advantage, calling into question the generalization of the CI model to PE and sports practices. High-quality follow-up research evaluating alternative motor-learning models are therefore needed.

Bano, S., Atif, K., & Mehdi, S. A. (2024). **Systematic review: Potential effectiveness of educational robotics for 21st century skills development in young learners.** *Education and Information Technologies*, 29(9), 11135-11153. <https://doi.org/10.1007/s10639-023-12233-2>

Educational Robotics (ER) is an upcoming trend in education. It has been introduced in classrooms to improve the learning environment. It provides opportunities for young learners by promoting knowledge-building activities. STEM (Science, Technology, Engineering, and Mathematics) education is viewed as a catalyst to ensure a successful future in the context of real-world issues. ER is an innovative tool that can provide a roadmap for quality education. This study aims to investigate "What skill-set does ER (Educational Robotics) develop in young learners?", "How does robotics intervention affect young learners?", and "Whether Educational Robotics (ER) facilitates STEM education?". We systematically reviewed the literature on robotics and the importance of STEM, identifying the role of robotics in both formal and informal elementary and secondary classrooms, after-school programs, and summer camp activities. We used the PRISMA (Preferred Reporting Items for Systematic Review and Meta-Analysis) methodology to analyze 20 relevant articles. We searched articles by using keywords and the snowballing technique. The study of recent applications of ER suggests that it aids in a precise and flexible understanding of STEM concepts.

Bayrambas, F., & Sendurur, E. (2024). **The comparison of two incidental learning scenarios on a digital learning platform from the cognitive load perspective.** *Education and Information Technologies*, 29(9), 11087-11117. <https://doi.org/10.1007/s10639-023-12241-2>

Incidental learning is a type of informal learning occurring consciously with unintentional acts. Within the scope of this study, informal learning on a digital learning platform was examined in the context of cognitive load. The current study investigated the changes in incidental learning within two different scenarios: extraneous irrelevant content (V1) vs. extraneous relevant content (V2) represented in various modalities. Data were collected in a mixed manner using eye-tracker and electroencephalogram devices. Both incidental and actual learning scores of V2 group were higher than the V1 group. For the incidental learning context, visual modality was superior to other modalities, but the dynamic visuals were perceived as disturbing in comparison to static ones. The V1 group had higher number of errors during task engagement. The eye fixation patterns of both groups were similar to each other. Fixation durations on the dynamic visual extraneous content area were recorded the longest among all extraneous content. The V2 group reported higher mental effort. The efficiency metric calculations yielded contradictory findings depending on the cognitive load values obtained from self-ratings vs. cognitive load index (CLI).

Boulahmel, A., Djelil, F., Gilliot, J.-M., Leray, P., & Smits, G. (2024). **Mining Discriminative Sequential Patterns of Self-regulated Learners.** *International Conference on Intelligent Tutoring Systems*, 14798(1), 137-149. Consulté à l'adresse <https://hal.science/hal-04617383>

This research explores the links between self-regulation behaviors and indicators of learning performance. A data mining approach coupled with appropriate qualitative measures is proposed to extract behavioral sequences that are representative of learning success. Applied on an online programming platform, obtained results allowed to highlight important self-regulation behaviors during the planning and engagement phases. It e.g. appears that successful self-regulated learners are those who analyze their tasks before working on them. This work brings methodological contributions in the field of self-regulation learning measurement and is a first step towards the design of intelligent tutoring systems.

Café pédagogique. (2024, juillet 2). **Sciences: le niveau baisse encore au collège d'après CEDRE.** Consulté 3 juillet 2024, à l'adresse Le Café pédagogique website: <https://www.cafepedagogique.net/2024/07/02/sciences-le-niveau-baisse-encore-au-college-dapres-cedre/>

Les résultats de l'enquête Cèdre ne laissent pas de place au doute quant à la baisse significative des résultats en sciences en fin de collège.

Carr, R. C., Jenkins, J. M., Watts, T. W., Peisner-Feinberg, E. S., & Dodge, K. A. (2024). **Investigating if high-quality kindergarten teachers sustain the pre-K boost to children's emergent literacy skill development in North Carolina.** *Child Development*, 95(4), 1200-1217. <https://doi.org/10.1111/cdev.14076>

This study tested the hypothesis that high-quality kindergarten teachers sustain and amplify the skill development of children who participated in North Carolina's NC Pre-K program during the previous year, compared to matched non-participants (N = 17,330; 42% African American, 40% Non-Hispanic White, 15% Hispanic; 51% male; Mage = 4.5

years at fall of pre-K). Kindergarten teacher quality was measured using a “value-added” approach. NC Pre-K participants outperformed non-participants in the fall of kindergarten ($\beta = .22$) and 11% of this boost remained evident by the spring of kindergarten. Higher value-added teachers promoted the skill development of all children ($\beta = .30$ in the spring) but did not differentially benefit the skill development of former NC Pre-K participants compared to non-participants.

Culver, K. C., Bray, N., & Braxton, J. (2024). **On My Honor: A Quasi-Experimental Analysis of Honors Students' Perceptions of Workload and Cognitive Challenge**. *Research in Higher Education*, 65(4), 679-704. <https://doi.org/10.1007/s11162-024-09788-5>

The assumption that honors programs are more academically challenging is rarely interrogated. Using multi-institutional, longitudinal quantitative data from a larger study, we use quasi-experimental methods to examine students' experiences of course rigor, including workload and cognitive challenge, for honors participants compared to non-participants. Honors students perceive greater workload but not cognitive challenge in their first year, especially in terms of the amount of reading and writing they are asked to do. In their fourth year, honors participants experience less cognitive challenge than non-participants. Results of subgroup analyses suggest that these differences are likely driven by students who participate in centralized honors programs rather than departmental honors as well as those attending more selective institutions, with implications for honors program instructors and administrators.

Gao, C., Li, Z., & Zheng, L. (2024). **Develop and validate a scale to measure primary and secondary teachers' digital teaching competence**. *Education and Information Technologies*, 29(9), 10763-10789. <https://doi.org/10.1007/s10639-023-12228-z>

Teachers' digital teaching competence is a prerequisite for efficient teaching. This study aimed to develop a scale to assess primary and secondary teachers' digital teaching competence (PSTDTC). We analyzed and generalized definitions, models, and frameworks for PSTDTC, proposed a five-dimension model (digital teaching design competence, digital teaching implementation competence, digital teaching evaluation competence, digital teaching responsibility, and digital teaching attitude), and developed a scale. Three specialists and seven in-service teachers tested the content validity of the PSTDTC scale. An exploratory factor analysis ($n = 473$) revealed a 5-factor structure corresponding to the theoretical model. Confirmatory factor analysis ($n = 574$) was used to assess the structural validity of the final scale. Other statistical findings indicate that the scale is scientific and reliable. In the study, we also used latent class analysis (LCA) to identify unobserved structures and the subpopulations of teachers. According to the LCA results, three latent classes were obtained, including low-level, intermediate- and high-level digital teaching competence. Through multiple logistic regression, we discovered that urban and secondary teachers are more likely to enter intermediate- and high-level digital teaching competence classes. Therefore, the PSTDTC scale provides educators and researchers an effective diagnostic instrument for evaluating the present state of teachers' digital teaching.

Ha, H., & Lee, H. S. (2024). **Evaluating the Judgment of Learning: its Limited Impact and the Power of Retrieval on Inductive Learning**. *Educational Psychology Review*, 36(2), 60. <https://doi.org/10.1007/s10648-024-09899-6>

Recent studies suggest that making judgments of learning (JOLs)—self-assessment of current learning status—may not merely be a neutral cognitive process, but can directly

improve learning through what is called 'JOL reactivity'. This study investigated whether making JOLs can facilitate the learning of previously studied materials (backward effect) and newly studied materials (forward effect) in inductive learning. We also examined how this effect varies depending on whether a JOL is accompanied by a retrieval attempt. Across three experiments, participants learned about various butterfly species presented in two sections (Sections A and B). Some participants made JOLs between Section A and Section B, while others did not, and then all participants took a final transfer test for both sections. In Experiment 1, merely making JOLs did not facilitate learning compared to restudy control, regardless of whether JOLs afforded covert retrieval (target-absent JOL) or not (target-present JOL). However, in Experiment 2, when participants made JOLs combined with overt retrieval prompts (retrieval practice + JOL), they outperformed the other groups in the final transfer test of Section B, showing the forward effect. Experiment 3 further revealed that the act of making JOLs combined with overt retrieval practice was as effective as (but not more than) retrieval practice without JOLs in promoting new learning. Our findings indicate that conventional forms of JOLs do not appear to enhance inductive learning; rather, they underscore the critical role of retrieval in facilitating inductive learning.

Holubnycha, L., Shchokina, T., & Soroka, N. (2024). **Enseigner et apprendre en présentiel** (C. et R. Étienne, Trad.). *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w1y>

Cet article traite de la forme traditionnelle d'enseignement et d'apprentissage du point de vue de la qualité des apprentissages, en particulier des avantages et des inconvénients de l'enseignement en présentiel par rapport à la formation en ligne. L'objectif est de vérifier si le processus d'enseignement en classe est de meilleure qualité que l'enseignement et l'apprentissage en ligne sur la base d'un cas réel d'enseignement de l'anglais à l'Université nationale de droit Yaroslav Mudryi. Les tâches consistent à découvrir les avantages de l'enseignement en classe par rapport à celui en ligne, à révéler les inconvénients de l'enseignement traditionnel par rapport au format en ligne sur la base d'une expérience d'enseignement réelle et à vérifier si les avantages ou les inconvénients de la formation en classe ont une plus grande influence sur les résultats d'apprentissage des étudiants de niveau licence. Les méthodes de recherches sont empiriques (enquêtes, observations) et théoriques (analyses, synthèses et comparaisons). Les résultats ont mis en évidence les points suivants : 1) les avantages de la formation en présentiel sont les suivants : interaction en temps réel, amélioration des compétences sociales, collaboration, organisation, motivation, accessibilité et meilleure évaluation ; 2) les inconvénients de la formation en présentiel ont été révélés : traitement d'une plus petite partie du programme ; problèmes de discipline ; impossibilité d'écouter le matériel de cours à plusieurs reprises si nécessaire ; problèmes d'accès au matériel d'apprentissage à partir d'Internet ; et la tendance de certains étudiants à avoir une barrière psychologique à parler une langue étrangère « en direct » devant d'autres étudiants ; 3) les résultats d'apprentissage des étudiants de niveau licence ont démontré que les étudiants en présentiel obtiennent de moins bons résultats académiques que les étudiants étudiant en ligne. Nous en concluons que les inconvénients de la formation en présentiel déterminent un plus grand effet sur les résultats d'apprentissage des étudiants que les avantages. Afin de déterminer quel format d'enseignement est de meilleure qualité, il est nécessaire de continuer à étudier le problème.

Jin, S. (2024). **Tapping into social media: transforming EFL learners' writing skills and alleviating anxiety through YouTube.** *Education and Information Technologies*, 29(9), 10707-10728. <https://doi.org/10.1007/s10639-023-12252-z>

This study explored the impact of incorporating interactive elements of YouTube, such as commenting and engagement, within social media-integrated writing activities. The aim was to examine how this approach influences the writing anxiety and writing performance of Korean English as a Foreign Language (EFL) learners. The participants, all of whom were first-year students at an intermediate English level, consisted of 115 EFL students. Among them, 58 were assigned to the experimental group, while the remaining 57 were part of the control group. The experimental group actively participated in social media-integrated writing activities that emphasized YouTube commenting and interactive engagement, while the control group engaged in traditional writing activities. Data collection involved pre- and post-writing tasks, accompanied by a pre- and post-questionnaire measuring second language (L2) writing anxiety. The findings revealed that the inclusion of YouTube commenting and interaction within social media-integrated writing activities was considerably more effective than traditional writing activities in reducing writing anxiety and enhancing writing proficiency. Specifically, the experimental group exhibited significant improvements in writing proficiency compared to the control group, and this improvement was observed across multiple dimensions including content, coherence, vocabulary, grammar, and mechanics. Additionally, the experimental group experienced a notable reduction in writing anxiety. These results highlight the importance of integrating interactive elements, such as YouTube commenting and engagement, in EFL writing instruction to alleviate writing anxiety and enhance writing proficiency among EFL learners. Furthermore, this approach offers innovative opportunities for language learning within educational settings.

Kendeou, P. (2024). **A Theory of Knowledge Revision: The Development of the KReC Framework.** *Educational Psychology Review*, 36(2), 44. <https://doi.org/10.1007/s10648-024-09885-y>

In this paper, I discuss the inspiration, development, and further refinement of the Knowledge Revision Components framework (KReC; Kendeou & O'Brien, 2014). In KReC, we theorize about the conditions that facilitate knowledge revision during reading, and thus successful learning in the presence of prior, often incorrect knowledge. I discuss how the inspiration and need for the framework arose, and how a systematic set of experimental studies and a shift in paradigm led to its initial development and further refinement. I also outline several virtues and contributions of this framework to the extant literature. I conclude with future directions for further development and applications of the framework in the current information ecosystem.

Linzarini, A., & Silva, D. C. da. (2024). **Innovative tools for the direct assessment of social and emotional skills.** <https://doi.org/10.1787/eed9bb04-en>

Social and emotional skills (SES) are important for various life outcomes, such as academic achievement, mental health, job performance or civic engagement. The assessment of these skills in children and adolescents, however, currently relies heavily on the use of self-reported questionnaires. As such, there is an urgent need for more direct measurement approaches of SES, which look at behaviours, actions and choices, in order to diversify the current portfolio of available assessments. The aim of this working paper is, thus, to map and review innovative assessment tools as well as technological approaches, aimed at the direct assessment of SES. Firstly, the paper documents almost

60 different behavioural tools, namely tasks and digital games. These instruments are reviewed according to a set of criteria, including their reliability, construct and ecological validity, and feasibility. Secondly, the paper identifies technological approaches, such as biophysiological measures, virtual reality or different artificial intelligence applications. Many of these technologies have the potential of being transversally integrated into different tasks and game, enriching the quality of SES assessment, albeit bringing new challenges. Lastly, the paper promotes a dialogue between the different types of innovative assessments, identifying comparative strengths and challenges.

Miller, E. B., Canfield, C. F., Roby, E., Wippick, H., Shaw, D. S., Mendelsohn, A. L., & Morris-Perez, P. A. (2024). **Enhancing early language and literacy skills for racial/ethnic minority children with low incomes through a randomized clinical trial: The mediating role of cognitively stimulating parent-child interactions.** *Child Development*, 95(4), 1172-1185. <https://doi.org/10.1111/cdev.14064>

Parenting is a critical mediator of children's school readiness. In line with this theory of change, data from the randomized clinical trial of Smart Beginnings (tiered Video Interaction Project and Family Check-Up; N = 403, treatment arm n = 201) were used to examine treatment impacts on early language and literacy skills at child age 4 years (nLatinx = 168, nBlack = 198, nMale = 203), as well as indirect impacts through parental support of cognitive stimulation at child age 2 years. Although results did not reveal direct effects on children's early skills, there were significant indirect effects for early literacy ($\beta = .03$, $p = .05$) and early language ($\beta = .04$, $p = .04$) via improvements in parental cognitive stimulation. Implications for interventions targeting parenting to improve children's school readiness beginning at birth are discussed.

OECD. (2024a). **PISA 2022 Results (Volume III): Creative Minds, Creative Schools.** Consulté à l'adresse https://www.oecd-ilibrary.org/education/pisa-2022-results-volume-iii_765ee8c2-en?utm_campaign=OECD%20Education%20%26%20Skills%20Newsletter%3A%20June%202024&utm_content=Read%20the%20report&utm_term=edu&utm_medium=email&utm_source=Adestra

The OECD Programme for International Student Assessment (PISA) examines what students around the world know and can do. This volume – Volume III, Creative Minds, Creative Schools – is one of five volumes presenting the results of the eighth round of...

OECD. (2024b). **PISA 2022 Results (Volume IV): How Financially Smart Are Students?** Consulté à l'adresse https://www.oecd-ilibrary.org/education/pisa-2022-results-volume-iv_5a849c2a-en?utm_campaign=OECD%20Education%20%26%20Skills%20Newsletter%3A%20June%202024&utm_content=Read%20the%20report&utm_term=edu&utm_medium=email&utm_source=Adestra

This volume presents the financial literacy results of the OECD Programme for International Student Assessment (PISA) 2022 and examines 15-year-old students' understanding of money matters in 20 countries and economies. It explores the links between...

Smits-van der Nat, M., van der Wilt, F., Meeter, M., & van der Veen, C. (2024). **The Value of Pretend Play for Social Competence in Early Childhood: A Meta-analysis.** *Educational Psychology Review*, 36(2), 46. <https://doi.org/10.1007/s10648-024-09884-z>

According to Vygotsky's cultural-historical activity theory, pretend play can be an important context for the development of children's social competence. The aim of this meta-analysis was to synthesize the current evidence about the relation between pretend play and social competence in early childhood (age 3–8 years). A systematic literature search of PsycINFO, ERIC, and Web of Science identified a total of 34 relevant empirical studies. The included studies were systematically coded and categorized for pretend play and social competence. Overall, the findings of this meta-analysis reveal a positive relation between pretend play and social competence, irrespective of how the latter was measured. The relation between pretend play and social competence was slightly negatively impacted by children's age, suggesting that the relation weakens as children get older. Studies measuring the amount of pretend play found lower correlations between pretend play and social competence than studies measuring the quality of pretend play. Most included studies adopted a cross-sectional design, so claims about causal effects could not be supported. Future research is required to determine the direction of causality and potential mechanisms that may explain the relation between pretend play and social competence.

Wahjusaputri, S., Nastiti, T. I., & Liu, Y.-D. (2024). **Development of a hybrid teaching factory model based on school governance in improving employability skills of vocational students.** *Jurnal Pendidikan Vokasi*, 14(1), 53-62. <https://doi.org/10.21831/jpv.v14i1.65108>
This research aims to develop a framework for a hybrid teaching factory model that combines face-to-face and online learning with information and communication technology to improve employability skills in the new normal era. The research method uses the ADDIE Research and Development model, which consists of five stages: analysis, design, development, implementation, and evaluation. The research was conducted in several vocational high schools in DKI Jakarta Region, Indonesia. The findings in the research prove that the implementation of hybrid learning has an impact on students and teachers. Hybrid learning teaching factory is proven to be able to overcome frustrations and limitations between teachers and students in the learning process through online facilities, making teaching factory learning more innovative because there are variations of learning to interact and discuss, and making the classroom atmosphere conducive because students become happy and active in learning and skilled in working. The success of a hybrid teaching factory is considered mutually beneficial for both students and teachers who complete one of the teaching factory learning curriculums while industry instructors develop and work on collaborative platforms that provide useful services such as augmented reality and virtual reality-based applications.

Wang, Y.-J., Gao, C.-L., & Ye, X.-D. (2024). **A data-driven precision teaching intervention mechanism to improve secondary school students' learning effectiveness.** *Education and Information Technologies*, 29(9), 11645-11673. <https://doi.org/10.1007/s10639-023-12238-x>

The continuous development of Educational Data Mining (EDM) and Learning Analytics (LA) technologies has provided more effective technical support for accurate early warning and interventions for student academic performance. However, the existing body of research on EDM and LA needs more empirical studies that provide feedback interventions, and more attention should be paid to primary and secondary school students. This study proposed a data-driven precision teaching intervention mechanism combining EDM and LA technologies. The proposed mechanism aims to assist teachers

in predicting students' academic performance and implementing corresponding interventions. This approach enables early warnings and reminders for students in crisis, and offers teaching assistance and support tailored to students at different levels. A quasi-experimental design was employed to examine the impact of the data-driven precision teaching intervention mechanism on secondary school students' learning outcomes. A total of 142 seventh-grade students participated in the intervention experiment, with an experimental group (50) receiving the data-driven precision teaching intervention, control group2 (48) receiving a group intervention stratified by teacher experience, and control group1 (44) receiving a traditional group intervention. Posttest data were collected after three rounds of intervention. Compared to the two control groups, students in the experimental group demonstrated superior academic achievement, intrinsic motivation, self-efficacy, and meta-cognitive awareness. These findings indicate that the data-driven precision teaching intervention approach positively impacted students' academic development, and effectively promoted their personalized learning. The findings provide pedagogical insights into the application of EDM in conjunction with LA prediction and actionable interventions.

Wang, Z., Chen, Z., Gong, B., & Feng, Z. (2024). **The interactive effects of instructors' guidance frequency and type on Chinese secondary school students' learning.** *Education and Information Technologies*, 29(9), 11257-11280. <https://doi.org/10.1007/s10639-023-12148-y>

As an important resource in online learning, video lectures have attracted considerable research attention in the impact of teachers' nonverbal guidance behaviors on learning. However, few studies have focused on secondary education, and it remains unclear whether the interaction between different guidance frequencies and types leads to variations in the effectiveness of guidance. This study tested the mutual effects of instructor's guidance frequency and type on secondary school students' learning performance (retention scores, transfer scores) and affective experiences (cognitive load, learning experience, learning satisfaction). A total of 202 secondary school students were randomly assigned to watch one of the four video lectures, using a 2 (guidance frequency: low-frequency guidance, high-frequency guidance) × 2 (guidance type: gesture guidance, gesture + gaze guidance) between-groups design. The study was conducted in a multimedia classroom setting. The results showed that low-frequency guidance by instructors contributed to improved learning performance. Specifically, under low-frequency guidance conditions, gesture guidance was more effective in enhancing retention, while gesture + gaze guidance facilitated learners' transfer. Moreover, low-frequency gesture + gaze guidance by teachers resulted in better affective experiences for students, as evident in cognitive load, learning experience, and learning satisfaction. Therefore, it is recommended that instructors lecturing for secondary students adopt appropriate types of low-frequency guidance according to the level of learning difficulty to improve teaching effectiveness.

Zhu, F., Pi, Z., & Yang, J. (2024). **Unleashing the Power of Positivity: How Positive Instructors Benefit Learning from Instructional Videos — A Meta-analytic Review.** *Educational Psychology Review*, 36(2), 47. <https://doi.org/10.1007/s10648-024-09859-0>

This meta-analysis explores the impact of positive instructors on learning from instructional videos. Both the contagion theory and the cognitive-affective theory of learning with media suggest that positive instructors can facilitate learning. This review analyzed 37 studies reporting various outcomes, including positive emotion, motivation, attention,

cognitive load, learning experience, learning satisfaction, self-efficacy, and learning achievement. The overall findings revealed that positive instructors in instructional videos significantly enhanced learners' positive emotion, motivation, learning experience, learning satisfaction, and learning achievement, and encouraged student attention to the instructor. However, no significant effect was found regarding attention paid to visual materials, cognitive load, and self-efficacy. A series of moderating effect analyses were also conducted. The results indicated that the impact of positive instructors is influenced by instructor characteristics and emotional expressions, as well as other factors independent of the instructors. These findings provide systematic evidence and practical insights for the design of effective instructional videos.

Aspects économiques de l'éducation

Adem, J. M. (2024). **Why cash grants fail to raise household investment in child education in developing countries.** *Review of Development Economics*, 28(3), 1063-1076. <https://doi.org/10.1111/rode.13092>

This study formulates a theoretical framework to shed light on why cash grants fail to increase parental investment in child education, and what can be done to address the issue. The paper asserts that consumption vulnerability, loss aversion, and information friction render lump-sum cash grants ineffective. Redesigning interventions as demand-side cost-sharing schemes would nudge parents to buy educational materials for their children.

Billings, M. S., Rubin, P. G., Gándara, D., & Hammond, L. (2024). **Higher Education Policy Narratives during COVID-19: How are Budget Requests Justified to State Legislatures?** *Research in Higher Education*, 65(4), 625-654. <https://doi.org/10.1007/s11162-024-09798-3>

During economic recessions, state funding for higher education contracts (Delaney & Doyle, 2011; Hovey, 1999; SHEEO, 2022). Despite this reality, public higher education officials need to offer insights and explanations to state legislators about the current status of their institutions and their needs when discussing their budget requests. We use a multiple case-study design, framed by the narrative policy framework, to examine how campus officials in California and Texas justify their budget requests to the state legislature during the COVID-19 pandemic. Drawing on 131 h of transcribed legislative budget meetings and 62 documents, our findings suggest that higher education leaders emphasize the economic functions of higher education and center their ability to successfully manage during these uncertain and difficult times by highlighting improved or stable accountability measures such as enrollment, persistence, graduation, and job placement rates. During these budget requests, there are commonalities between the states regarding the structure, justifications, and narrative strategies used. However, higher education leaders evoked different narrative objects depending on the perceived values, beliefs, and norms of their state legislators.

Carlana, M., Miglino, E., & Tincani, M. M. (2024). **How Far Can Inclusion Go? The Long-term Impacts of Preferential College Admissions** (NBER Working Paper N° 32525). Consulté à l'adresse National Bureau of Economic Research, Inc website: <https://econpapers.repec.org/paper/nbrnberwo/32525.htm>

Affirmative action and preferential admission policies play a crucial role in fostering social mobility by bolstering the prospects of disadvantaged groups. In this paper, we analyze the long-term effects of a Chilean policy (PACE) that targets students in underprivileged

schools, offering guaranteed admission to selective colleges to those graduating in the top 15 percent of their high school class. Leveraging both the randomized expansion of PACE and the admission discontinuity, our analysis reveals that PACE yields positive labor market effects for the average targeted student, especially women, driven by the selectivity of the attended colleges. However, for marginally eligible students, higher dropout rates and negative labor market outcomes emerge, suggesting PACE may induce a mismatch between their skills and the academic rigor of selective programs. Finally, we find that students in the bottom 85 percent of their schools experience positive effects on labor market outcomes. We identify equilibrium effects on local labor markets as a potential mechanism. The results suggest that there is a limit to how far preferential admissions can go while delivering on their promises.

Conde-Ruiz, J. I., Ganuza, J.-J., García, M., & Victoria, C. (2024). **AI and Digital Technology: Gender Gaps in Higher Education** (Working Paper N° 1450). Consulté à l'adresse Barcelona School of Economics website: <https://econpapers.repec.org/paper/bgewpaper/1450.htm>

This article examines gender gaps in higher education in Spain from 1985 to 2023 in the context of technological advancements, particularly digitalization and artificial intelligence (AI). We identify significant disparities, with women over represented in health-related fields and underrepresented in STEM disciplines. This imbalance is concerning as STEM fields offer better employment prospects and higher salaries. We analyze university degrees' exposure to technological change through Routine Task Intensity (RTI) and AI exposure indices. Our findings show that women are more enrolled in degrees with high RTI, prone to automation, and less in degrees with high AI exposure, likely to benefit from technological advancements. This suggests technological change could widen existing labor market gender gaps. To address this, we recommend policies to boost female participation in STEM fields and adapt educational curricula to reduce routine tasks and enhance AI complementarities, ensuring equitable labor market outcomes amid technological change.

de Gendre, A., Karbownik, K., Salamanca, N., & Zenou, Y. (2024). **Integrating Minorities in the Classroom: The Role of Students, Parents, and Teachers** (IZA Discussion Paper N° 16969). Consulté à l'adresse Institute of Labor Economics (IZA) website: <https://econpapers.repec.org/paper/izaizadps/dp16969.htm>

We develop a multi-agent model of the education production function where investments of students, parents, and teachers are linked to the presence of minorities in the classroom. We then test the key implications of this model using rich survey data and a mandate to randomly assign students to classrooms. Consistent with our model, we show that exposure to minority peers decreases student effort, parental investments, and teacher engagement and it results in lower student test scores. Observables correlated with minority status explain less than a third of the reduced-form test score effect while over a third can be descriptively attributed to endogenous responses of the agents.

Giuntella, O., Saccardo, S., & Sadoff, S. (2024). **Sleep: Educational Impact and Habit Formation** (NBER Working Paper N° 32550). Consulté à l'adresse National Bureau of Economic Research, Inc website: <https://econpapers.repec.org/paper/nbrnberwo/32550.htm>

There is growing evidence on the importance of sleep for productivity, but little is known about the impact of interventions targeting sleep. In a field experiment among U.S.

university students, we show that incentives for sleep increase both sleep and academic performance. Motivated by theories of cue-based habit formation, our primary intervention couples personalized bedtime reminders with morning feedback and immediate rewards for sleeping at least seven hours on weeknights. The intervention increases the share of nights with at least seven hours of sleep by 26 percent and average weeknight sleep by an estimated 19 minutes during a four-week treatment period, with persistent effects of about eight minutes per night during a one to five-week post-treatment period. Comparisons to secondary treatments show that immediate incentives have larger impacts on sleep than delayed incentives or reminders and feedback alone during the treatment period, but do not have statistically distinguishable impacts on longer-term sleep habits in the post-treatment period. We estimate that immediate incentives improve average semester course performance by 0.075--0.088 grade points, a 0.10--0.11 standard deviation increase. Our results demonstrate that incentives to sleep can be a cost-effective tool for improving educational outcomes.

Jeffrey, W., & Gibbs, B. G. (2024). **Unpacking the Gap: Socioeconomic Background and the Stratification of College Applications in the United States.** *Research in Higher Education*, 65(4), 705-731. <https://doi.org/10.1007/s11162-024-09780-z>

While a substantial body of work has shown that higher-SES students tend to apply to more selective colleges than their lower-SES counterparts, we know relatively less about why students differ in their application behavior. In this study, we draw upon a sociological approach to educational stratification to unpack the SES-based gap in college application selectivity. Using data from the High School Longitudinal Study of 2009, we examine the contribution of theoretical factors to the class-based gap in the selectivity of college applications. Namely, from the rational action model we estimate the contribution of performance differentials and choice differentials, while from the status attainment model we look at the level and type of educational expectations as well as the number of applications submitted. Through a series of Heckman selection models, as well as a Blinder-Oaxaca decomposition analysis, we can explain 85% of the gap in college application selectivity between students in the top and bottom SES quintiles. In turn, we estimate that 60% of this explained portion is due to rational action mechanisms such as grades and test scores while 35% is due to status attainment mechanisms. Finally, we reveal that SES moderates the relationship between type of expectations and application selectivity. We find that the payoff to higher expectations (in terms of selective applications) disproportionately accrues to higher-SES students.

Launay, J., & Gaillard, R. (2024). **Les parcours étudiants au prisme des allocations de ressources : quelles évolutions depuis 15 ans ?** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal*, 24-25 juin 2024, Aix-en-Provence (p. 165-176). <https://doi.org/10.4000/11uuk>

OCDE. (2024). **Shaping students' financial literacy: The role of parents and socio-economic backgrounds.** <https://doi.org/10.1787/c3f3dc74-en>

The results of the PISA 2022 financial literacy assessment show that many 15-year-olds should be better prepared for their financial future, as they are not able to apply their financial knowledge to real-life situations. In every participating country and economy, students from disadvantaged socio-economic backgrounds performed significantly worse than their advantaged peers. PISA data also show that students who discuss money matters with their parents, and those who make autonomous decisions about

how to spend their money, achieve higher levels of financial literacy. This PISA in Focus examines the proportion of students who do not achieve baseline financial literacy and explores the links between socio-economic backgrounds, parental interactions and financial literacy performance.

Aspects psychologiques de l'éducation

Abel, R., de Bruin, A., Onan, E., & Roelle, J. (2024). **Why Do Learners (Under)Utilize Interleaving in Learning Confusable Categories? The Role of Metastrategic Knowledge and Utility Value of Distinguishing.** *Educational Psychology Review*, 36(2), 64. <https://doi.org/10.1007/s10648-024-09902-0>

Distinguishing easily confusable categories requires learners to detect their predictive differences. Interleaved sequences — switching between categories — help learners to detect such differences. Nonetheless, learners prefer to block — switching within a category — to detect commonalities. Across two 2×2-factorial experiments, we investigated why learners scarcely engage in interleaving when learning confusable categories. In Experiment 1 (N = 190), we investigated the role of the utility value of being able to distinguish confusable mushroom doubles on their spontaneous study sequence choices and of the conditional knowledge component that for distinguishing, the detection of differences (between the doubles) matters. In Experiment 2 (N = 134), we again investigated the role of the latter and additionally of the conditional knowledge component that interleaving highlights differences. Results showed that combining two factors — increasing the utility value of distinguishing and informing learners that for distinguishing, the detection of differences matters — fostered learners' use of interleaving. In conclusion, learners are more aware that interleaving highlights differences than previously thought. Nonetheless, learners prefer blocking because they do not recognize the utility value of distinguishing, and they lack the conditional knowledge that distinguishing requires finding predictive differences. Their blocked study sequence choices reflect a deliberate investment of effort to find commonalities rather than just avoiding effort. To make learners shift their effort allocation from finding commonalities to finding differences and engage them in spontaneous interleaving, we recommend highlighting the utility value of distinguishing and informing learners about the importance of finding differences for distinguishing.

Ahmed, U., Ismail, A. I., Fati, M., & Akour, M. A. (2024). **E-Learning during COVID-19: Understanding the nexus between instructional innovation, E-psychological capital, and online behavioural engagement.** *Management in Education*, 38(3), 107-119. <https://doi.org/10.1177/08920206211053101>

This current study is to empirically validate the importance of student's behavioural engagement on online teaching during a coronavirus-2019 disease pandemic. The global spread of coronavirus-2019 disease has affected every aspect of business, including education, resulting in the shift of classroom to online teaching. Keeping in view the growing concern about students' attentiveness, connectivity, participation, and interaction in online classes, the authors underlined the critical need for paying empirical attention to this issue. While addressing a major empirical gap, the present study tested and found the significant role of e-learning efficacy, e-learning resilience, and teachers' instructional innovation in boosting students' online behavioural engagement. Additionally, the study found a thought-provoking direct and interacting role of teachers'

instructional innovation. Therefore, the implications of the findings indicate that leaders in educational institutions need to invest in psychological resources that emphasize innovation and creativity in instructional methods for teachers to enhance student engagement in an online environment.

Ammar, A., Trabelsi, K., Boujelbane, M. A., Salem, A., Boukhris, O., Glenn, J. M., ... Schöllhorn, W. I. (2024). **The Effects of Contextual Interference Learning on the Acquisition and Relatively Permanent Gains in Skilled Performance: A Critical Systematic Review with Multilevel Meta-Analysis.** *Educational Psychology Review*, 36(2), 57. <https://doi.org/10.1007/s10648-024-09892-z>

The paradoxical effects of contextual interference (CI) assume that high CI practices hinder performances during the acquisition phase of learning, while providing more permanent enhancement during the retention phase. This meta-analysis evaluates the possible generalizability of the CI phenomenon in physical education (PE) and sports contexts, with regard to the acute and relatively permanent gains in performance outcomes. A total of 933 records from five electronic databases were screened using the PICOS criteria, of which 36 studies were selected. Outcomes evaluating the performance changes (Δ) from pre-post, post-retention, and pre-retention tests were included. Out of 183 overall pooled outcomes, Δ in only 37 performance outcomes (20%) agreed with the paradoxical CI effects on the acquisition or the relatively permanent gains. No statistically significant overall difference was detected for “ Δ pre-post” between low (blocked) ($28.9 \pm 59.5\%$) and high (random/serial) ($27.9 \pm 52.8\%$) CI (effect size (ES) = 0.1, $p = 0.35$). An overall significant difference ($p = 0.001$) in favor of high CI practice was detected in “ Δ post-retention.” However, this difference was not large enough (ES = -0.35) to produce an overall greater long-term gain following high ($24.56 \pm 4.4\%$), compared to low ($21.9 \pm 9.8\%$) CI (ES = -0.13, $p = 0.18$). Out of 10 tested variables, only the age significantly moderated both CI effects ($p < 0.0001$ for both Δ pre-post and Δ pre-retention) and the female proportion significantly moderated only the first CI effect ($p = 0.009$ for Δ pre-post). These findings found very limited evidence supporting the recommendation to employ high CI practices to gain a longer-term performance advantage, calling into question the generalization of the CI model to PE and sports practices. High-quality follow-up research evaluating alternative motor-learning models are therefore needed.

Anastasiou, D., Wirngo, C. N., & Bagos, P. (2024). **The Effectiveness of Concept Maps on Students' Achievement in Science: A Meta-Analysis.** *Educational Psychology Review*, 36(2), 39. <https://doi.org/10.1007/s10648-024-09877-y>

This study aims to evaluate the effectiveness of concept maps on science achievement among elementary and secondary education students, including low-achieving students. A systematic search located 55 studies about concept mapping in science achievement published in peer-reviewed journals and dissertations between 1980 and 2020. We extracted 58 independent standardized mean difference effect sizes from 55 eligible studies involving 5,364 students from Grade 3 to Grade 12 who used concept maps for learning in physics/earth science, chemistry, and biology that met the specified design criteria. A random-effects model meta-analysis revealed that the mean effect size was moderate for overall science ($g = 0.776$). The mean effect sizes varied from moderate to large based on the subject area ($g = 0.671$ for biology; $g = 0.590$ for chemistry; $g = 1.040$ for physics and earth science); these differences between groups were not statistically significant ($p = 0.220$). Concept maps were generally associated with increased science learning across several learning and teaching conditions, and

methodological features (low-achieving students, higher teaching guidance, intermediate grades, low- or middle-income countries, journal publications, and late year of publication). However, we found significant heterogeneity in most subsets. Implications for future research and practice recommendations are discussed.

Ball, I., Banerjee, M., Holliman, A., & Tyndall, I. (2024). **Investigating Success in the Transition to University: A Systematic Review of Personal Risk and Protective Factors Influencing Academic Achievement.** *Educational Psychology Review*, 36(2), 52. <https://doi.org/10.1007/s10648-024-09891-0>

The transition to university is a time of great change and adjustment. The challenges of university life can lead to numerous negative consequences for the students. Despite the importance of successful transition for both the student and the university, the current body of literature comprises methodological inconsistencies and disparate analytical goals that make it difficult to identify the most salient and effective factors that help predict transition success. This paper presents a systematic review of research linking personal level risk and protective factors to the outcome of academic achievement among students making the transition to university. This is part of a larger review, following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) and Synthesis Without Meta-analysis (SWiM) guidelines, preregistered on the International Prospective Register of Systematic Reviews (PROSPERO, CRD42022330515), searching PsychInfo, Web of Science, and ERIC databases. Records were included if they studied 'traditional' first year students transitioning to university and were longitudinal in design and excluded if they looked at specific subgroups of students (e.g. international students). The search yielded 27 articles that were eligible, highlighting a broad range of salient factors ranging from personality traits to procrastination and perfectionism. The findings are discussed in relation to moving the research forward towards an intervention to enhance the probability of successful student transition to university.

Burlinson, D., McQuaigue, M., Goncharow, A., Subramanian, K., Saule, E., Payton, J., & Goolkasian, P. (2024). **BRIDGES: Real world data, assignments and visualizations to engage and motivate CS majors.** *Education and Information Technologies*, 29(9), 10649-10675. <https://doi.org/10.1007/s10639-023-11958-4>

BRIDGES is a software framework for creating engaging assignments for required courses such as data structures and algorithms. It provides students with a simplified API that populates their own data structure implementations with live and real-world data, and provides the ability for students to easily visualize the data structures they create as part of routine classroom exercises. The objective is to use the infrastructure to promote a better understanding of the data structure and its underlying algorithms. This report describes the BRIDGES infrastructure and provides evaluation data collected over the first five years of the project. In the first 2 years, as we were developing the BRIDGES projects, our focus was on gathering data to assess whether the addition of the BRIDGES exercises had an effect on student retention of core concepts in data structures; and throughout the 5-year duration of the project, student interest and faculty feedback were collected online and anonymously. A mixed method design was used to evaluate the project impact. A quasiexperimental design compared student cohorts who were enrolled in comparable course sections that used BRIDGES with those that did not. Qualitative and quantitative measures were developed and used together with course grades and grade point averages. Interest and relevance in BRIDGES programming assignments was assessed with additional survey data from students and instructors.

Results showed that students involved in BRIDGES projects demonstrated larger gains in knowledge of data structures compared to students enrolled in comparable course sections, as well as long-term benefits in their performance in four follow-on required courses. Survey responses indicated that some investment of time was needed to use BRIDGES, but the extra efforts were associated with several notable outcomes. Students and instructors had positive perceptions of the value of engaging in BRIDGES projects. BRIDGES can become a tool to get students more engaged in critical foundational courses, demonstrating relevance and context to today's computational challenges.

Coşkun, L. (2024). **An advanced modeling approach to examine factors affecting preschool children's phonological and print awareness.** *Education and Information Technologies*, 29(9), 11155-11182. <https://doi.org/10.1007/s10639-023-12216-3>

This paper presents a unique advanced statistical approach based on Artificial Intelligence (AI) to examine factors affective on phonological awareness and print awareness of preschool children. Artificial Neural Network (ANN) models were created and correlations between the independent and dependent (outcome) variables were analyzed. The ANN models were trained using the data for phonological awareness and print awareness of children. According to the findings, the created ANN model had an excellent fit to the actual data ($R^2 = 0.934$ and 0.940). Furthermore, the ANN model results were tested with a traditional analysis technique, Pearson correlation analysis. The ANN models yielded similar results to the Pearson correlation analysis but with more detail as expected. The ANN models were run for user-generated synthetic datasets and the relationships between the dependent and independent variables were discussed using model results. Demographic variables, namely, children's age, mother's age, mother's education, and family income were found to be not effective on children's print and phonological awareness skills. On the other hand, home literacy environment-related variables were found to be very effective. In conclusion, this paper introduces a methodology for implementing ANN modeling in educational data. A novel and powerful approach is provided to assess and estimate essential components of early literacy skills. The study has important implications for advancing our understanding of potential benefits of employing an AI-based modeling techniques in the field of education. The utilization of machine learning methods in educational research, as presented in this paper, has the potential to fundamentally reshape our approaches in categorizing and analyzing educational data.

Cottez, R. (2024, mai 16). **La violence d'élève à l'école : Quels effets sur le bien-être des enseignants ?** Présenté à Printemps de la Recherche en Éducation 2024 : « Bien-être à l'école : quels enjeux de formation ? ». Consulté à l'adresse <https://u-bourgogne.hal.science/hal-04623803>

Ce poster scientifique s'appuie sur des données de notre travail de thèse qui étudie les phénomènes de violence d'élève à l'école primaire française. Il a fait l'objet d'une communication dans le cadre du Printemps des INSPE 2024 à Amiens dont le thème était le bien-être à l'école. Le poster se propose d'interroger l'effet des violences d'élèves sur le bien-être des enseignants. Les enquêtes internationales montrent l'importance du bien-être des professeurs qui a une incidence sur les résultats scolaires et le bien-être de leurs élèves (OCDE, 2019). Dans le même temps, elles révèlent pour la France une dégradation du climat scolaire (Bernigole et al., 2023), ce que confirment des enquêtes nationales qui pointent une hausse des situations conflictuelles à l'école, mettant les enseignants en difficulté (Debarbieux & Moignard, 2023). Ces derniers se sentent

peu armés face à la grande difficulté comportementale (Charpentier et al., 2021) et expriment un besoin de ressources et de formation sur les questions de santé au travail (Vercambre-Jacquot et al., 2023). Nous formulons l'hypothèse que cette difficulté professionnelle contribue à une désaffection pour le métier qui se traduit notamment par une augmentation des démissions (Garcia, 2023) et une perte d'attractivité (Farges & Szerdahelyi, 2024). Nous nous demandons ainsi dans quelle mesure la formation des enseignants peut contribuer à améliorer leur bien-être au travail. Notre enquête sociologique, mêlant analyse du prescrit, observations d'écoles et entretiens avec des enseignants, fournit quelques éléments de réponse. Les ressources institutionnelles sur le thème de la santé au travail sont principalement axées sur le traitement individuel de la souffrance des professeurs, au détriment de la prévention des risques psychosociaux et d'une interrogation collective sur les conditions de travail et l'organisation du service. En particulier, les enseignants interrogés expriment une source majeure de souffrance dans l'exercice de leur profession, à travers la difficile gestion des comportements d'élèves perçus comme « perturbateurs ». Ils regrettent un manque de ressources institutionnelles pour les accompagner dans cette tâche, se sentant impuissant à aider les élèves en question, à garantir la sécurité de tous, et à mener à bien le mandat qui leur a été confié et qui constitue toujours selon eux le cœur de leur métier : assurer l'apprentissage des élèves. Du point de vue de la formation des enseignants, il paraît ainsi important de documenter les comportements d'élèves pour mieux réfléchir aux postures professionnelles à adopter, notamment une gestion émotionnelle qui apparaît comme cruciale à la fois pour la régulation des comportements d'élèves et la prévention des affections psychosociales du professeur. Enfin, les enseignants expriment une méconnaissance de certains des droits et règlements qui encadrent leur activité professionnelle, notamment la procédure d'accident de service et le fonctionnement des instances compétentes en matière de santé, sécurité et conditions de travail, qui constituent pourtant des ressources pour aider les enseignants et les équipes rencontrant de telles difficultés, et pourraient donc à ce titre devenir des objets explicites et systématiques de formation.

Cvencek, D., Brečić, R., Sanders, E. A., Gaćeša, D., Skala, D., & Meltzoff, A. N. (2024). **Am I a good person? Academic correlates of explicit and implicit self-esteem during early childhood.** *Child Development*, 95(4), 1047-1062. <https://doi.org/10.1111/cdev.14052>
Implicit and explicit self-esteem are not commonly measured in the same children. Using a cross-sectional design, data from 354 Croatian children (184 girls) in Grade 1 (Mage = 7.55 years) and Grade 5 (Mage = 11.58 years) were collected in Spring 2019. All children completed explicit and implicit self-esteem measures; math and language grades were obtained. For the explicit measure, older children showed lower self-esteem than younger children, and girls showed lower self-esteem than boys. For the implicit measure, there were no age effects, and girls showed higher self-esteem than boys. Although both types of self-esteem were positively associated with academic achievement, implicit self-esteem was associated more strongly with language than with math achievement. Discussion is provided about why self-esteem relates to academic achievement during childhood.

Duan, S., Bissaker, K., & Xu, Z. (2024). **Correlates of teachers' classroom management self-efficacy: A systematic review and meta-analysis.** *Educational Psychology Review*, 36(2), 43. <https://doi.org/10.1007/s10648-024-09881-2>

This meta-analysis examined literature from the last two decades to identify factors that correlate with teachers' classroom management self-efficacy (CMSE) and to estimate the effect size of these relationships. Online and reference list searches from international and Chinese databases yielded 1085 unique results. However, with a focus on empirical research the final sample consisted of 87 studies and 22 correlates. The findings cluster the correlates of CMSE into three categories: teacher-level factors (working experience, constructivist beliefs, teacher stress, job satisfaction, teacher commitment, teacher personality, and teacher burnout), classroom-level factors (classroom climate, classroom management, students' misbehaviour, students' achievement, classroom interaction, and student-teacher relationship), and school-level factors (principal leadership and school culture). The results of this meta-analysis show small to large correlations between these 15 factors with CMSE. How these factors are associated with teachers' CMSE and recommendations for future CMSE research are discussed.

Eccles, J. S., & Wigfield, A. (2024). **The Development, Testing, and Refinement of Eccles, Wigfield, and Colleagues' Situated Expectancy-Value Model of Achievement Performance and Choice.** *Educational Psychology Review*, 36(2), 51. <https://doi.org/10.1007/s10648-024-09888-9>

To address the seven guiding questions posed for authors of articles in this special issue, we begin by discussing the development (in the late 1970s-early 1980s) of Eccles' expectancy-value theory of achievement choice (EEVT), a theory developed to explain the cultural phenomenon of why girls were less likely to participate in STEM courses and careers. We then discuss how we tested key predictions from the theory, notably how expectancies and values relate to achievement choices and performance and how socialization practices at home and in school influence them. Next, we discuss three main refinements: addressing developmental aspects of the theory, refining construct definitions, and renaming the theory situated expectancy value theory. We discuss reasons for that change, and their implications. To illustrate the theory's practicality, we discuss intervention projects based in the model, and what next steps should be in SEVT-based intervention research. We close with suggestions for future research, emphasizing attaining consensus on how to measure the central constructs, expanding the model to capture better motivation of diverse groups, and the challenges of testing the increasingly complex predictions stemming from the model. Throughout the manuscript, we make suggestions for early career researchers to provide guidance for their own development of theories.

Efklides, A., & Schwartz, B. L. (2024). **Revisiting the Metacognitive and Affective Model of Self-Regulated Learning: Origins, Development, and Future Directions.** *Educational Psychology Review*, 36(2), 61. <https://doi.org/10.1007/s10648-024-09896-9>

Efklides and colleagues developed the Metacognitive and Affective model of Self-Regulated Learning (MASRL) to provide a comprehensive theoretical framework of self-regulated learning (SRL). The distinguishing feature of MASRL is that it stresses metacognitive experiences and other subjective experiences (e.g., motivational, affective) as critical components of SRL. The insights underlying the model are that metacognitive experiences are related to affect, and that metacognition, motivation, and affect interact in SRL rather than function independently. Moreover, the MASRL proposes that SRL takes place at two levels, the Person and the Task X Person levels, with the latter being specific to the learning task and its demands. Although SRL can start with goal setting and planning in a top-down manner, monitoring and control processes at

the Task X Person level provide input for bottom-up SRL. To highlight the theory-building process that led to the MASRL theory, we present questions that inspired its conception, its theoretical underpinnings, and current evidence supporting it. We also discuss the implications of the MASRL theory for understanding SRL in the classroom and for teacher–student interactions. Finally, we discuss open questions and issues that future research on MASRL would address in the context of educational psychology and SRL promotion.

Espinas, D. R., & Chandler, B. W. (2024). **Correlates of K-12 Students' Intertextual Integration**. *Educational Psychology Review*, 36(2), 48. <https://doi.org/10.1007/s10648-024-09889-8>

We conducted a systematic review of research involving K-12 students that examined associations among individual differences factors (e.g., working memory) and intertextual integration. We identified 25 studies published in 23 peer-reviewed journal articles and two dissertations/theses. These examined a wide range of individual difference factors, which we organized into four categories: (a) language and literacy, (b) cognition and metacognition, (c) knowledge and beliefs, and (d) motivation, emotion, and personality. We found large variation in the participants, tasks, and document types, and little systematic replication across studies. Nonetheless, results generally showed that variation in literacy, cognition, metacognition, knowledge, beliefs, and motivation are positively and moderately associated with intertextual integration. We discuss the limitations of this work and offer four recommendations for future research.

Faraci, P., & Malluzzo, G. A. (2024). **Psychometric Properties of Statistics Anxiety Measures: A Systematic Review**. *Educational Psychology Review*, 36(2), 56. <https://doi.org/10.1007/s10648-024-09897-8>

The phenomenon of statistics anxiety, prevalent particularly among students engaged in non-mathematical disciplines such as the social sciences, has been linked to a multitude of detrimental outcomes. Over time, several instruments have been developed to measure this construct; however, a comprehensive analysis of these instruments and an adequate evaluation of their psychometric properties have been conspicuously absent. In an attempt to bridge this gap, we undertook a systematic review in accordance with Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines using PsycINFO, Scopus, Web of Science, MEDLINE, and PubMed. Our focus was on studies that were published in peer-reviewed English journals and reported a self-report measure of statistics anxiety. These included both original developments and further validations. We employed Skinner's three-stage framework to assess the methodological quality of the instruments that were retrieved. Out of the 225 results that our search yielded, a mere 28 satisfied the inclusion criteria. The resulting papers reported on the psychometric properties of eight scales. The identified measures undoubtedly provide the potential of capturing some of the key features of the construct. However, our analyses unveiled certain psychometric limitations. Consequently, we advise researchers to either use the most psychometrically robust measures or conduct additional evaluations to ensure the accuracy of their results.

Guo, J., Marsh, H. W., Parker, P. D., & Hu, X. (2024). **Cross-Cultural Patterns of Gender Differences in STEM: Gender Stratification, Gender Equality and Gender-Equality Paradoxes**. *Educational Psychology Review*, 36(2), 37. <https://doi.org/10.1007/s10648-024-09872-3>

Our study is among the first to provide a comprehensive review of cross-national patterns of gender differences in various STEM-related constructs—achievement, beliefs, attitudes, aspirations, and participation, concerning country-level gender equality. We complement our review with empirical analyses utilizing rigorous methodologies and richer datasets from individual and country levels. Specifically, we examine gender differences in relative strength measures (e.g., strength in science relative to math and reading) and STEM aspirations and graduation, using PISA 2015 and PISA 2018 data from 78 countries/regions (N = 941,475). Our analysis corroborates our literature review, indicating that support for both the gender stratification hypothesis and the gender equality paradox (i.e., whether gender gaps favoring male students are smaller or larger in more gender-equal countries) is generally inconsistent and weak. Various factors contribute to this inconsistency, including specific outlier countries, different years of data collection, diverse data sources, a range of composite and domain-specific measures of gender equality, and statistical models. Our study also introduces a robust statistical model to compare performances in three subjects and evaluate the predictive power of relative strength measures for STEM aspirations at the student level. Our analyses reveal that general academic achievement and math achievement relative to reading are key predictors of STEM aspirations, compared with science achievement relative to math and reading. By juxtaposing both levels of analysis, our findings offer a more nuanced understanding of gender differences in decision-making processes that lead to careers in STEM-related fields.

Ha, H., & Lee, H. S. (2024). **Evaluating the Judgment of Learning: its Limited Impact and the Power of Retrieval on Inductive Learning**. *Educational Psychology Review*, 36(2), 60. <https://doi.org/10.1007/s10648-024-09899-6>

Recent studies suggest that making judgments of learning (JOLs)—self-assessment of current learning status—may not merely be a neutral cognitive process, but can directly improve learning through what is called 'JOL reactivity'. This study investigated whether making JOLs can facilitate the learning of previously studied materials (backward effect) and newly studied materials (forward effect) in inductive learning. We also examined how this effect varies depending on whether a JOL is accompanied by a retrieval attempt. Across three experiments, participants learned about various butterfly species presented in two sections (Sections A and B). Some participants made JOLs between Section A and Section B, while others did not, and then all participants took a final transfer test for both sections. In Experiment 1, merely making JOLs did not facilitate learning compared to restudy control, regardless of whether JOLs afforded covert retrieval (target-absent JOL) or not (target-present JOL). However, in Experiment 2, when participants made JOLs combined with overt retrieval prompts (retrieval practice + JOL), they outperformed the other groups in the final transfer test of Section B, showing the forward effect. Experiment 3 further revealed that the act of making JOLs combined with overt retrieval practice was as effective as (but not more than) retrieval practice without JOLs in promoting new learning. Our findings indicate that conventional forms of JOLs do not appear to enhance inductive learning; rather, they underscore the critical role of retrieval in facilitating inductive learning.

Jin, S. (2024). **Tapping into social media: transforming EFL learners' writing skills and alleviating anxiety through YouTube**. *Education and Information Technologies*, 29(9), 10707-10728. <https://doi.org/10.1007/s10639-023-12252-z>

This study explored the impact of incorporating interactive elements of YouTube, such as commenting and engagement, within social media-integrated writing activities. The aim was to examine how this approach influences the writing anxiety and writing performance of Korean English as a Foreign Language (EFL) learners. The participants, all of whom were first-year students at an intermediate English level, consisted of 115 EFL students. Among them, 58 were assigned to the experimental group, while the remaining 57 were part of the control group. The experimental group actively participated in social media-integrated writing activities that emphasized YouTube commenting and interactive engagement, while the control group engaged in traditional writing activities. Data collection involved pre- and post-writing tasks, accompanied by a pre- and post-questionnaire measuring second language (L2) writing anxiety. The findings revealed that the inclusion of YouTube commenting and interaction within social media-integrated writing activities was considerably more effective than traditional writing activities in reducing writing anxiety and enhancing writing proficiency. Specifically, the experimental group exhibited significant improvements in writing proficiency compared to the control group, and this improvement was observed across multiple dimensions including content, coherence, vocabulary, grammar, and mechanics. Additionally, the experimental group experienced a notable reduction in writing anxiety. These results highlight the importance of integrating interactive elements, such as YouTube commenting and engagement, in EFL writing instruction to alleviate writing anxiety and enhance writing proficiency among EFL learners. Furthermore, this approach offers innovative opportunities for language learning within educational settings.

Kendeou, P. (2024). **A Theory of Knowledge Revision: The Development of the KReC Framework.** *Educational Psychology Review*, 36(2), 44. <https://doi.org/10.1007/s10648-024-09885-y>

In this paper, I discuss the inspiration, development, and further refinement of the Knowledge Revision Components framework (KReC; Kendeou & O'Brien, 2014). In KReC, we theorize about the conditions that facilitate knowledge revision during reading, and thus successful learning in the presence of prior, often incorrect knowledge. I discuss how the inspiration and need for the framework arose, and how a systematic set of experimental studies and a shift in paradigm led to its initial development and further refinement. I also outline several virtues and contributions of this framework to the extant literature. I conclude with future directions for further development and applications of the framework in the current information ecosystem.

Kim, H. J., Park, Y., & Lee, J. (2024). **The Validity of Heart Rate Variability (HRV) in Educational Research and a Synthesis of Recommendations.** *Educational Psychology Review*, 36(2), 42. <https://doi.org/10.1007/s10648-024-09878-x>

This study provides a comprehensive overview of methodological aspects when using heart rate variability (HRV) measures in educational research. Following PRISMA 2020 guidelines, we searched four databases for relevant studies published until March 5, 2024. From the 48 studies reviewed, we extracted data across three analytical categories: (1) area of study interest and participant populations, (2) data collection and analysis methodologies, and (3) the concurrent and predictive validity of HRV measurement for educational research. Study quality was evaluated using QualSyst assessment criteria. Most studies measured stress and enlisted undergraduate students as participants. Data were predominately collected using wearable devices, measuring HRV for durations of less than 30 min, and in varied contexts, including during exams, while learning, and in

experiments. The parameters analyzed varied within both time and frequency domains. HRV data had a moderate level of concurrent validity as a measure of stress in an educational context. The concurrent validity of HRV data for measuring attention remains uncertain with insufficient evidence. Limited correlations appeared between stress and performance. The findings, potentials, and limitations of HRV measures are discussed, and synthesized recommendations for educational research using HRV data are provided.

King, R. B., & Fryer, L. K. (2024). **Hybridizing Motivational Strains: How Integrative Models Are Crucial for Advancing Motivation Science**. *Educational Psychology Review*, 36(2), 38. <https://doi.org/10.1007/s10648-024-09850-9>

This special issue was motivated by the realization that student motivation is inherently complex and no single framework can capture it in its full richness. However, the current zeitgeist in educational psychology seems to explicitly discourage attempts at integration as researchers are incentivized to stay within their own theoretical camps. In this special issue, we asked seven research teams to revisit their theoretical assumptions and cross-fertilize their own theories with other frameworks. We also invited three distinguished luminaries to critique and comment on this undertaking. We highlighted key issues that prevent cross-fertilization of ideas across theoretical borders, surfaced potential dangers associated with naïve integration, and proffered future directions that could nudge motivation science towards a more cumulative and integrative approach.

Lee, J. (2024). **The Roles of Identity-Based Motivation and Perceived Instrumentality for Probationary Students' Positive Self-Beliefs, Self-Regulation, and Performance**. *Research in Higher Education*, 65(4), 655-678. <https://doi.org/10.1007/s11162-024-09800-y>

It is potentially beneficial for all college students to have perspectives on identity and future connections to develop and maintain academic motivation. However, researchers have yet to examine probationary students' identity-based motivation (IBM) and perceived instrumentality (PI), and how those motivational constructs relate to their academic performance. This longitudinal survey study (N = 225) investigated the distinct structure of IBM and PI, as well as their different relationships with positive self-beliefs and self-regulation toward academic performance. The results demonstrate that (a) probationary students' IBM (i.e., important mindset and impossible mindset) and PI are related yet distinct constructs; (b) IBM and PI are associated with positive self-beliefs and self-regulation differently at the present (self-concept and self-efficacy for self-regulated learning) and for the future (persistent academic possible selves); (c) the data support an integrative model including IBM and PI (antecedents), positive self-beliefs and self-regulation (mediators), and expected grades and retention (outcomes). Based on this empirical study, it is vital to understand probationary students' IBM and PI along with positive self-beliefs and self-regulation to promote their academic achievement and retention.

Lee, S.-M., Yang, Z., & Wu, J. G. (2024). **Live, play, and learn: Language learner engagement in the immersive VR environment**. *Education and Information Technologies*, 29(9), 10529-10550. <https://doi.org/10.1007/s10639-023-12215-4>

The use of immersive virtual reality (iVR) technology creates an infinite set of possibilities for language learners both inside and outside the traditional classroom setting. In contributing a deeper understanding of language education with iVR, the present study explored how low-proficiency level English learners perceived iVR and how iVR benefited

language learning. This mixed-method study included qualitative data (screen and in-class recordings, post-interviews) and quantitative data (pre-and posttests, post-surveys). Twenty-five 4th graders in a Korean elementary school participated in this study and the study explored their language learning experiences with an iVR platform, Immerse. Findings showed that the students perceived the activities in iVR as motivating, enjoyable, and useful for learning English. Specifically, the current study investigated students' behavioral, affective, and cognitive engagement. The results showed that the iVR learning environment had a positive impact on students' engagement in all three dimensions. The pre- and post-test results indicated that learning outcomes were significantly enhanced after the iVR sessions. The study suggests pedagogical implications to effectively utilize iVR technology for language learning based on the results.

Liu, Shaohang, Zhao, W., Shanks, D. R., Hu, X., Luo, L., & Yang, C. (2024). **Effects of Test Anxiety on Self-Testing and Learning Performance.** *Educational Psychology Review*, 36(2), 59. <https://doi.org/10.1007/s10648-024-09882-1>

Practice testing (i.e., practice retrieval) has been established as an effective learning strategy. Uncovering potential factors influencing self-testing usage is a prerequisite to promote its practical use. The present study reports five experiments exploring whether test anxiety (TA) and test stake (1) affect self-testing usage (Experiments 1–5) and (2) influence learning performance through their negative effects on self-testing usage (Experiments 1, 4, and 5). Experiment 1 analyzed data from 459 high school students collected via a survey and found both that TA negatively predicted students' daily use of self-testing and that self-testing usage mediated the negative association between TA and academic performance. The negative association between TA and self-testing usage was further replicated in a laboratory experiment (Experiment 2). Another quasi-experiment (Experiment 3) showed that students were less likely to test themselves when preparing for a high-stake than a low-stake exam. Experiment 4 replicated this finding and additionally demonstrated that a high-stake test led to poorer learning via its negative influence on self-testing usage. Experiment 5 demonstrated that a high-stake test provoked high state anxiety, which then induced avoidance of self-testing and ultimately impaired learning. Overall, these findings demonstrate a negative effect of TA on self-testing usage, in turn leading to poor learning. Practical implications are discussed.

Liu, Shiyu, Sui, Y., You, Z., Shi, J., Wang, Z., & Zhong, C. (2024). **Reading better with AR or print picture books? A quasi-experiment on primary school students' reading comprehension, story retelling and reading motivation.** *Education and Information Technologies*, 29(9), 11625-11644. <https://doi.org/10.1007/s10639-023-12231-4>

Augmented reality (AR) technology can enhance picture book reading experience. The present study aimed to explore the influence of reading AR picture books on primary school students' reading comprehension, story retelling, and reading motivation. Eighty second graders, who were from two classes at a rural primary school in a coastal city in East China, were recruited through convenience sampling to participate in this quasi-experimental study. The two classes were randomly assigned to be either the experimental group (AR picture book reading) or control group (print picture book reading), and both groups read three traditional Chinese picture books during reading classes throughout three weeks. T-test analyses revealed that, before the study began, the two groups did not have significant differences in reading comprehension, story

retelling, or reading motivation. However, after the three weeks of instructional intervention, the experimental group significantly outperformed the control group in all three aspects. Furthermore, MANCOVA analysis showed that reading AR picture books was more effective in boosting participants' performance on implicit questions during the reading comprehension tests. They also performed significantly higher on story retelling tests, especially when it came to story structures regarding settings and plots. In addition, AR picture book reading was more conducive to improving participants' level of attention and confidence in reading. This work adds to the ongoing endeavors in incorporating AR picture books into classroom settings, and will inform future development of original Chinese picture books with AR technology.

Liu, Y., Huang, L., & Doleck, T. (2024). **How teachers' self-regulation, emotions, perceptions, and experiences predict their capacities for learning analytics dashboard: A Bayesian approach.** *Education and Information Technologies*, 29(9), 10437-10472. <https://doi.org/10.1007/s10639-023-12163-z>

Learning analytics dashboards (LADs) are emerging tools that convert abstract, complex information with visualizations to facilitate teachers' data-driven pedagogical decision-making. While many LADs have been designed, teachers' capacities for using such LADs are not well articulated in the literature. To fill the gap, this study provided a conceptual definition highlighting data visualization literacy and integrating abilities as two critical components in LAD capacities. Moreover, this study assessed teachers' LAD capacities through a knowledge test and examined the combined effect of teachers' self-regulation, emotions, perceptions of LAD usefulness and ease of use, and online teaching experience on teachers' achievements of the LAD capacity knowledge test. The results of a Bayesian path analysis based on the sample of 150 teachers show that (1) teachers' self-regulation and perceived LAD usefulness were the two main factors that made significant impacts on their LAD capacities, (2) the factors of negative emotions and perceived ease of use had effects on teachers' LAD capacities, but such effects were mediated by self-regulation and perceived usefulness, and (3) online teaching experience had little effect on LAD capacities. This is the first study that conceptually researches teachers' capacities for LAD uses. The findings offer novel perspectives into the complexity of LAD using process and demonstrate the importance of teachers' self-regulation, emotions, and perceptions of usefulness in enhancing teachers' abilities to use LADs for pedagogical decisions and actions.

Mairal-Llebot, M., Liesa-Orús, M., & Latorre-Coscolluela, C. (2024). **Challenges in achieving educational inclusion and development in the digital era: analysis of emotions, barriers and perceived needs.** *Education and Information Technologies*, 29(9), 11421-11443. <https://doi.org/10.1007/s10639-023-12285-4>

Society is currently immersed in a highly digitalised panorama due to Information and Communication Technologies (ICT). The educational process is also in a period of constant technological change and renewal. The transformation of education and methodologies can bring positive benefits for students, but also inequalities. This study aims to analyse the perceptions of families of pupils aged 3–18 on how the use of technology influences their children's education in terms of emotions, barriers and needs. It is also intended to study whether the perceived barriers are determined by the underlying needs of the households and/or the emotions they experience from the use of technological resources. Finally, the consequences of perceived barriers on needs are studied. For this purpose, 720 parents completed an online questionnaire. The application

of the Structural Equation Model reveals that negative emotions have a positive and significant effect on perceived barriers. On the other hand, a positive and significant effect of perceived barriers on expressed needs is found. The results of the research show the inequalities that ICT generate in the school environment, which are determined by the characteristics of the pupils' family context. Knowing about the situations and perceptions of families is a first step towards carrying out actions to break down barriers and meet needs, the ultimate goal of inclusive education.

Marsh, H. W., Guo, J., Pekrun, R., Lüdtke, O., & Núñez-Regueiro, F. (2024). **Cracking Chicken-Egg Conundrums: Juxtaposing Contemporaneous and Lagged Reciprocal Effects Models of Academic Self-Concept and Achievement's Directional Ordering.** *Educational Psychology Review*, 36(2), 53. <https://doi.org/10.1007/s10648-024-09887-w>

Multi-wave-cross-lagged-panel models (CLPMs) of directional ordering are a focus of much controversy in educational psychology and more generally. Extending traditional analyses, methodologists have recently argued for including random intercepts and lag2 effects between non-adjacent waves and giving more attention to controlling covariates. However, the related issues of appropriate time intervals between waves (lag1 intervals across waves) and the possibility of contemporaneous (lag0) effects within each wave are largely unresolved. Although philosophers, theologians, and scientists widely debate sequential (lagged) and simultaneous (lag0) theories of causality, CLPM researchers have mostly ignored contemporaneous effects, arguing causes must precede effects. In a substantive-methodological synergy, we integrated these issues and designed new structural equation models to reanalyze one of the strongest CLPM studies of academic self-concept (ASC) and achievement (five annuals of mathematics data; 3527 secondary school students). A taxonomy of models incorporating various combinations of lag0, lag1, and lag2 effects, random intercepts, and covariates consistently supported a priori reciprocal effect model (REM) predictions—medium or large reciprocal effects of ASC and achievement on each other. Consistent with self-concept theory, effects of ASC on achievement evolved over time (lag1, not lag0 effects), whereas effects of achievement on ASC effects were more contemporaneous (lag0, not lag1 effects). We argue that lag0 effects reflect proximal events occurring subsequent to the previous data wave, suggesting the need for shorter intervals but also leaving open the possibility of contemporaneous effects that are truly instantaneous. We discuss limitations and future directions but also note the broad applicability of our statistical models.

Schewior, L., & Lindner, M. A. (2024). **Revisiting Picture Functions in Multimedia Testing: A Systematic Narrative Review and Taxonomy Extension.** *Educational Psychology Review*, 36(2), 49. <https://doi.org/10.1007/s10648-024-09883-0>

Studies have indicated that pictures in test items can impact item-solving performance, information processing (e.g., time on task) and metacognition as well as test-taking affect and motivation. The present review aims to better organize the existing and somewhat scattered research on multimedia effects in testing and problem solving while considering several potential moderators. We conducted a systematic literature search with liberal study inclusion criteria to cover the still young research field as broadly as possible. Due to the complexity and heterogeneity of the relevant studies, we present empirical findings in a narrative review style. Included studies were classified by four categories, coding the moderating function of the pictures investigated. The evaluation of 62 studies allowed for some tentative main conclusions: Decorative pictures did not

appear to have a meaningful effect on test-taker performance, time on task, test-taking affect, and metacognition. Both representational and organizational pictures tended to increase performance. Representational pictures further seem to enhance test-taker enjoyment and response certainty. Regarding the contradictory effects of informational pictures on performance and time on task that we found across studies, more differentiated research is needed. Conclusions on other potential moderators at the item-level and test-taker level were often not possible due to the sparse data available. Future research should therefore increasingly incorporate potential moderators into experimental designs. Finally, we propose a simplification and extension of the functional picture taxonomy in multimedia testing, resulting in a simple hierarchical approach that incorporates several additional aspects for picture classification beyond its function.

Seufert, T., Hamm, V., Vogt, A., & Riemer, V. (2024). **The Interplay of Cognitive Load, Learners' Resources and Self-regulation.** *Educational Psychology Review*, 36(2), 50. <https://doi.org/10.1007/s10648-024-09890-1>

Self-regulated learning depends on task difficulty and on learners' resources and cognitive load, as described by an inverted U-shaped relationship in Seufert's (2018) model: for easy tasks, resources are high and load is low, so there is no need to regulate, whereas for difficult tasks, load is too high and resources are too low to regulate. Only at moderate task difficulty do learners regulate, as resources and load are in equilibrium. The purpose of this study is to validate this model, i.e., the inverted U-shaped relationship between task difficulty and self-regulatory activities, as well as learner resources and cognitive load as mediators. In the within-subject study, 67 participants reported their cognitive and metacognitive strategy use for four exams of varying difficulty. For each exam task difficulty, cognitive load, and available resources (such as prior knowledge, interest, etc.) were assessed. Multilevel analysis revealed an inverted U-shaped relationship between task difficulty and the use of cognitive strategies. For metacognitive strategies, only a linear relationship was found. Increasing cognitive load mediated these relationship patterns. For learner resources we found a competitive mediation, indicating that further mediators could be relevant. In future investigations a broader range of task difficulty should be examined.

Sidi, Y., & Ackerman, R. (2024). **Opting Out as an Untapped Resource in Instructional Design: Review and Implications.** *Educational Psychology Review*, 36(2), 41. <https://doi.org/10.1007/s10648-024-09879-w>

When faced with challenging thinking tasks accompanied by a feeling of uncertainty, people often prefer to opt out (e.g., replying "I don't know", seeking advice) over giving low-confidence responses. In professions with high-stakes decisions (e.g., judges, medical practitioners), opting out is generally seen as preferable to making unreliable decisions. Contrarily, in educational settings, despite being designed to prepare students for real-life challenges, opting out is often viewed as an indication of low motivation or an avoidance of challenges. Presenting a complementary perspective, metacognitive research dealing with knowledge management and problem-solving shows substantial empirical evidence that both adults and children can use opt-out options to enhance the quality of their responses. Moreover, there are initial signs that strategic opting out can increase the efficiency of self-regulated effort. These opportunities to improve self-regulated learning have yet to be exploited in instructional design. Research guided by Cognitive Load Theory (CLT), which focuses on effort allocation in the face of cognitive challenges, has largely ignored the benefits of opting out as a strategy for improving

effort allocation. The present review summarizes advantages and pitfalls within the current state of knowledge. Furthermore, we propose new avenues of inquiry for examining the impact of incorporating explicit opt-out options in instructional design to support knowledge and skill acquisition. As a novel avenue, we urge educators to develop effective opting-out skills in students to prepare them for real-life challenges.

Skulmowski, A. (2024). **Placebo or Assistant? Generative AI Between Externalization and Anthropomorphization.** *Educational Psychology Review*, 36(2), 58. <https://doi.org/10.1007/s10648-024-09894-x>

Generative AIs have been embraced by learners wishing to offload (parts of) complex tasks. However, recent research suggests that AI users are at risk of failing to correctly monitor the extent of their own contribution when being assisted by an AI. This difficulty in keeping track of the division of labor has been shown to result in placebo and ghostwriter effects. In case of the AI-based placebo effect, users overestimate their ability while or after being assisted by an AI. The ghostwriter effect occurs when AI users do not disclose their AI use despite being aware of the contribution made by an AI. These two troubling effects are discussed in the context of the conflict between cognitive externalization and anthropomorphization. While people tend to offload cognitive load into their environment, they also often perceive technology as human-like. However, despite the natural conversations that can be had with current AIs, the desire to attribute human-like qualities that would require the acknowledgment of AI contributions appears to be lacking. Implications and suggestions on how to improve AI use, for example, by employing embodied AI agents, are discussed.

Smits-van der Nat, M., van der Wilt, F., Meeter, M., & van der Veen, C. (2024). **The Value of Pretend Play for Social Competence in Early Childhood: A Meta-analysis.** *Educational Psychology Review*, 36(2), 46. <https://doi.org/10.1007/s10648-024-09884-z>

According to Vygotsky's cultural-historical activity theory, pretend play can be an important context for the development of children's social competence. The aim of this meta-analysis was to synthesize the current evidence about the relation between pretend play and social competence in early childhood (age 3–8 years). A systematic literature search of PsycINFO, ERIC, and Web of Science identified a total of 34 relevant empirical studies. The included studies were systematically coded and categorized for pretend play and social competence. Overall, the findings of this meta-analysis reveal a positive relation between pretend play and social competence, irrespective of how the latter was measured. The relation between pretend play and social competence was slightly negatively impacted by children's age, suggesting that the relation weakens as children get older. Studies measuring the amount of pretend play found lower correlations between pretend play and social competence than studies measuring the quality of pretend play. Most included studies adopted a cross-sectional design, so claims about causal effects could not be supported. Future research is required to determine the direction of causality and potential mechanisms that may explain the relation between pretend play and social competence.

van den Bogaard, D., Soenens, B., Brenning, K., Flamant, N., & Vansteenkiste, M. (2024). **Can Students Learn to Optimize Their Need-Based Experiences and Mental Health During a Stressful Period? Testing a Need-Crafting Intervention in Higher Education.** *Journal of Happiness Studies*, 25(5), 49. <https://doi.org/10.1007/s10902-024-00761-8>

Abundant research has shown that the support of students' basic needs for autonomy, relatedness, and competence contributes to higher motivation and mental health. Yet, whether students themselves can craft their own need satisfactions and be trained herein has rarely been examined. The findings of the present online intervention study among university students indicates that a brief 7-day training on need crafting during a stressful period suffices to foster greater need satisfaction and well-being, while reducing need frustration and ill-being, with enhanced need crafting accounting for the training benefits. These effects were somewhat stronger for participants who were more actively engaged in the program, but did not depend on participants' type of motivation to initiate the training, the self-chosen pacing of the training or their use of WhatsApp during the training. Yet, more autonomously motivated participants, those using WhatsApp and choosing the fast track were less likely to drop-out of the training. The discussion focuses on the role of need crafting as a pro-active skill that fosters well-being and resilience in students.

van Gog, T., Janssen, E., Lucas, F., & Taheij, M. (2024). **A Motivational Perspective on (Anticipated) Mental Effort Investment: The Biopsychosocial Model of Challenge and Threat.** *Educational Psychology Review*, 36(2), 54. <https://doi.org/10.1007/s10648-024-09861-6>

Research in cognitive load theory is increasingly recognizing the importance of motivational influences on students' (willingness to invest) mental effort, in particular in the context of self-regulated learning. Consequently, next to addressing effects of instructional conditions and contexts on groups of learners, there is a need to start investigating individual differences in motivational variables. We propose here that the biopsychosocial model of challenge and threat may offer a useful model to study the motivational antecedents of (anticipated) mental effort. We also report four experiments as initial tests of these ideas, exploring how feedback valence affects students' challenge/threat experiences, self-efficacy, and mental effort investment. The results showed that negative feedback leads participants to expect that they will have to invest significantly more effort in future problems than positive feedback (Experiments 1, 2, and 3) or no feedback (Experiment 3). Had we not considered the motivational variables in investigating the effect of feedback conditions on effort investment, we would not have known that this effect was fully mediated and thus explained by participants' feelings of self-efficacy (Experiments 1/2) and threat (Experiment 1). We would also have concluded that feedback does not affect the willingness to invest effort in future problems (all four experiments), whereas actually, there were significant indirect effects of feedback on willingness to invest effort via challenge (in Experiments 1/2) and threat (in all experiments). Thus, our findings demonstrate the added value of considering challenge and threat motivational states to explain individual differences in effort investment.

Wan, C. L. J., Cheung, K., Tsang, H., & Yip, T. L. (2024). **Exploring the explanatory variables of peer support: perspectives from direct-entry and transfer students.** *Education and Information Technologies*, 29(9), 11445-11481. <https://doi.org/10.1007/s10639-023-12162-0>

Peers can play an invaluable role in helping a student to learn, and peer support is a means to help collaborative students learn well in teams. Students who communicate well with peers understand multiple points of view, and peer support allows students to achieve a shared goal. In higher education, a student can enroll on an undergraduate program directly after completing high school/secondary school or as a transfer student after finishing an associate degree/a higher diploma. Compared to direct-entry students,

transfer students are believed to have more psychological issues and receive less peer support because they spend less time in university. However, there is a lack of studies to investigate the factors affecting peer support among direct-entry and transfer students in higher education. This article is aimed at addressing this research gap. The online questionnaire survey was conducted in 2018 with 1,819 responses. Through regression analysis, the results indicated that teaching for understanding & encouraging learning, alignment & constructive feedback, deep & organized approach, social connections, and heard of English learning centre are related to peer support. In addition, self-efficacy, generic skills, and general support & advising may help to explain the differences between direct-entry and transfer students. Despite the two different admission pathways, the majority of the explanatory variables of peer support are common and the whole learning experience influences students' perception on peer support. This study suggests strategies and resource allocation to cope with their differences so as to encourage peer support in universities.

Wu, R., & Yu, Z. (2024). **Relationship between university students' personalities and e-learning engagement mediated by achievement emotions and adaptability.** *Education and Information Technologies*, 29(9), 10821-10850. <https://doi.org/10.1007/s10639-023-12222-5>

Since the outbreak of the pandemic, a large number of university students have been required to adapt to e-learning. E-learning engagement, a key indicator of academic success, is thus a great concern of educational partitioners and researchers. Although previous studies have identified various determinants of e-learning engagement, there is a paucity of research that examines the associations between university students' personalities and their engagement in e-learning. Moreover, the mechanisms underlying the personality-engagement relationship are still poorly understood. The present study used the five-factor model of personality as the main theoretical framework to explore how students with different personality traits engaged in e-learning. Additionally, it examined whether achievement emotions and adaptability mediated the personality-engagement relationship in the e-learning context. A sample of 1004 students enrolled at Guizhou University participated in an online survey to collect data for the study. Employing structural equation modeling, the findings unveiled several significant results: (1) extroversion, agreeableness, openness to new experiences, and conscientiousness exhibited positive associations with e-learning engagement, (2) neuroticism demonstrated a negative relationship with e-learning engagement, (3) the mediating effect of enjoyment as an achievement emotion was observed between personality traits (excluding neuroticism) and e-learning engagement, (4) adaptability played a mediating role in the relationship between personality traits (excluding conscientiousness and neuroticism) and e-learning engagement, and (5) the negative achievement emotion of anxiety did not operate as a mediator between personality traits and e-learning engagement. This study enriches the understanding of the relationship between personality and engagement in the emerging field of e-learning. Moreover, it offers a fresh perspective on how to investigate mechanisms underlying the relationship between personality and engagement in the e-learning context. The findings could provide a basis for instructors who wish to deploy emotional and adaptability interventions to increase university students' engagement in e-learning.

Xu, K. M., Coertjens, S., Lespiau, F., Ouweland, K., Korpershoek, H., Paas, F., & Geary, D. C. (2024). **An Evolutionary Approach to Motivation and Learning: Differentiating**

Biologically Primary and Secondary Knowledge. *Educational Psychology Review*, 36(2), 45. <https://doi.org/10.1007/s10648-024-09880-3>

The ubiquity of formal education in modern nations is often accompanied by an assumption that students' motivation for learning is innate and self-sustaining. The latter is true for most children in domains (e.g., language) that are universal and have a deep evolutionary history, but this does not extend to learning in evolutionarily novel domains (e.g., mathematics). Learning in evolutionarily novel domains requires more cognitive effort and thus is less motivating. The current study tested the associated hypothesis that learning will feel easier and more motivating for evolutionarily relevant (e.g., "mother," "food") than evolutionarily novel (e.g., "computer," "gravity") word pairs and that a growth mindset emphasizing the importance of effort in learning might moderate this effect. Specifically, 144 adults were presented with 32 word pairs (half evolutionarily relevant and half evolutionarily novel) and were randomly assigned to a growth mindset or a control condition. Evolutionarily relevant words were better remembered than evolutionarily novel words ($d = 0.65$), and the learning was reported as more enjoyable ($d = 0.49$), more interesting ($d = 0.38$), as well as less difficult ($d = -0.96$) and effortful ($d = -0.78$). Although the growth mindset intervention fostered a mindset belief, compared to the control condition, it did not lead to improved recall performance or changes in motivational beliefs. These results are consistent with the prediction of higher motivation and better learning of evolutionarily relevant words and concepts than for evolutionarily novel words and concepts. Implications for future research and educational practice are discussed.

Yildirim, Y., Alptekin, G., Altinpulluk, H., Kilinc, H., & Yumurtaci, O. (2024). **Loneliness and intrinsic motivation levels of distance learners in virtual environments.** *Education and Information Technologies*, 29(9), 11023-11041. <https://doi.org/10.1007/s10639-023-12274-7>

This study aims to determine the relationship between the loneliness levels and intrinsic motivation levels felt by distance learners in a virtual environment. To this end, predictive design was used as a quantitative research method. The results obtained from 330 distance learner participants revealed a medium level negative statistically significant relationship between the intrinsic motivation levels and loneliness levels of students. Additionally, a medium level positive statistically significant relationship was found between students' intrinsic motivation levels and the sub-factors of virtual socializing and virtual sharing, while a medium level negative statistically significant relationship was found for the virtual seclusion sub-factor. The regression analysis conducted within the study revealed that 48.3% of the intrinsic motivation can be explained by the feeling of virtual loneliness. The analysis shows a medium level negative effect of virtual loneliness on intrinsic motivation. Furthermore, the regression model developed to explain the relationship between intrinsic motivation levels and virtual loneliness sub-factors explained the intrinsic motivation levels by 49.5%. As such, a statistically significant negative effect of the virtual seclusion variable on intrinsic motivation levels of students was observed. A statistically significant positive effect was found for the variables virtual sharing and virtual socializing. The findings of the study led to the conclusion that communication and interaction should be emphasized in order to minimize the feeling of virtual loneliness in learners.

Zhou, S., Slemp, G. R., & Vella-Brodrick, D. A. (2024). **Factors Associated with Teacher Wellbeing: A Meta-Analysis.** *Educational Psychology Review*, 36(2), 63. <https://doi.org/10.1007/s10648-024-09886-x>

Teacher wellbeing has received widespread and increasing global attention over the last decade due to high teacher turnover, growing teacher shortages, and the goal of improving the quality of teaching and student performance. No review has yet sought to undertake a cumulative quantitative assessment of the literature pertaining to teacher wellbeing. Using meta-analysis, we address this gap by systematically examining the relative strength of key antecedents, consequences, and correlates of teacher wellbeing, using the Job Demands-Resources theory as a guide to positioning factors in the nomological network. Following PRISMA guidelines, our systematic search yielded 173 eligible studies for inclusion (N=89,876). Results showed that hope, autonomous motivation, psychological capital and job competencies were the top four strongest positive predictors of overall wellbeing, whereas neuroticism and disengagement coping were the top two strongest negative predictors. Occupational commitment was the strongest positive consequence of overall wellbeing, and turnover intentions were the strongest negative consequence. Burnout and work engagement were the strongest correlates of overall wellbeing. We also found that some effects were moderated by factors such as whether teachers were in-service or pre-service, and the educational setting (e.g., K-12, initial teacher education). Our review provides a useful empirical resource that may help guide practice in terms of how teachers, school leaders, and policy makers can support teacher wellbeing.

Zhu, F., Pi, Z., & Yang, J. (2024). **Unleashing the Power of Positivity: How Positive Instructors Benefit Learning from Instructional Videos — A Meta-analytic Review.** *Educational Psychology Review*, 36(2), 47. <https://doi.org/10.1007/s10648-024-09859-0>

This meta-analysis explores the impact of positive instructors on learning from instructional videos. Both the contagion theory and the cognitive-affective theory of learning with media suggest that positive instructors can facilitate learning. This review analyzed 37 studies reporting various outcomes, including positive emotion, motivation, attention, cognitive load, learning experience, learning satisfaction, self-efficacy, and learning achievement. The overall findings revealed that positive instructors in instructional videos significantly enhanced learners' positive emotion, motivation, learning experience, learning satisfaction, and learning achievement, and encouraged student attention to the instructor. However, no significant effect was found regarding attention paid to visual materials, cognitive load, and self-efficacy. A series of moderating effect analyses were also conducted. The results indicated that the impact of positive instructors is influenced by instructor characteristics and emotional expressions, as well as other factors independent of the instructors. These findings provide systematic evidence and practical insights for the design of effective instructional videos.

Aspects sociaux de l'éducation

Abi Younes, M., Feuilladiu, S., Thuilier, O., & Hache, C. (2024). **Coéducation et classe ouverte : Une étude sur l'implication parentale dans une École Maternelle en REP +.** *Objets frontières et transformations en éducation et formation*. Présenté à Créteil, France. Consulté à l'adresse <https://hal.science/hal-04628821>

Akther, J. (2024). **Educational inequality and emancipation: A Rohingya case study.** *International Review of Education*, 70(3), 397-415. <https://doi.org/10.1007/s11159-023-10056-4>

In 2017, Rohingya people experienced forced migration from their native land of Myanmar to the neighbouring country of Bangladesh. They fled in massive numbers and took shelter in Cox's Bazar where they now live in a diaspora community. The qualitative study presented in this article aimed to illustrate and analyse the contemporary educational situation of the Rohingya community in Bangladesh, in light of Paulo Freire's and Henry A. Giroux's philosophies. Data were collected using document analysis, focus group discussions with 20 Rohingya community members, and in-depth interviews with three development workers, two Rohingya school teachers and a host country representative. Results were analysed and grouped into themes. The education of Rohingya appears to be in preparation for repatriation to their home country; however, the process and timeline remain uncertain. Meanwhile, their movement in Bangladesh is restricted, and they cannot go outside the refugee camps for any education or training purposes. They remain in a "culture of silence", including a lack of acknowledgement of their opinions and voices. Political hegemony, absence of democracy, structural inequality and the language barrier deprive these Rohingya of access to state education and job opportunities. Cooperation between the Bangladeshi government and international non-governmental organisations could help to empower Rohingya people to develop more awareness about the structural oppression and encourage their emancipation through education.

Benveniste, S., Leturcq, M., & Wilner, L. (2024). **Naissances, accumulation de patrimoine et inégalités de genre : Résumé.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 223-224). <https://doi.org/10.4000/11uu1>

Bidart, C., Machut, A., Mercklé, P., & Perdoncin, A. (2024). **Quelles données pour analyser les conséquences sociales de la crise sanitaire de la Covid-19 ? : L'expérience de PanelVico.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 305-315). <https://doi.org/10.4000/11utp>

Buissonnet, A. (2023a). **Impacts liés aux territorialités sur l'éducation : étude comparative territoriale des projets et des choix d'orientation des élèves de 3ème issus du piémont alpin - rural isolé moyenne montagne - urbain défavorisé. Enquête 2018-2022 sur l'académie de Grenoble.** *Journée d'étude - Séminaire Territorialité et éducation.* Présenté à Lyon Université Lyon 2, France. Consulté à l'adresse <https://hal.science/hal-04643867>

A doctoral research was conducted from 2018 to 2022 to shed light on the influence of territorialities in the orientation process of middle school students. Three types of territories are under study: isolated rural mid-mountain - Alpine foothills - disadvantaged urban. Territorialities encompass the symbolic dimension of a territory, its representations, values, and territorial identities shared collectively by its inhabitants. In what ways do territorialities influence students' aspirations? Do they also impact the educational stance and professional actions of educational actors in their guidance for orientation? A quantitative methodology for collecting statistical orientation data, supplemented by qualitative interviews and ethnographic observation in each research field, identifies a strong territorial anchoring, both from students and their parents, in the orientation process.

Buissonnet, A. (2023b). **Influence des territorialités dans l'accompagnement pédagogique à l'orientation scolaire des élèves de 3ème**. *10ème colloque international en éducation - CRIFPE*. Présenté à Montréal (Québec), Canada. Consulté à l'adresse <https://hal.science/hal-04644623>

The purpose of this communication is to present different territorial contexts impacting the guidance for school orientation of middle school students. How do territories and their territorialities influence the orientation process from the perspective of professionals? Within a territorial comparative study of 9 schools, 90 qualitative interviews were conducted with educational teams and 100 biographical interviews with students (with an equal distribution of boys and girls). An ethnographic observation was carried out in the 9 middle schools. Supporting students and their families in their orientation choices, within the chosen tracks, remains an educational societal issue as it contributes to the emancipation of the individual. The often anxiety-inducing and complex nature of the orientation process leads students to prioritize the choice of a geographically nearby high school over the choice of a track. In the face of this geographical « self-censorship, » territorialities play a role in the actions and stance of orientation professionals, whether working in a village, at the foot, in the heart of the mountain, or in a priority neighborhood of a large city. The factors influencing the construction of students' and parents' projects are impacted by the territorial context, linked to specific pedagogical support.

Buissonnet, A. (2024). **L'influence des territorialités dans les choix d'orientation. Recherche doctorale de comparaison tripartite territoriale du piémont alpin, rural isolé moyenne montagne, urbain défavorisé**. *Séminaire Observatoire Éducation et Territoires*. Présenté à Digne-les-Bains, France. Consulté à l'adresse <https://hal.science/hal-04644689>

A tripartite territorial comparison in the construction of orientation choices for middle school students was conducted. The aim is to shed light on the influence of territorialities in the orientation process, both from the perspective of students and their families, as well as from the perspective of teachers in their pedagogical guidance for orientation. Three territories are under study: Alpine foothills, isolated rural mid-mountain, disadvantaged urban. Within each territory, we investigated three middle schools. Three sports-study boarding schools in the mountainous area, three priority education network schools in the urban area, and three so-called « ordinary » schools in the Alpine foothills. The territorial variable is analyzed to identify a strong territorial anchoring on the part of students and their parents, thus influencing the choices of educational tracks or careers after middle school. This variable is also considered in the educational stance and professional actions of educational actors in their orientation guidance. The methodology is mixed: processing statistical orientation data and a questionnaire, supplemented by qualitative interviews to gain a finer understanding of the orientation process, and ethnographic observation to highlight the territorialities shared by the inhabitants of the surveyed territories.

Cardon, V., Machut, A., & Perdoncin, A. (2024). **Discontinuités professionnelles en contexte de crise. Atouts et limites d'une enquête panélisée sur les effets sociaux de la pandémie de Covid-19**. In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 317-328). <https://doi.org/10.4000/11uuc>

Conde-Ruiz, J. I., Ganuza, J.-J., García, M., & Victoria, C. (2024). **AI and Digital Technology: Gender Gaps in Higher Education** (Working Paper N° 1450). Consulté à

l'adresse [Barcelona School of Economics website: https://econpapers.repec.org/paper/bgewpaper/1450.htm](https://econpapers.repec.org/paper/bgewpaper/1450.htm)

This article examines gender gaps in higher education in Spain from 1985 to 2023 in the context of technological advancements, particularly digitalization and artificial intelligence (AI). We identify significant disparities, with women over represented in health-related fields and underrepresented in STEM disciplines. This imbalance is concerning as STEM fields offer better employment prospects and higher salaries. We analyze university degrees' exposure to technological change through Routine Task Intensity (RTI) and AI exposure indices. Our findings show that women are more enrolled in degrees with high RTI, prone to automation, and less in degrees with high AI exposure, likely to benefit from technological advancements. This suggests technological change could widen existing labor market gender gaps. To address this, we recommend policies to boost female participation in STEM fields and adapt educational curricula to reduce routine tasks and enhance AI complementarities, ensuring equitable labor market outcomes amid technological change.

de Gendre, A., Karbownik, K., Salamanca, N., & Zenou, Y. (2024). **Integrating Minorities in the Classroom: The Role of Students, Parents, and Teachers** (IZA Discussion Paper N° 16969). Consulté à l'adresse Institute of Labor Economics (IZA) website: <https://econpapers.repec.org/paper/izaizadps/dp16969.htm>

We develop a multi-agent model of the education production function where investments of students, parents, and teachers are linked to the presence of minorities in the classroom. We then test the key implications of this model using rich survey data and a mandate to randomly assign students to classrooms. Consistent with our model, we show that exposure to minority peers decreases student effort, parental investments, and teacher engagement and it results in lower student test scores. Observables correlated with minority status explain less than a third of the reduced-form test score effect while over a third can be descriptively attributed to endogenous responses of the agents.

Depléchin, M. (2024). **Égalité et diversité : que raconte le livret scolaire des élèves au Japon ?** *Etudes japonaises*. Consulté à l'adresse <http://interfas.univ-tlse2.fr/etudes-japonaises/198>

Au lendemain de la Seconde Guerre mondiale, le contrôle du ministère de l'Éducation japonais sur les enseignants et le contenu des enseignements trouve à s'exprimer dans le système d'édition et de sélection des manuels scolaires, dans le caractère prescriptif des directives d'enseignement, mais également dans l'instauration d'un livret scolaire qui bride autant qu'il désresponsabilise les enseignants dans l'évaluation des compétences des élèves. Au fil des révisions successives du livret scolaire depuis 1948, cet article propose d'explorer le rôle que joue cet outil pédagogique dans l'entretien de la compétition scolaire entre les élèves ou encore de l'uniformisation des comportements, tout en réinterrogeant la fonction de l'évaluation à travers l'évolution des modalités évaluatives retenues dans le livret jusqu'à aujourd'hui.

Feuilladiou, S. (2024). **L'accès des parents au suivi de la scolarité de leur enfant en collège d'éducation prioritaire : étude de cas.** *Éducation et Sociétés*, 52(2), 155-171. <https://doi.org/10.3917/es.052.0155>

Les relations école-familles dans les quartiers socio-économiquement défavorisés prennent place en France dans les politiques territorialisées de l'éducation prioritaire. Elles s'inscrivent aussi dans l'ambition de démocratisation scolaire portée par les

politiques de l'école inclusive autour de l'impératif d'accessibilité. Or ces relations sont souvent instaurées dans un rapport asymétrique normé, inadéquat à une participation paritaire. À partir d'une enquête exploratoire sur les rencontres école-familles dans un collège en réseau d'éducation prioritaire renforcé, cet article analyse en quoi ces rencontres, en rendant ou non accessibles certaines informations ou certains positionnements, peuvent déployer un accès légitime et émancipateur des parents à la scolarité de leurs enfants et à son suivi.

Gao, X., Luo, J., Chen, H., Zhen, Y., Zhang, J., & Fu, X. (2024). **Alleviating educational inequality in math with the aid of online shadow education— the impact of equal access and equal quality mechanisms.** *Education and Information Technologies*, 29(9), 10571-10593. <https://doi.org/10.1007/s10639-023-12214-5>

This paper aims to investigate whether online private supplementary education, also known as shadow education, can alleviate educational inequality and what types of mechanisms can help alleviate it. We investigate this using an online learning platform dataset (3,603 anonymous students from China) with additional data from multiple sources and employ geospatial analyses to measure students' socioeconomic, regional and rural/urban inequalities. We find that taking part in online education narrows the performance gap in mathematics between privileged and unprivileged students in terms of school status and regional disparity in China. Theoretically, two micro-level mechanisms explain the alleviating differences: 1) equal access mechanism: students from lower city tiers and low-status schools show greater score improvement when having equal access to online education; 2) equal quality mechanism: students from rural regions improve their in-class rankings more substantially if they receive equal quality online education with the same tutoring and learning environment alongside urban students. This study comprehensively looks at the different effects of two mechanisms of online education—equal access and equal quality—for alleviating various types of inequality. Thus we speak to both educational inequality and digital inequality theory, finding that equal access to online education is not enough for rural students, as they also need access to classes of equal educational quality with their urban counterparts.

Guo, J., Marsh, H. W., Parker, P. D., & Hu, X. (2024). **Cross-Cultural Patterns of Gender Differences in STEM: Gender Stratification, Gender Equality and Gender-Equality Paradoxes.** *Educational Psychology Review*, 36(2), 37. <https://doi.org/10.1007/s10648-024-09872-3>

Our study is among the first to provide a comprehensive review of cross-national patterns of gender differences in various STEM-related constructs—achievement, beliefs, attitudes, aspirations, and participation, concerning country-level gender equality. We complement our review with empirical analyses utilizing rigorous methodologies and richer datasets from individual and country levels. Specifically, we examine gender differences in relative strength measures (e.g., strength in science relative to math and reading) and STEM aspirations and graduation, using PISA 2015 and PISA 2018 data from 78 countries/regions (N = 941,475). Our analysis corroborates our literature review, indicating that support for both the gender stratification hypothesis and the gender equality paradox (i.e., whether gender gaps favoring male students are smaller or larger in more gender-equal countries) is generally inconsistent and weak. Various factors contribute to this inconsistency, including specific outlier countries, different years of data collection, diverse data sources, a range of composite and domain-specific measures of gender equality, and statistical models. Our study also introduces a robust statistical

model to compare performances in three subjects and evaluate the predictive power of relative strength measures for STEM aspirations at the student level. Our analyses reveal that general academic achievement and math achievement relative to reading are key predictors of STEM aspirations, compared with science achievement relative to math and reading. By juxtaposing both levels of analysis, our findings offer a more nuanced understanding of gender differences in decision-making processes that lead to careers in STEM-related fields.

Hill, J., & Reimer, T. (2024). **Technology as a tool to address educational inequities: practices implemented during the COVID-19 pandemic that have been sustained.** *Education and Information Technologies*, 29(9), 10879-10898. <https://doi.org/10.1007/s10639-023-12236-z>

The COVID-19 pandemic ushered in a dramatic shift to online learning for K-12 public schools, requiring school districts to address inequities that surfaced in the remote learning model. This paper includes the findings of the second study of a multi-year research project exploring the intersection of technology and educational inequities through the pandemic. As the pandemic waned, practitioners evaluated which practices developed during remote learning should be sustained. Five Minnesota technology directors participated in a focus group to discuss how inequities are being addressed in their schools post-pandemic. Technology directors explained that the pandemic was an opportunity to reimagine schools for the success of all students through an infrastructure that includes actions relative to three domains: effective instruction, school-home partnerships, and law and policy. Further research is recommended, such as broadening the geographical location of participants outside of Minnesota, expanding participants beyond the role of technology director (i.e., students, teachers, parents), and analyzing student enrollment in K-12 online schools through a longitudinal study.

Jeffrey, W., & Gibbs, B. G. (2024). **Unpacking the Gap: Socioeconomic Background and the Stratification of College Applications in the United States.** *Research in Higher Education*, 65(4), 705-731. <https://doi.org/10.1007/s11162-024-09780-z>

While a substantial body of work has shown that higher-SES students tend to apply to more selective colleges than their lower-SES counterparts, we know relatively less about why students differ in their application behavior. In this study, we draw upon a sociological approach to educational stratification to unpack the SES-based gap in college application selectivity. Using data from the High School Longitudinal Study of 2009, we examine the contribution of theoretical factors to the class-based gap in the selectivity of college applications. Namely, from the rational action model we estimate the contribution of performance differentials and choice differentials, while from the status attainment model we look at the level and type of educational expectations as well as the number of applications submitted. Through a series of Heckman selection models, as well as a Blinder-Oaxaca decomposition analysis, we can explain 85% of the gap in college application selectivity between students in the top and bottom SES quintiles. In turn, we estimate that 60% of this explained portion is due to rational action mechanisms such as grades and test scores while 35% is due to status attainment mechanisms. Finally, we reveal that SES moderates the relationship between type of expectations and application selectivity. We find that the payoff to higher expectations (in terms of selective applications) disproportionately accrues to higher-SES students.

Jellab, A. (2024). **La mixité sociale dans les établissements scolaires : une question socialement vive pour l'école et la société à venir.** *Éducation et Sociétés*, 52(2), 173-188. <https://doi.org/10.3917/es.052.0173>

La mixité sociale fait partie de ces thématiques qui émergent ici et là au rythme des débats politiques et sociaux. Elle est souvent présentée comme une modalité particulière visant à réduire les inégalités scolaires. Si des expérimentations ont été tentées en France et dans d'autres pays occidentaux, l'évaluation de leur efficacité ne laisse pas entrevoir de modèle généralisable, mais plutôt des pistes d'action qui tiennent compte des variables locales en présence –par exemple quand l'offre de formation par les établissements privés est plus ou moins importante. L'entre-soi choisi et l'entre-soi subi dessinent les contours des inégalités sociales qui ont des effets sur les devenir socialement différenciés des élèves. Si des expériences nationales et internationales augurent d'évolutions positives, les fortes résistances chez les milieux socialement favorisés et le faible volontarisme politique interrogent fondamentalement sur le type de société qui se dessine.

Kherroubi, M., & Lebon, F. (2024). **Une contribution à l'histoire de la sociologie de l'éducation en France. L'élaboration du concept de forme scolaire de 1961 au début des années 1980.** *Éducation et Sociétés*, 52(2), 189-215. <https://doi.org/10.3917/es.052.0189>

La paternité du concept de forme scolaire revient à Guy Vincent (1933-2017) et à des chercheurs du Groupe de recherche sur la socialisation (GRS, laboratoire qu'il dirigea de sa création, en 1975, jusqu'en 1991). Cet article rend compte de ce travail de conceptualisation sociologique en adoptant une temporalité plus longue. L'approche chronologique commence en 1961, année où Guy Vincent obtient un poste universitaire, amorce une thèse d'État sous la direction de Raymond Aron et est contacté pour participer aux premières enquêtes Éducation de Pierre Bourdieu. Elle s'achève au moment de la reconnaissance de l'intérêt du concept de forme scolaire pour le renouvellement de la sociologie de l'éducation à la suite de la publication de l'ouvrage *L'école primaire en France*, en 1980. Ce concept engage avant tout une idée de l'histoire, du social et une définition de la socialisation. La construction progressive de son originalité est soulignée en examinant en détail des influences intellectuelles nombreuses et cumulatives. Sont examinés aussi ses liens étroits avec l'état des sciences sociales et les débats dans le champ de l'éducation, dont, tout particulièrement, celui autour des théories de la reproduction.

Nakhili, N. (2024). **Entre socialisation à l'individualisation et sélection : expériences de la transition secondaire-supérieur des nouveaux bacheliers généraux.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w2a>

La période récente est marquée par des réformes (ORE et Nouveau Baccalauréat Général) qui ont transformé la transition secondaire-supérieur, introduisant une forme de régulation des flux via la plateforme Parcoursup d'une part, et davantage de flexibilité via une logique d'individualisation des parcours d'autre part. Dans cet article, nous analysons les processus de socialisation à l'individualisation en amont et lors de la transition secondaire-supérieur à l'heure de la mise en place de cette nouvelle organisation. À partir d'une enquête qualitative auprès de 20 bacheliers 2021 nous décrivons la manière dont ils se sont appropriés ces nouvelles règles. In fine, le cadre, les agents et les processus de socialisation mis à jour sont : la déstabilisation de la sociabilité lycéenne, une liberté de choix amenant les lycéens à gérer les incertitudes et à peser ou assumer les conséquences de leurs choix, un accompagnement procédural invitant à la

prudence et à la multiplication des choix d'études supérieures en terminale. Tout cela prépare les lycéens à une expérience de la transition secondaire-supérieur éprouvante, opaque et souvent inégalitaire.

OCDE. (2024). **Shaping students' financial literacy: The role of parents and socio-economic backgrounds**. <https://doi.org/10.1787/c3f3dc74-en>

The results of the PISA 2022 financial literacy assessment show that many 15-year-olds should be better prepared for their financial future, as they are not able to apply their financial knowledge to real-life situations. In every participating country and economy, students from disadvantaged socio-economic backgrounds performed significantly worse than their advantaged peers. PISA data also show that students who discuss money matters with their parents, and those who make autonomous decisions about how to spend their money, achieve higher levels of financial literacy. This PISA in Focus examines the proportion of students who do not achieve baseline financial literacy and explores the links between socio-economic backgrounds, parental interactions and financial literacy performance.

Ouoba, N. E., Loye, A. S., Ouedraogo, E., & Kabore, N. D. (2024). **Équité dans l'éducation en mathématiques en Afrique subsaharienne francophone : quels leviers actionner pour ne laisser aucun enfant pour compte ?** LAKISA. Consulté à l'adresse <https://hal.science/hal-04629699>

Equity in education is at the heart of education systems in both developed and developing countries. In sub-Saharan Africa francophone countries, the quality of mathematical learning is a major issue for many countries, since only 37% of pupils at the end of primary school have the minimum skills required. The aim of this research is to fill the gaps in knowledge about the factors that foster quality and equitable learning in mathematics at the end of primary school in those countries. Improving the quality of mathematics learning at the end of primary school requires identifying the drivers in these countries to inform decision-making and educational policies. To this end, this research identifies the variables in the four dimensions of equity (access to resources, quality of teachers, learning opportunities, family, and personal characteristics of the pupil) that promote high-quality, equitable learning at the end of primary school in those countries. A total of 62,934 pupils at the end of primary school (including 49.1% girls) in 14 countries were considered in the analyses. A logistic regression model and effect size were used to identify variables in the four dimensions of equity that have the greatest effect on mathematical learning at the end of primary school. In the light of these results, proposals are made to ensure quality and equitable education in sub-Saharan Africa francophone countries.

Parry, B. R. (2024). **"We've got a sisterhood ...": Understanding personal and peer empowerment capabilities in the narratives of South African women furthering their education while incarcerated**. *International Review of Education*, 70(3), 417-431. <https://doi.org/10.1007/s11159-023-10051-9>

The empowering effect of higher education in a carceral environment is recognised globally as the most effective rehabilitative tool for reducing reoffence and promoting the reintegration of incarcerated individuals into society. While many researchers from the Global North have studied carceral education and accessibility, few of those studies have focused specifically on incarcerated women's access to higher education. Even fewer have considered this topic within the context of the Global South. This qualitative

exploratory study addresses gaps in the literature by exploring the experiences of seven women who have pursued and completed a higher education degree while incarcerated in South Africa's largest correctional facility. The narrative inquiry highlights how higher education helped these women develop capabilities that went beyond education, improving their personal agency and their ability to support their peers.

Reversé, C., & Ramneehorah, R. (2024). **Crise commune et chemins divergents. Comparaison de la réception des politiques liées à l'absence de diplôme chez des jeunes en QPV urbain et en zone rurale pauvre.** In V. di Paola & C. Guittou (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 199-207). <https://doi.org/10.4000/11uud>

Climat de l'école

Arridiaux, M., Lefebvre-Boccardifucoco, A., Piedfer-Quêney, L., & Roha, M. (2024). **Panorama international sur le bien-être à l'école des élèves et des personnels.** Consulté à l'adresse Cnesco-Cnam website: <https://hal.science/hal-04642074>

Chesné, J.-F., Arridiaux, M., & Piedfer-Quêney, L. (2024). **Conférence de comparaisons internationales du Cnesco sur le bien-être à l'école : Notes des experts.** In *Conférence de comparaisons internationales du Cnesco sur le bien-être à l'école*. Consulté à l'adresse <https://hal.science/hal-04634003>

Cottez, R. (2024, mai 16). **La violence d'élève à l'école : Quels effets sur le bien-être des enseignants ?** Présenté à Printemps de la Recherche en Éducation 2024 : « Bien-être à l'école : quels enjeux de formation ? ». Consulté à l'adresse <https://u-bourgogne.hal.science/hal-04623803>

Ce poster scientifique s'appuie sur des données de notre travail de thèse qui étudie les phénomènes de violence d'élève à l'école primaire française. Il a fait l'objet d'une communication dans le cadre du Printemps des INSPE 2024 à Amiens dont le thème était le bien-être à l'école. Le poster se propose d'interroger l'effet des violences d'élèves sur le bien-être des enseignants. Les enquêtes internationales montrent l'importance du bien-être des professeurs qui a une incidence sur les résultats scolaires et le bien-être de leurs élèves (OCDE, 2019). Dans le même temps, elles révèlent pour la France une dégradation du climat scolaire (Bernigole et al., 2023), ce que confirment des enquêtes nationales qui pointent une hausse des situations conflictuelles à l'école, mettant les enseignants en difficulté (Debarbieux & Moignard, 2023). Ces derniers se sentent peu armés face à la grande difficulté comportementale (Charpentier et al., 2021) et expriment un besoin de ressources et de formation sur les questions de santé au travail (Vercambre-Jacquot et al., 2023). Nous formulons l'hypothèse que cette difficulté professionnelle contribue à une désaffection pour le métier qui se traduit notamment par une augmentation des démissions (Garcia, 2023) et une perte d'attractivité (Farges & Szerdahelyi, 2024). Nous nous demandons ainsi dans quelle mesure la formation des enseignants peut contribuer à améliorer leur bien-être au travail. Notre enquête sociologique, mêlant analyse du prescrit, observations d'écoles et entretiens avec des enseignants, fournit quelques éléments de réponse. Les ressources institutionnelles sur le thème de la santé au travail sont principalement axées sur le traitement individuel de la souffrance des professeurs, au détriment de la prévention des risques psychosociaux et d'une interrogation collective sur les conditions de travail et l'organisation du service. En

particulier, les enseignants interrogés expriment une source majeure de souffrance dans l'exercice de leur profession, à travers la difficile gestion des comportements d'élèves perçus comme « perturbateurs ». Ils regrettent un manque de ressources institutionnelles pour les accompagner dans cette tâche, se sentant impuissant à aider les élèves en question, à garantir la sécurité de tous, et à mener à bien le mandat qui leur a été confié et qui constitue toujours selon eux le cœur de leur métier : assurer l'apprentissage des élèves. Du point de vue de la formation des enseignants, il paraît ainsi important de documenter les comportements d'élèves pour mieux réfléchir aux postures professionnelles à adopter, notamment une gestion émotionnelle qui apparaît comme cruciale à la fois pour la régulation des comportements d'élèves et la prévention des affections psychosociales du professeur. Enfin, les enseignants expriment une méconnaissance de certains des droits et règlements qui encadrent leur activité professionnelle, notamment la procédure d'accident de service et le fonctionnement des instances compétentes en matière de santé, sécurité et conditions de travail, qui constituent pourtant des ressources pour aider les enseignants et les équipes rencontrant de telles difficultés, et pourraient donc à ce titre devenir des objets explicites et systématiques de formation.

Dugas, É., Ferréol, G., & Normand, R. (2024). **Bien-être à l'école : comment les écoles et les établissements scolaires peuvent-ils favoriser le bien-être de leurs élèves et de leurs personnels ?** Consulté à l'adresse Cnesco-Cnam website: <https://hal.science/hal-04642053>

Jacquin, J. (2024). **Innovations et expérimentations destinées à favoriser le bien-être des élèves et des enseignants dans les établissements scolaires : revue de question internationale.** Consulté à l'adresse Cnesco-Cnam website: <https://hal.science/hal-04642065>

Marande, G., Garcia Bacete, F. J., & Muñoz Tinoco, V. (2024). **Une intervention curriculaire pour combattre le rejet par les pairs en école primaire en Espagne.** Consulté à l'adresse Cnesco-Cnam website: <https://hal.science/hal-04641956>

Cette étude de cas traite d'un programme d'intervention contre le rejet par les pairs en école primaire, mis en œuvre en Espagne pendant quatre ans et suivi sur deux ans. L'équipe de recherche a examiné la qualité des relations entre élèves dans les écoles primaires en soulignant la nécessité d'un apprentissage socio-émotionnel curriculaire. Les approches et principes utilisés pour l'élaboration et la mise en œuvre du programme d'intervention sont décrites, mettant l'accent sur la position centrale du professeur pour réaliser une mise en œuvre de qualité. Cette contribution présente des résultats en tenant compte des difficultés rencontrées.

Ramos, M. (2024). **Le bien-être à l'école : état des lieux national.** Consulté à l'adresse <https://hal.science/hal-04634862>

Traore, B. (2024a). **2,2 % des lycéens déclarent cinq violences ou plus de façon répétée.** *Note d'Information*, (24.26), 1-4. Consulté à l'adresse <https://www.education.gouv.fr/22-des-lyceens-declarent-cinq-violences-ou-plus-de-facon-repetee-414660>

Résultats de l'enquête nationale de climat scolaire et de victimation auprès des lycéens pour l'année scolaire 2022-2023.

Traore, B. (2024b). **91 % des élèves déclarent se sentir « bien » ou « tout à fait bien » dans leur lycée Résultats de l'enquête nationale de climat scolaire et de victimation auprès des lycéens pour l'année scolaire 2022-2023.** *Note d'Information*, (24.25), 1-4. Consulté à l'adresse <https://www.education.gouv.fr/91-des-eleves-declarent-se-sentir-bien-ou-tout-fait-bien-dans-leur-lycee-resultats-de-l-enquete-414652>

En 2022-2023, 91 % des lycéens déclarent se sentir « bien » ou « tout à fait bien » dans leur établissement scolaire.

Wang, L. (2024). **La construction institutionnelle d'un environnement scolaire pour le bien-être des enseignants et des élèves : le cas de la Chine** (Cnesco-Cnam, Éd.). Consulté à l'adresse <https://hal.science/hal-04634019>

Évaluation des dispositifs d'éducation-formation

Perret, C., & Villeneuve, E. (2024). **Les défis de la méta-analyse pour produire des conclusions générales sur les dispositifs d'aide à la réussite dans l'enseignement supérieur.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w1z>

Face à la multiplication des dispositifs visant l'amélioration de la réussite des étudiants du 1er cycle de l'enseignement supérieur, les travaux de recherche en sciences de l'éducation et de la formation se sont multipliés. Toutefois, il reste difficile d'avoir une vue globale des effets de ces dispositifs : qu'impactent-ils ? dans quelles mesures ? sous quelles conditions ? Dans cet article, nous discutons de l'intérêt de la méta-analyse pour répondre à ces interrogations. Très répandue dans la recherche médicale, cette méthode consiste à ré-exploiter des données de recherches antérieures afin d'en proposer une revue critique ainsi qu'une combinaison évaluative pour identifier une tendance centrale. Dans le domaine des sciences de l'éducation et de la formation, il s'agit d'une méthode encore peu mobilisée. Elle possède pourtant de nombreuses forces tout en n'étant pas exempte de limites (hétérogénéité des données mobilisées, qualité méthodologique des études...). Si la mise en œuvre d'une telle méthode nécessite de déterminer des critères d'inclusion sur les études primaires mobilisées, elle suppose de surcroît la nécessité d'une forte définition de l'objet étudié, c'est-à-dire les dispositifs, leurs effets et les contextes dans lesquels ils sont déployés. En donnant à voir la pluralité des définitions possibles, des effets et des contextes dans lesquels ces dispositifs sont déployés, cet article propose une réflexion de nature méthodologique pour la mise en œuvre de futurs programmes de recherche mobilisant la méta-analyse pour étudier les dispositifs d'aide à la réussite étudiante.

Formation continue

Abriac, D. (2024). **La validation des acquis de l'expérience : 251 000 diplômes délivrés en vingt ans.** *Note d'Information*, (24.27), 1-4. <https://doi.org/10.48464/ni-24-27>

L'année 2022 marque les vingt ans du lancement de la validation des acquis de l'expérience (VAE), qui aura permis la délivrance de 251 000 diplômes.

Granato, M., Beckmann, J., & Athanasiadi, E. (2024). **Est-ce que les ambassadeurs de formation en alternance peuvent contribuer à réduire les tensions dans les professions STIM sur le marché des places d'apprentissage en Allemagne ? : Premiers**

résultats d'une étude longitudinale. Résumé. In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal*, 24-25 juin 2024, Aix-en-Provence (p. 301-302). <https://doi.org/10.4000/11uut>

Regmi, K. D. (2024). **The rise of learning technology in an unequal world: potentials and limitations in enhancing lifelong learning.** *International Review of Education*, 70(3), 433-452. <https://doi.org/10.1007/s11159-023-10058-2>

Even though technologies have always been useful for promoting lifelong learning, in recent decades, the use of generative Artificial Intelligence like ChatGPT has come to radically influence the way we perceive learning, learner and educator. Technology positivists assume that newer technologies will enhance lifelong learning whereas its critics argue that the learning gap that currently exists will widen further because, given the existing global inequalities, its benefits will continue to be disproportionate. Nested in an unequal history of technological innovation, this paper investigates the potentials and limitations of learning technologies in enhancing lifelong learning. The paper argues that digital inequality, artificial community, and epistemic exclusion are three major limitations of learning technologies; therefore, they have almost no resonance with life-wide and life-deep approaches to lifelong learning. The findings are crucial for setting post-2030 global goals on education.

Roquet, P., & Boutinet, J.-P. (2024). **Note de synthèse : Les dynamiques temporelles présentes dans les formations tout au long de la vie.** *Savoirs : Revue internationale de recherches en éducation et formation des adultes*, (65). Consulté à l'adresse <https://hal.science/hal-04644876>

The current variety of adult training actions being part of the lifelong learning system requires societal reflection on the different temporal dynamics that underlie them and give them meaning. These dynamics in their diversity but also their singularity constitute one of the essential parameters for determining the relevance of a training course and its capacity to cooperate with the ambient temporalities. Starting from the temporal issues of two notable pioneers in the sciences of education and training, J. Ardoino and G. Pineau, two ways of problematizing time in training have been identified which both highlight paradoxical temporalities that need to cohabit. There are seven typical figures of these paradoxical temporalities which have been noted in the scientific literature, mainly French speaking, highlighted in the rest of the review, opening on perspectives for plural paths in the training approaches and of adult learning.

von der Bank, F., Pilz, M., & Venkatram, R. (2024). **Farming is charming: Informal learning of farmers in Coimbatore, Tamil Nadu, India.** *International Review of Education*, 70(3), 497-518. <https://doi.org/10.1007/s11159-023-10049-3>

The agricultural sector in India has come to prominence as a source of employment and livelihood. It is one of the most significant informal sectors in the country, and one in which informal learning plays a major role. This article analyses the informal learning of farmers in Coimbatore, Tamil Nadu, India. In the course of this research, qualitative interviews with 34 farmers in Coimbatore were conducted and analysed with regard to informal learning. The findings show that informal learning is lifelong and chiefly takes place at home in a family and peer group context. Informal learning is facilitated by training courses specifically adapted to farmers' needs, which can help them improve their situation on their respective farms. However, not every farmer attends these courses, indicating a need to strengthen the programmes, conduct information campaigns to

raise awareness, and improve accessibility, especially for farmers and agricultural labourers.

Marché du travail

Bonnard, C., Danner, M., & Olympio, N. (2024). **Orientation et conditions d'emploi des diplômés de l'enseignement professionnel : questionner l'inadéquation horizontale : Résumé.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 287-288). <https://doi.org/10.4000/11uu7>

Guitton, C. (2024). **Genèse et formalisations contemporaines de l'injonction au travail : Une mise en perspective historique à partir d'une analyse longitudinale du rapport social au travail dans les politiques du droit.** In V. di Paola (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 253-260). <https://doi.org/10.4000/11uu5>

Hetmańczyk, P. (2024). **Digitalization and its impact on labour market and education. Selected aspects.** *Education and Information Technologies*, 29(9), 11119-11134. <https://doi.org/10.1007/s10639-023-12203-8>

The main purpose of the article is to demonstrate the need for multidimensional professional training of employees for challenges related to the rapidly-developing digitalization, which consequently translate into the competitiveness of the economy. The theses presented in the article have been verified using: literature review, critical literature analysis, document research and comparative analysis. Based on this article, we can discuss a future in which man and the surrounding reality will depend on the rapidly-developing digitalization. This phenomenon may lead to a fading of the known world and the transition to a new one defined by technologies based on the flow of data and its analysis. However, knowledge will still remain important for such a change. It seems that the ongoing education system should be better connected with competencies allowing for changes that are taking place in the economic environment. The article demonstrates the importance of knowledge and provides an opportunity to exchange ideas in the vigorously-developing digitalization. Through the knowledge presented in the article, it can be concluded that the digitalization of the education system and labour market means revolutionary changes, incomparable with the objectives and scope of the existing measures.

Issehnane, S., Merchaoui, W., & Fares, R. (2024). **Discontinuité de l'emploi et réforme de l'assurance chômage : quels effets sur le revenu et le retour à l'emploi des demandeurs d'emploi ? : Résumé.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 251-252). <https://doi.org/10.4000/11usw>

Kamionka, T., & Leveneur, P. (2024). **The dynamics of interactions between work and health: from theory to empirics : Résumé.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence*. <https://doi.org/10.4000/11uu7>

Kayser, L., & Rousset, C. (2024). **L'hôtellerie-restauration à l'épreuve de la crise sanitaire : quelle approche longitudinale des recompositions de l'emploi dans un secteur ?** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 107-122). <https://doi.org/10.4000/11uu6>

Matus, M. (2024). **Liens entre chômage et reconversion : complémentarités, apports et limites d'une triangulation des sources et méthodes.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 61-70). <https://doi.org/10.4000/11uub>

Romanens, M. (2024). **Parcours d'apprenties du dispositif dual suisse : santé et souffrances au travail.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 289-299). <https://doi.org/10.4000/11uui>

Tremblay, D.-G. (2024). **Les perceptions des employeurs et les mesures mises en place pour une meilleure rétention de la main-d'œuvre d'expérience au Québec.** *Revue Interventions économiques. Papers in Political Economy*, (71). <https://doi.org/10.4000/11qw9>

Étant donné la rareté de main-d'œuvre observée dans plusieurs secteurs au Québec, les organisations souhaitent identifier les obstacles au maintien et au retour en emploi et les mesures qui pourraient favoriser une meilleure participation au marché du travail de la main-d'œuvre d'expérience. Nombre de personnes souhaitent aussi rester sur le marché du travail mais se voient confrontées à des obstacles. Pour ce faire, nous avons mené deux enquêtes, l'une auprès de la main-d'œuvre et l'autre auprès des employeurs afin de connaître leurs perceptions des obstacles et des mesures ou politiques qui pourraient favoriser le maintien en emploi. Certains obstacles peuvent difficilement être contournés (problèmes personnels ou de santé) mais d'autres pourraient être abordés : surcharge de travail et fatigue, charge de travail mentale ou physique, absence ou faiblesse de la formation après 50 et 60 ans, reconnaissance de l'expérience ou rémunération insuffisante. Sur le plan des mesures publiques, outre une amélioration de la fiscalité, d'autres options pourraient être considérées, comme un soutien financier ou un service-conseil pour l'embauche de travailleurs d'expérience, une banque de candidatures disponibles, ou encore la mise en place de programmes permettant d'aider les organisations à développer des mesures innovantes en matière d'aménagement du temps de travail.

Vega, P., & Dumas, A. (2024). **L'impact du Covid-19 sur les inégalités femmes-hommes sur le marché du travail : une approche par les mesures d'efficience : Résumé.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 329-330). <https://doi.org/10.4000/11uun>

Métiers de l'éducation

Bradwell, M., & Bending, H. (2024). **"I'm just a TA"; From mixing paints to managing safeguarding and class teaching: An exploration of teaching assistant's perceptions and**

roles in school. *Management in Education*, 38(3), 120-124.
<https://doi.org/10.1177/08920206211057344>

This small-scale piece of research listened to the stories, experiences and perceptions of teaching assistants to hear their lived experiences of the role of teaching assistant. To hear how expectations have altered with/without legislative and framework guidance and consideration of the individuals who take up teaching assistant roles, in a climate where there is a succinct lack of legal requirement for any training or qualifications to be undertaken prior to or during the job role. The findings indicated that there appears to be an ethos within primary educational settings that teaching assistants can 'do it all' at 'all times', that there is a lack of clarity in role and responsibilities across the 'unqualified staff', and furthermore that they self-position as "Just a TA".

Corral-Granados, A., Rogers, C., & Kruse, F. (2024). **The forgotten ECEC staff working with birth-to-3-year-olds: The imbalances between the workforce policies and ECEC staff employment conditions in Spain.** *Management in Education*, 38(3), 125-137.
<https://doi.org/10.1177/08920206211057979>

In response to an international focus on Early Childhood Education and Care (ECEC), Spanish scholars have recently started to explore the participation of early years practitioners in their educational organisations and their views on working conditions. However, a comprehensive review of the current challenges experienced by the Under 3s early years educators and the examination of the imbalances in workforce policy and working conditions on literature, has thus far not been conducted. Three themes are identified related to the professional developmental path within the school settings that the Spanish ECEC educators follow. The first relates to the educators' initial ECEC education and training, who the staff caring for this age group are, and how prepared they are. The second is linked to the ECEC programs available for children from birth until they reach three years, and how and where the inclusive programs are delivered to this age group, as well as the early years educators' working conditions and the impact of the professional roles. Whereas the third relates to in-service professional development derived from interaction and collective learning. The article concludes with suggestions on how the practitioners' professional development could operationalise policy requirements in order to achieve more inclusive and child-centred learning.

Cottez, R. (2024, mai 16). **La violence d'élève à l'école : Quels effets sur le bien-être des enseignants ?** Présenté à Printemps de la Recherche en Éducation 2024 : « Bien-être à l'école : quels enjeux de formation ? ». Consulté à l'adresse <https://u-bourgogne.hal.science/hal-04623803>

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(Vercambre-Jacquot et al., 2023). Nous formulons l'hypothèse que cette difficulté professionnelle contribue à une désaffection pour le métier qui se traduit notamment par une augmentation des démissions (Garcia, 2023) et une perte d'attractivité (Farges & Szerdahelyi, 2024). Nous nous demandons ainsi dans quelle mesure la formation des enseignants peut contribuer à améliorer leur bien-être au travail. Notre enquête sociologique, mêlant analyse du prescrit, observations d'écoles et entretiens avec des enseignants, fournit quelques éléments de réponse. Les ressources institutionnelles sur le thème de la santé au travail sont principalement axées sur le traitement individuel de la souffrance des professeurs, au détriment de la prévention des risques psychosociaux et d'une interrogation collective sur les conditions de travail et l'organisation du service. En particulier, les enseignants interrogés expriment une source majeure de souffrance dans l'exercice de leur profession, à travers la difficile gestion des comportements d'élèves perçus comme « perturbateurs ». Ils regrettent un manque de ressources institutionnelles pour les accompagner dans cette tâche, se sentant impuissant à aider les élèves en question, à garantir la sécurité de tous, et à mener à bien le mandat qui leur a été confié et qui constitue toujours selon eux le cœur de leur métier : assurer l'apprentissage des élèves. Du point de vue de la formation des enseignants, il paraît ainsi important de documenter les comportements d'élèves pour mieux réfléchir aux postures professionnelles à adopter, notamment une gestion émotionnelle qui apparaît comme cruciale à la fois pour la régulation des comportements d'élèves et la prévention des affections psychosociales du professeur. Enfin, les enseignants expriment une méconnaissance de certains des droits et règlements qui encadrent leur activité professionnelle, notamment la procédure d'accident de service et le fonctionnement des instances compétentes en matière de santé, sécurité et conditions de travail, qui constituent pourtant des ressources pour aider les enseignants et les équipes rencontrant de telles difficultés, et pourraient donc à ce titre devenir des objets explicites et systématiques de formation.

Feuillet, P. (2024). **Les parcours de reconversion professionnelle vers le métier enseignant.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 133-143). <https://doi.org/10.4000/11uus>

Geers, A., Legendre, F., & Pinto, S. (2024). **Opacités et implicites : ce que Parcoursup fait au groupe professionnel des enseignant·es.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w29>

Nous proposons de comprendre les effets des récentes réformes relatives aux parcours d'orientation, dont Parcoursup, sur la division du travail dans le monde scolaire et en particulier sur le groupe professionnel des enseignant·es de lycée. Notre analyse s'appuie sur une recherche socio-ethnographique menée dans un lycée polyvalent. Les prescriptions, multiples et nébuleuses, redéfinissent la license et le mandat (Hughes, 1996) des enseignant·es en élargissant, de manière opaque, leur champ d'action. Ces nouveaux modes de régulation remettent en cause les frontières et les juridictions (Abbott, 2016) de leur travail. Pour éclairer les opacités du dispositif, sans formation et avec peu de recul ils et elles bricolent. Dans ce contexte, leurs engagements varient selon les profils scolaires des élèves et à l'aune de leurs dispositions sociales et professionnelles.

Javier, C. (2024). **Les savoirs professionnels des conseill.e.s principaux/(p)ales d'éducation débutant.e.s construits dans un dispositif de formation en situation de travail, en matière de régulation de l'équipe de vie scolaire.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w2d>

Les savoirs professionnels des conseillers principaux d'éducation débutants (CPES) demeurent une question peu documentée. Aussi, dans cet article, nous souhaitons identifier les savoirs professionnels construits par les CPES en matière de régulation de l'équipe de vie scolaire, lors de leur participation à un dispositif de formation en situation de travail. Le texte présente une partie des résultats d'une recherche-intervention menée dans le cadre de la formation des CPE tuteurs chargés d'accompagner les CPES. Nous exposons tout d'abord les tensions relatives à l'apprentissage de la régulation de l'équipe de vie scolaire pour les CPES. Après avoir précisé l'ancrage dans une approche sociocognitive des apprentissages et explicité la méthodologie de recherche, l'article présente les principaux résultats. Il apparaît que les CPES partagent la conception d'un management basé sur une éthique du care, adossé à une visée participative et formative. Cette orientation des pratiques professionnelles peut être génératrice de tensions.

Zhou, S., Slemp, G. R., & Vella-Brodrick, D. A. (2024). **Factors Associated with Teacher Wellbeing: A Meta-Analysis.** *Educational Psychology Review*, 36(2), 63. <https://doi.org/10.1007/s10648-024-09886-x>

Teacher wellbeing has received widespread and increasing global attention over the last decade due to high teacher turnover, growing teacher shortages, and the goal of improving the quality of teaching and student performance. No review has yet sought to undertake a cumulative quantitative assessment of the literature pertaining to teacher wellbeing. Using meta-analysis, we address this gap by systematically examining the relative strength of key antecedents, consequences, and correlates of teacher wellbeing, using the Job Demands-Resources theory as a guide to positioning factors in the nomological network. Following PRISMA guidelines, our systematic search yielded 173 eligible studies for inclusion (N=89,876). Results showed that hope, autonomous motivation, psychological capital and job competencies were the top four strongest positive predictors of overall wellbeing, whereas neuroticism and disengagement coping were the top two strongest negative predictors. Occupational commitment was the strongest positive consequence of overall wellbeing, and turnover intentions were the strongest negative consequence. Burnout and work engagement were the strongest correlates of overall wellbeing. We also found that some effects were moderated by factors such as whether teachers were in-service or pre-service, and the educational setting (e.g., K-12, initial teacher education). Our review provides a useful empirical resource that may help guide practice in terms of how teachers, school leaders, and policy makers can support teacher wellbeing.

Numérique et éducation

Abbadie, A., Lammoglia, A., Servajean, M., Atemezing, G., & Roussey, C. (2024, juillet). **Usages de l'IAG dans l'enseignement supérieur: Enjeux et perspectives.** In *APIA-2024*. Consulté à l'adresse <https://hal.science/hal-04639471>

Cette communication vise à présenter un exemple de contenu de formation innovant entièrement dédié à la compréhension des outils d'IA et à la proposition de bonnes

pratiques d'usage dans le milieu universitaire que ce soit pour les enseignants ou les étudiants. Le contenu initial, nommé Alvéole, a été produit lors de la conception d'un module de formation en ligne asynchrone totalement inédit dédié à l'IA. Nous parlons ici des Briques en Humanités numériques, un des chantiers du programme ANR Nexus, porté par l'Université Paul Valéry Montpellier 3. Au-delà d'un simple résumé de l'Alvéole "L'IA dans l'enseignement et la pédagogie" notre objectif est ici de communiquer sur les enjeux et les craintes liés au développement d'outils puissants à base d'IA. Notre souhait est d'une part de démystifier l'IA, d'en expliquer les enjeux et les limites et de montrer comment nous appréhendons ces innovations technologiques en termes de pédagogie et de recherche dans le milieu universitaire.

Ahmed, U., Ismail, A. I., Fati, M., & Akour, M. A. (2024). **E-Learning during COVID-19: Understanding the nexus between instructional innovation, E-psychological capital, and online behavioural engagement.** *Management in Education*, 38(3), 107-119. <https://doi.org/10.1177/08920206211053101>

This current study is to empirically validate the importance of student's behavioural engagement on online teaching during a coronavirus-2019 disease pandemic. The global spread of coronavirus-2019 disease has affected every aspect of business, including education, resulting in the shift of classroom to online teaching. Keeping in view the growing concern about students' attentiveness, connectivity, participation, and interaction in online classes, the authors underlined the critical need for paying empirical attention to this issue. While addressing a major empirical gap, the present study tested and found the significant role of e-learning efficacy, e-learning resilience, and teachers' instructional innovation in boosting students' online behavioural engagement. Additionally, the study found a thought-provoking direct and interacting role of teachers' instructional innovation. Therefore, the implications of the findings indicate that leaders in educational institutions need to invest in psychological resources that emphasize innovation and creativity in instructional methods for teachers to enhance student engagement in an online environment.

Ali, N. S. M., Fauzi, M. A., Saidin, N., Nor, N. R. M., Ismail, N. F. S., & Aling, N. A. (2024). **Adoption of e-learning by pre-university students following the COVID-19 pandemic: An analysis based on the unified theory of acceptance and use of technology (UTAUT).** *International Review of Education*, 70(3), 453-475. <https://doi.org/10.1007/s11159-023-10046-6>

The COVID-19 pandemic has had immense consequences for education systems worldwide. Institutions had to quickly switch to remote teaching and learning (RTL) as an alternative delivery mode. The study presented here investigated the implementation of an e-learning system for Malaysian pre-university students. The study employed the unified theory of acceptance and use of technology (UTAUT) to evaluate 503 pre-university students' adoption of e-learning across various states in Malaysia. The analysis was performed through partial least square structural equation modelling (PLS-SEM). The findings show that all UTAUT variables were significant except for effort expectancy and facilitating condition. Platform availability was found to be highly significant to the intention to engage in e-learning. Despite the existence of a large body of research on the experiences of students in higher education during the COVID-19 pandemic, there have been few studies of pre-university students. The authors also discuss theoretical and managerial implications.

Angelini, M. L., Muñiz, R., & Lozano, A. C. (2024). **Virtual simulation in teacher education across borders.** *Education and Information Technologies*, 29(9), 10551-10569. <https://doi.org/10.1007/s10639-023-12244-z>

There is already an abundant literature on the virtues of simulation in education. However, there is also a lack of assessment instruments to determine the impact of virtual simulation and virtual exchange on participants' self-realisation of learning in teacher education. The aim of this study is to identify the variables that best describe students' learning of current educational issues. A questionnaire consisting of Likert-type items was used as a metacognitive assessment tool to provide data for the study. An exploratory longitudinal study was conducted over three years. Data were collected using students' answers to the questionnaire. A convenience sampling procedure was used, with participating students enrolled in the Didactic Resources module of English as a Second Language (ESL) in an Official Master's Degree in Teacher Training in Compulsory Secondary Education and Baccalaureate, Vocational Training, and Language Teaching. The most strongly correlated variables that best explain the dependent variable ("I have gained deeper insights into current educational issues") addressed inclusion, special learning needs, service learning, and simulation through intercultural dialogue. Each of the variables significantly contributes to the estimation of perceived acquisition of insight into current educational issues through virtual simulation.

Ansari, A. N., Ahmad, S., & Bhutta, S. M. (2024). **Mapping the global evidence around the use of ChatGPT in higher education: A systematic scoping review.** *Education and Information Technologies*, 29(9), 11281-11321. <https://doi.org/10.1007/s10639-023-12223-4>

The recent development of AI Chatbot – specifically ChatGPT - has gained dramatic attention from users as evident by ongoing discussion among the education fraternity. We argue that prior to making any conclusion, it is important to understand how ChatGPT is being used in higher education across the globe. This paper makes a significant contribution by systematically reviewing the global literature on the use of ChatGPT in higher education using PRISMA guidelines. We included 69 studies in the analysis based on inclusion and exclusion criteria. We presented the scope of published literature in three aspects: (i) contextual, (ii) methodological, and (iii) disciplinary. Most of the studies have been carried out in HICs (n = 53; 77%) representing the field of higher education (n = 37; 54%) without specifying the discipline, while only a few studies were based on empirical data (n = 19; 27%). The findings based on included studies reveal that ChatGPT serves as a convenient tool to assist teachers, students, and researchers in various tasks. While the specific uses vary, the underlying motivation remains consistent: seeking personal benefits and reducing academic burdens. Teachers use it for personal and professional learning and resource generation while students use it as personal tutors for various learning purposes. However, concerns related to accuracy, reliability, academic integrity, and potential negative effects on cognitive and social development were consistently highlighted in many studies. To address these concerns, we have proposed a comprehensive framework for universities along with directions for future research in higher education as an optimal response.

Babo, R., Fitas, R., & Suhonen, J. (2024). **WebAVALIA: analysis of students' opinions and experiences using an e-assessment tool in collaborative learning.** *Education and Information Technologies*, 29(9), 10677-10705. <https://doi.org/10.1007/s10639-023-12220-7>

The students' assessment regarding collaborative learning and workgroups is being reported as one of the main concerns in higher education. The increased technological

evolution leads to adapting novel self and peer assessment methods to e-assessment. This paper reports the results of a study to evaluate students' opinion about their experience with an e-assessment tool, WebAVALIA, and its assessment criteria. The results indicate that students (N = 359) consider the tool fair, and it increases the productivity regarding work development. Kruskal-Wallis tests show that the students recently considered WebAVALIA fairer and more straightforward. Quickness and anonymity are also identified as tool advantages.

Bano, S., Atif, K., & Mehdi, S. A. (2024). **Systematic review: Potential effectiveness of educational robotics for 21st century skills development in young learners.** *Education and Information Technologies*, 29(9), 11135-11153. <https://doi.org/10.1007/s10639-023-12233-2>

Educational Robotics (ER) is an upcoming trend in education. It has been introduced in classrooms to improve the learning environment. It provides opportunities for young learners by promoting knowledge-building activities. STEM (Science, Technology, Engineering, and Mathematics) education is viewed as a catalyst to ensure a successful future in the context of real-world issues. ER is an innovative tool that can provide a roadmap for quality education. This study aims to investigate "What skill-set does ER (Educational Robotics) develop in young learners?", "How does robotics intervention affect young learners?", and "Whether Educational Robotics (ER) facilitates STEM education?". We systematically reviewed the literature on robotics and the importance of STEM, identifying the role of robotics in both formal and informal elementary and secondary classrooms, after-school programs, and summer camp activities. We used the PRISMA (Preferred Reporting Items for Systematic Review and Meta-Analysis) methodology to analyze 20 relevant articles. We searched articles by using keywords and the snowballing technique. The study of recent applications of ER suggests that it aids in a precise and flexible understanding of STEM concepts.

Bayrambas, F., & Sendurur, E. (2024). **The comparison of two incidental learning scenarios on a digital learning platform from the cognitive load perspective.** *Education and Information Technologies*, 29(9), 11087-11117. <https://doi.org/10.1007/s10639-023-12241-2>

Incidental learning is a type of informal learning occurring consciously with unintentional acts. Within the scope of this study, informal learning on a digital learning platform was examined in the context of cognitive load. The current study investigated the changes in incidental learning within two different scenarios: extraneous irrelevant content (V1) vs. extraneous relevant content (V2) represented in various modalities. Data were collected in a mixed manner using eye-tracker and electroencephalogram devices. Both incidental and actual learning scores of V2 group were higher than the V1 group. For the incidental learning context, visual modality was superior to other modalities, but the dynamic visuals were perceived as disturbing in comparison to static ones. The V1 group had higher number of errors during task engagement. The eye fixation patterns of both groups were similar to each other. Fixation durations on the dynamic visual extraneous content area were recorded the longest among all extraneous content. The V2 group reported higher mental effort. The efficiency metric calculations yielded contradictory findings depending on the cognitive load values obtained from self-ratings vs. cognitive load index (CLI).

Bećirović, S. (2024). **Examining learning management system success: a multiperspective framework.** *Education and Information Technologies*, 29(9), 11675-11699. <https://doi.org/10.1007/s10639-023-12308-0>

This study aims to determine the factors influencing the efficient and successful use of LMS among university-level students. A multiperspective approach was performed using TAM3 and ISS framework to achieve the aforementioned aim. The survey was administered to 371 university students. Structural equation modeling (SEM) has been conducted to test the model. The findings showed that information quality significantly impacts output and system quality, while output quality significantly affects perceived usefulness. However, there was an insignificant relationship between output quality and system quality, information quality and user satisfaction, and information quality and perceived usefulness. Likewise, system quality does not significantly affect perceived usefulness and system success. The test of the structural model demonstrated the negative relationship between user satisfaction and system and output quality and system success. Thus, the success of the LMS system should be enhanced through improvements of the content, system, and output quality, which lead to increased students' satisfaction and perceived usefulness of LMS. This study provides valuable theoretical and practical implications. Given that most previous studies focused on student satisfaction with LMS, this study adds to the literature on LMS system success at the tertiary level of education. Further, the results of this research may contribute to improvements in educational policy, teachers' pre-service and in-service training and practices, and the effectiveness of students' LMS use.

Boltziar, J., & Munkova, D. (2024). **Emergency remote teaching of listening comprehension using YouTube videos with captions.** *Education and Information Technologies*, 29(9), 11367-11383. <https://doi.org/10.1007/s10639-023-12282-7>

Emergency remote teaching of listening comprehension is a challenge requiring rethinking of the delivery methods and use of technologies. The paper presents an approach to teaching listening comprehension remotely to students of translating and interpreting for whom this skill will be crucial in their future profession. The aim of the study was to examine the impact of using YouTube videos with captions in listening comprehension lessons on the students' listening skills and their confidence in foreign language use. A standard questionnaire was used to record their learning experience. In spite of being taught remotely, students improved in listening comprehension and profited from being able to consider their individual needs during listening assignments. They used captions in comprehension difficulties similar to those in real life, such as strong accents, fast speech, and unknown words. Positive correlation was identified between the use of captions and students' performance in listening tests. It appears captions have a potential to help improve in listening, recognizing accents, segmenting connected speech, and acquiring new vocabulary.

Burlinson, D., McQuaigue, M., Goncharow, A., Subramanian, K., Saule, E., Payton, J., & Goolkasian, P. (2024). **BRIDGES: Real world data, assignments and visualizations to engage and motivate CS majors.** *Education and Information Technologies*, 29(9), 10649-10675. <https://doi.org/10.1007/s10639-023-11958-4>

BRIDGES is a software framework for creating engaging assignments for required courses such as data structures and algorithms. It provides students with a simplified API that populates their own data structure implementations with live and real-world data, and provides the ability for students to easily visualize the data structures they create as part

of routine classroom exercises. The objective is to use the infrastructure to promote a better understanding of the data structure and its underlying algorithms. This report describes the BRIDGES infrastructure and provides evaluation data collected over the first five years of the project. In the first 2 years, as we were developing the BRIDGES projects, our focus was on gathering data to assess whether the addition of the BRIDGES exercises had an effect on student retention of core concepts in data structures; and throughout the 5-year duration of the project, student interest and faculty feedback were collected online and anonymously. A mixed method design was used to evaluate the project impact. A quasiexperimental design compared student cohorts who were enrolled in comparable course sections that used BRIDGES with those that did not. Qualitative and quantitative measures were developed and used together with course grades and grade point averages. Interest and relevance in BRIDGES programming assignments was assessed with additional survey data from students and instructors. Results showed that students involved in BRIDGES projects demonstrated larger gains in knowledge of data structures compared to students enrolled in comparable course sections, as well as long-term benefits in their performance in four follow-on required courses. Survey responses indicated that some investment of time was needed to use BRIDGES, but the extra efforts were associated with several notable outcomes. Students and instructors had positive perceptions of the value of engaging in BRIDGES projects. BRIDGES can become a tool to get students more engaged in critical foundational courses, demonstrating relevance and context to today's computational challenges.

Cao, Y. (2024). **Online courses for piano teaching: comparing the effectiveness and impact of modern and traditional methods.** *Education and Information Technologies*, 29(9), 11407-11419. <https://doi.org/10.1007/s10639-023-12283-6>

In recent years, distance education has become very popular around the world. Innovative pedagogical methods and strategies helped to shift full-time education to online learning. The research purpose is to introduce online piano learning, ensure assessment of academic performance and evaluate the respondents' motivation. The experiment involved 40 students from 19 to 25 years. The research was conducted at Harbin Normal University. Before the research, the respondents were divided into control and experimental groups. The first group was trained using the full-time curriculum, and the second group learnt the piano online. The scholars tested academic performance and motivation among the participants. The results suggested that online methods of teaching piano do not differ from face-to-face lessons. The results comparison of the experimental and control groups revealed no significant statistical differences in skills. The only exception was Fluency in Reading Music Notation. In the control group, the test result at the final stage was 85.1 points. In the experimental group, this indicator was 85.9 points. At all research stages, students' motivation was higher in the experimental group than in the control group. The research findings suggested that the online learning strategy was not less effective than face-to-face training and had better parameters. In practice, the technique can be applied in schools and universities focused on musical curricular activities. The proposed method of learning to play the piano is effective for online courses available for everyone.

Cheng, W., Nguyen, P. N. T., & Nguyen, N. D. (2024). **How active/passive social network usage relates to academic performance among high school students in Taiwan.** *Education and Information Technologies*, 29(9), 10805-10820. <https://doi.org/10.1007/s10639-023-12254-x>

This study aimed to explore the effects of active social network usage (ASNU) and passive social network usage (PSNU) on academic performance. Using a survey sample of 621 high school students in Taiwan, the results showed that PSNU did not associate with learning results, whereas ASNU may have its function on students' learning. Specifically, ASNU interacted with PSNU to predict high school students' academic performance. Moreover, ASNU undermined the academic performance of those with high PSNU, but not of those with low or medium PSNU. Additionally, for individuals with high PSNU and high ASNU, their performance mostly suffered. The results supported the work-life conflict theory, revealing that excessive social network sites (SNS) use, especially ASNU, might distract students from studying and, therefore, negatively impact their learning performance. The findings may contribute to the clinical and educational fields regarding adolescents' SNS-using behaviors and psychological development.

Conde-Ruiz, J. I., Ganuza, J.-J., García, M., & Victoria, C. (2024). **AI and Digital Technology: Gender Gaps in Higher Education** (Working Paper N° 1450). Consulté à l'adresse [Barcelona School of Economics website: https://econpapers.repec.org/paper/bgewpaper/1450.htm](https://econpapers.repec.org/paper/bgewpaper/1450.htm)

This article examines gender gaps in higher education in Spain from 1985 to 2023 in the context of technological advancements, particularly digitalization and artificial intelligence (AI). We identify significant disparities, with women over represented in health-related fields and underrepresented in STEM disciplines. This imbalance is concerning as STEM fields offer better employment prospects and higher salaries. We analyze university degrees' exposure to technological change through Routine Task Intensity (RTI) and AI exposure indices. Our findings show that women are more enrolled in degrees with high RTI, prone to automation, and less in degrees with high AI exposure, likely to benefit from technological advancements. This suggests technological change could widen existing labor market gender gaps. To address this, we recommend policies to boost female participation in STEM fields and adapt educational curricula to reduce routine tasks and enhance AI complementarities, ensuring equitable labor market outcomes amid technological change.

El-Hamamsy, L., Monnier, E.-C., Avry, S., Chessel-Lazarotto, F., Liégeois, G., Bruno, B., ... Mondada, F. (2024). **An adapted cascade model to scale primary school digital education curricular reforms and teacher professional development programs.** *Education and Information Technologies*, 29(9), 10391-10436. <https://doi.org/10.1007/s10639-023-12043-6>

Many countries struggle to effectively introduce Digital Education (DE) to all K-12 students as they lack adequately trained teachers. While cascade models of in-service teacher-professional development (PD) can rapidly deploy PD-programs through multiple levels of trainers to reach all teachers, they suffer from many limitations and are often ineffective. We therefore propose an adapted cascade model to deploy a primary school DE teacher-PD program throughout an administrative region. The model relies on teacher-trainers who (i) are active teachers in the region, (ii) have a prolonged trainer-PD with experts who piloted the teacher-PD program to acquire adult-trainer and DE-related competences, and (iii) are supported by the experts throughout the deployment. To validate the deployment model we used data from 14 teacher-trainers, the 700 teachers they trained, and 350 teachers trained by experts. The teacher-trainer findings demonstrate that the adapted cascade model effectively addresses most cascade models' limitations. The teacher-related findings further validate the adapted

cascade model in terms of perception, motivation and adoption which are at least equivalent to those obtained with the experts. To conclude, the adapted cascade model is an effective means of spreading primary school DE PD-programs at a large scale and can be used in other DE reforms.

Gao, C., Li, Z., & Zheng, L. (2024). **Develop and validate a scale to measure primary and secondary teachers' digital teaching competence.** *Education and Information Technologies*, 29(9), 10763-10789. <https://doi.org/10.1007/s10639-023-12228-z>

Teachers' digital teaching competence is a prerequisite for efficient teaching. This study aimed to develop a scale to assess primary and secondary teachers' digital teaching competence (PSTDTC). We analyzed and generalized definitions, models, and frameworks for PSTDTC, proposed a five-dimension model (digital teaching design competence, digital teaching implementation competence, digital teaching evaluation competence, digital teaching responsibility, and digital teaching attitude), and developed a scale. Three specialists and seven in-service teachers tested the content validity of the PSTDTC scale. An exploratory factor analysis (n = 473) revealed a 5-factor structure corresponding to the theoretical model. Confirmatory factor analysis (n = 574) was used to assess the structural validity of the final scale. Other statistical findings indicate that the scale is scientific and reliable. In the study, we also used latent class analysis (LCA) to identify unobserved structures and the subpopulations of teachers. According to the LCA results, three latent classes were obtained, including low-level, intermediate- and high-level digital teaching competence. Through multiple logistic regression, we discovered that urban and secondary teachers are more likely to enter intermediate- and high-level digital teaching competence classes. Therefore, the PSTDTC scale provides educators and researchers an effective diagnostic instrument for evaluating the present state of teachers' digital teaching.

Gao, X., Luo, J., Chen, H., Zhen, Y., Zhang, J., & Fu, X. (2024). **Alleviating educational inequality in math with the aid of online shadow education— the impact of equal access and equal quality mechanisms.** *Education and Information Technologies*, 29(9), 10571-10593. <https://doi.org/10.1007/s10639-023-12214-5>

This paper aims to investigate whether online private supplementary education, also known as shadow education, can alleviate educational inequality and what types of mechanisms can help alleviate it. We investigate this using an online learning platform dataset (3,603 anonymous students from China) with additional data from multiple sources and employ geospatial analyses to measure students' socioeconomic, regional and rural/urban inequalities. We find that taking part in online education narrows the performance gap in mathematics between privileged and unprivileged students in terms of school status and regional disparity in China. Theoretically, two micro-level mechanisms explain the alleviating differences: 1) equal access mechanism: students from lower city tiers and low-status schools show greater score improvement when having equal access to online education; 2) equal quality mechanism: students from rural regions improve their in-class rankings more substantially if they receive equal quality online education with the same tutoring and learning environment alongside urban students. This study comprehensively looks at the different effects of two mechanisms of online education—equal access and equal quality—for alleviating various types of inequality. Thus we speak to both educational inequality and digital inequality theory, finding that equal access to online education is not enough for rural students, as they also need access to classes of equal educational quality with their urban counterparts.

Heine, S., Krepf, M., Jäger-Biela, D. J., Gerhard, K., Stollenwerk, R., & König, J. (2024). **Preservice teachers' professional knowledge for ICT integration in the classroom: Analysing its structure and its link to teacher education.** *Education and Information Technologies*, 29(9), 11043-11075. <https://doi.org/10.1007/s10639-023-12212-7>

As digitalisation is becoming increasingly important in educational settings, teachers' key competencies – in particular, their professional knowledge regarding the integration of information and communication technology (ICT) in the classroom – warrant targeted development. Aside from their general pedagogical knowledge (GPK), teachers' technological pedagogical knowledge (TPK) and technological knowledge (TK) are becoming increasingly necessary for mastering professional teaching-related tasks (as outlined in the well-known technological pedagogical content knowledge (TPACK) model). To date, however, the question of whether these knowledge facets are discrete or interrelated – at least, on the basis of standardised assessments – has remained largely unanswered. In the present study, therefore, a sample of 619 preservice teachers (320 bachelor's and 299 master's students in their second semesters) were considered via an online survey with three different knowledge tests. In this article, we investigate hypotheses concerning the structures of those knowledge facets and further hypothesise that initial teacher education learning opportunities relate to preservice teachers' GPK, TPK, and TK. Our findings reveal that the three knowledge facets can be empirically separated. Master's students outperform bachelor's students in all three tests, however, with effects varying from strong (GPK) to medium (TPK, TK). As expected, pedagogical learning opportunities – surveyed through students' self-reports – directly correlate with GPK. By contrast, technological pedagogical and technological learning opportunities are not correlated with TPK and TK, respectively. We discuss the findings' implications for future initial teacher education design – in particular, the evident need to update the curriculum to meet the needs of the current era of digitalisation.

Hetmańczyk, P. (2024). **Digitalization and its impact on labour market and education. Selected aspects.** *Education and Information Technologies*, 29(9), 11119-11134. <https://doi.org/10.1007/s10639-023-12203-8>

The main purpose of the article is to demonstrate the need for multidimensional professional training of employees for challenges related to the rapidly-developing digitalization, which consequently translate into the competitiveness of the economy. The theses presented in the article have been verified using: literature review, critical literature analysis, document research and comparative analysis. Based on this article, we can discuss a future in which man and the surrounding reality will depend on the rapidly-developing digitalization. This phenomenon may lead to a fading of the known world and the transition to a new one defined by technologies based on the flow of data and its analysis. However, knowledge will still remain important for such a change. It seems that the ongoing education system should be better connected with competencies allowing for changes that are taking place in the economic environment. The article demonstrates the importance of knowledge and provides an opportunity to exchange ideas in the vigorously-developing digitalization. Through the knowledge presented in the article, it can be concluded that the digitalization of the education system and labour market means revolutionary changes, incomparable with the objectives and scope of the existing measures.

Hill, J., & Reimer, T. (2024). **Technology as a tool to address educational inequities: practices implemented during the COVID-19 pandemic that have been sustained.** *Education and Information Technologies*, 29(9), 10879-10898. <https://doi.org/10.1007/s10639-023-12236-z>

The COVID-19 pandemic ushered in a dramatic shift to online learning for K-12 public schools, requiring school districts to address inequities that surfaced in the remote learning model. This paper includes the findings of the second study of a multi-year research project exploring the intersection of technology and educational inequities through the pandemic. As the pandemic waned, practitioners evaluated which practices developed during remote learning should be sustained. Five Minnesota technology directors participated in a focus group to discuss how inequities are being addressed in their schools post-pandemic. Technology directors explained that the pandemic was an opportunity to reimagine schools for the success of all students through an infrastructure that includes actions relative to three domains: effective instruction, school-home partnerships, and law and policy. Further research is recommended, such as broadening the geographical location of participants outside of Minnesota, expanding participants beyond the role of technology director (i.e., students, teachers, parents), and analyzing student enrollment in K-12 online schools through a longitudinal study.

Holubnycha, L., Shchokina, T., & Soroka, N. (2024). **Enseigner et apprendre en présentiel** (C. et R. Étienne, Trad.). *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w1y>

Cet article traite de la forme traditionnelle d'enseignement et d'apprentissage du point de vue de la qualité des apprentissages, en particulier des avantages et des inconvénients de l'enseignement en présentiel par rapport à la formation en ligne. L'objectif est de vérifier si le processus d'enseignement en classe est de meilleure qualité que l'enseignement et l'apprentissage en ligne sur la base d'un cas réel d'enseignement de l'anglais à l'Université nationale de droit Yaroslav Mudryi. Les tâches consistent à découvrir les avantages de l'enseignement en classe par rapport à celui en ligne, à révéler les inconvénients de l'enseignement traditionnel par rapport au format en ligne sur la base d'une expérience d'enseignement réelle et à vérifier si les avantages ou les inconvénients de la formation en classe ont une plus grande influence sur les résultats d'apprentissage des étudiants de niveau licence. Les méthodes de recherches sont empiriques (enquêtes, observations) et théoriques (analyses, synthèses et comparaisons). Les résultats ont mis en évidence les points suivants 1) les avantages de la formation en présentiel sont les suivants : interaction en temps réel, amélioration des compétences sociales, collaboration, organisation, motivation, accessibilité et meilleure évaluation ; 2) les inconvénients de la formation en présentiel ont été révélés : traitement d'une plus petite partie du programme ; problèmes de discipline ; impossibilité d'écouter le matériel de cours à plusieurs reprises si nécessaire ; problèmes d'accès au matériel d'apprentissage à partir d'Internet ; et la tendance de certains étudiants à avoir une barrière psychologique à parler une langue étrangère « en direct » devant d'autres étudiants ; 3) les résultats d'apprentissage des étudiants de niveau licence ont démontré que les étudiants en présentiel obtiennent de moins bons résultats académiques que les étudiants étudiant en ligne. Nous en concluons que les inconvénients de la formation en présentiel déterminent un plus grand effet sur les résultats d'apprentissage des étudiants que les avantages. Afin de déterminer quel format d'enseignement est de meilleure qualité, il est nécessaire de continuer à étudier le problème.

Jin, S. (2024). **Tapping into social media: transforming EFL learners' writing skills and alleviating anxiety through YouTube.** *Education and Information Technologies*, 29(9), 10707-10728. <https://doi.org/10.1007/s10639-023-12252-z>

This study explored the impact of incorporating interactive elements of YouTube, such as commenting and engagement, within social media-integrated writing activities. The aim was to examine how this approach influences the writing anxiety and writing performance of Korean English as a Foreign Language (EFL) learners. The participants, all of whom were first-year students at an intermediate English level, consisted of 115 EFL students. Among them, 58 were assigned to the experimental group, while the remaining 57 were part of the control group. The experimental group actively participated in social media-integrated writing activities that emphasized YouTube commenting and interactive engagement, while the control group engaged in traditional writing activities. Data collection involved pre- and post-writing tasks, accompanied by a pre- and post-questionnaire measuring second language (L2) writing anxiety. The findings revealed that the inclusion of YouTube commenting and interaction within social media-integrated writing activities was considerably more effective than traditional writing activities in reducing writing anxiety and enhancing writing proficiency. Specifically, the experimental group exhibited significant improvements in writing proficiency compared to the control group, and this improvement was observed across multiple dimensions including content, coherence, vocabulary, grammar, and mechanics. Additionally, the experimental group experienced a notable reduction in writing anxiety. These results highlight the importance of integrating interactive elements, such as YouTube commenting and engagement, in EFL writing instruction to alleviate writing anxiety and enhance writing proficiency among EFL learners. Furthermore, this approach offers innovative opportunities for language learning within educational settings.

Kisieleska, J., Millin, P., Rice, N., Pego, J. M., Burr, S., Nowakowski, M., & Gale, T. (2024). **Medical students' perceptions of a novel international adaptive progress test.** *Education and Information Technologies*, 29(9), 11323-11338. <https://doi.org/10.1007/s10639-023-12269-4>

Between 2018–2021, eight European medical schools took part in a study to develop a medical knowledge Online Adaptive International Progress Test. Here we discuss participants' self-perception to evaluate the acceptability of adaptive vs non-adaptive testing. Study participants, students from across Europe at all stages of undergraduate medical education with varying levels of prior experience with progress testing, sat remotely invigilated tests using the online QuizOne® platform. Participants completed online feedback questionnaires on their experiences and perceptions of adaptive and non-adaptive tests. Overall satisfaction with the organisation and delivery of remote online tests was high regardless of previous experience with progress testing, differences in stages, programmes, and to some degree language. In statements probing the appropriateness of the level and the length of testing, differences were observed between adaptive and non-adaptive tests. There was a high level of agreement that the adaptive test was a good measure of personal knowledge and increased participants' motivation for study. Students' self-perception of the assessment is an important factor in evaluation of acceptability of the exam and its further development. In our study, the adaptive test algorithm adjusted the level of difficulty for the individual student in real-time, leading to positive perceptions of the length of the test and promoting students'

engagement. The assessment increases student motivation for learning and in turn, has the potential to improve their performance.

Lee, S.-M., Yang, Z., & Wu, J. G. (2024). **Live, play, and learn: Language learner engagement in the immersive VR environment.** *Education and Information Technologies*, 29(9), 10529-10550. <https://doi.org/10.1007/s10639-023-12215-4>

The use of immersive virtual reality (iVR) technology creates an infinite set of possibilities for language learners both inside and outside the traditional classroom setting. In contributing a deeper understanding of language education with iVR, the present study explored how low-proficiency level English learners perceived iVR and how iVR benefited language learning. This mixed-method study included qualitative data (screen and in-class recordings, post-interviews) and quantitative data (pre-and posttests, post-surveys). Twenty-five 4th graders in a Korean elementary school participated in this study and the study explored their language learning experiences with an iVR platform, Immerse. Findings showed that the students perceived the activities in iVR as motivating, enjoyable, and useful for learning English. Specifically, the current study investigated students' behavioral, affective, and cognitive engagement. The results showed that the iVR learning environment had a positive impact on students' engagement in all three dimensions. The pre- and post-test results indicated that learning outcomes were significantly enhanced after the iVR sessions. The study suggests pedagogical implications to effectively utilize iVR technology for language learning based on the results.

Lee, U., Jung, H., Jeon, Y., Sohn, Y., Hwang, W., Moon, J., & Kim, H. (2024). **Few-shot is enough: exploring ChatGPT prompt engineering method for automatic question generation in english education.** *Education and Information Technologies*, 29(9), 11483-11515. <https://doi.org/10.1007/s10639-023-12249-8>

Through design and development research (DDR), we aimed to create a validated automatic question generation (AQG) system using large language models (LLMs) like ChatGPT, enhanced by prompting engineering techniques. While AQG has become increasingly integral to online learning for its efficiency in generating questions, issues such as inconsistent question quality and the absence of transparent and validated evaluation methods persist. Our research focused on creating a prompt engineering protocol tailored for AQG. This protocol underwent several iterations of refinement and validation to improve its performance. By gathering validation scores and qualitative feedback on the produced questions and the system's framework, we examined the effectiveness of the system. The study findings indicate that our combined use of LLMs and prompt engineering in AQG produces questions with statistically significant validity. Our research further illuminates academic and design considerations for AQG design in English education: (a) certain question types might not be optimal for generation via ChatGPT, (b) ChatGPT sheds light on the potential for collaborative AI-teacher efforts in question generation, especially within English education.

Lei, L. (2024). **The latest technological developments in Chinese music education: Motifs of national musical culture and folklore in modern electronic music.** *Education and Information Technologies*, 29(9), 10595-10610. <https://doi.org/10.1007/s10639-023-12227-0>

The research purpose is to investigate the ways of using new technologies in music education and help scholars analyse the motifs of national music culture and folklore in modern electronic music. The research uses the oscillation coefficient to identify the key

features of electronic music, combined with folk music, the rich melisma and the method of changing the speed of sound. The combination of different sound processing tools and the additional noise is typical for national music. The scholars developed and introduced learning approaches to ensure electronic music making, providing editorial approaches to working on musical compositions and learning the specifics of intonation techniques for compositions. Moreover, the research proposes ways to develop technical skills to create melodies and skills of harmonic instrumentation of music. The utilization of contemporary technologies such as NCH TwelveKeys, Ardour, NanoStudio, and n-Track Studio has facilitated the incorporation of learning mechanisms into the process. Such an approach to teaching influences the creation of high-quality musical compositions from scratch (1.98) and improvised compositions (1.82). The compositions focus on the combination of electronic music with national and folk music elements. The practical research significance is the possibility of improving skills in electronic music making, combining different musical genres and using the possibilities of modern technologies. The research prospects entail the analysis of the quality in the creation of electronic and popular compositions, alongside the exploration of the amalgamation of diverse components from national and folk music traditions.

Li, L., Ma, Z., Fan, L., Lee, S., Yu, H., & Hemphill, L. (2024). **ChatGPT in education: a discourse analysis of worries and concerns on social media.** *Education and Information Technologies*, 29(9), 10729-10762. <https://doi.org/10.1007/s10639-023-12256-9>

The rapid advancements in generative AI models present new opportunities in the education sector. However, it is imperative to acknowledge and address the potential risks and concerns that may arise with their use. We analyzed Twitter data to identify critical concerns related to the use of ChatGPT in education. We employed BERT-based topic modeling to conduct a discourse analysis and social network analysis to identify influential users in the conversation. While Twitter users generally expressed a positive attitude toward using ChatGPT, their concerns converged into five categories: academic integrity, impact on learning outcomes and skill development, limitation of capabilities, policy and social concerns, and workforce challenges. We also found that users from the tech, education, and media fields were often implicated in the conversation, while education and tech individual users led the discussion of concerns. Based on these findings, the study provides several implications for policymakers, tech companies and individuals, educators, and media agencies. In summary, our study underscores the importance of responsible and ethical use of AI in education and highlights the need for collaboration among stakeholders to regulate AI policy.

Li, Z., Chen, H., & Gao, X. (2024). **The influencing factors and predictability of primary school students' learning performance in online supplementary classes.** *Education and Information Technologies*, 29(9), 10995-11021. <https://doi.org/10.1007/s10639-023-12246-x>

Online supplementary education has been prevalent in recent years due to the advent of technology (e.g., live streaming) and the COVID-19 pandemic. However, the performance of students in this mode of education varies greatly, and the underlying reasons are yet to be investigated. This study aims to understand the impact of various factors and giving their quantified importance, including student information, family information, and course information by applying Machine Learning method to one of the world's largest online learning platforms. Big data analysis is employed for this purpose via leveraging the abundance of data generated from online education platforms, providing insights that are not attainable through conventional methods such as panel

surveys or questionnaires used in offline education. The findings indicate that the most significant factor affecting student performance is the disparity in access to educational resources and the socioeconomic status of families. Finally, we predict students' online learning performance by using explainable machine learning with different groups of features. Our results indicate approximately 70% accuracy in predicting students' performance progress.

Liu, S., Sui, Y., You, Z., Shi, J., Wang, Z., & Zhong, C. (2024). **Reading better with AR or print picture books? A quasi-experiment on primary school students' reading comprehension, story retelling and reading motivation.** *Education and Information Technologies*, 29(9), 11625-11644. <https://doi.org/10.1007/s10639-023-12231-4>

Augmented reality (AR) technology can enhance picture book reading experience. The present study aimed to explore the influence of reading AR picture books on primary school students' reading comprehension, story retelling, and reading motivation. Eighty second graders, who were from two classes at a rural primary school in a coastal city in East China, were recruited through convenience sampling to participate in this quasi-experimental study. The two classes were randomly assigned to be either the experimental group (AR picture book reading) or control group (print picture book reading), and both groups read three traditional Chinese picture books during reading classes throughout three weeks. T-test analyses revealed that, before the study began, the two groups did not have significant differences in reading comprehension, story retelling, or reading motivation. However, after the three weeks of instructional intervention, the experimental group significantly outperformed the control group in all three aspects. Furthermore, MANCOVA analysis showed that reading AR picture books was more effective in boosting participants' performance on implicit questions during the reading comprehension tests. They also performed significantly higher on story retelling tests, especially when it came to story structures regarding settings and plots. In addition, AR picture book reading was more conducive to improving participants' level of attention and confidence in reading. This work adds to the ongoing endeavors in incorporating AR picture books into classroom settings, and will inform future development of original Chinese picture books with AR technology.

Liu, Y., Huang, L., & Doleck, T. (2024). **How teachers' self-regulation, emotions, perceptions, and experiences predict their capacities for learning analytics dashboard: A Bayesian approach.** *Education and Information Technologies*, 29(9), 10437-10472. <https://doi.org/10.1007/s10639-023-12163-z>

Learning analytics dashboards (LADs) are emerging tools that convert abstract, complex information with visualizations to facilitate teachers' data-driven pedagogical decision-making. While many LADs have been designed, teachers' capacities for using such LADs are not well articulated in the literature. To fill the gap, this study provided a conceptual definition highlighting data visualization literacy and integrating abilities as two critical components in LAD capacities. Moreover, this study assessed teachers' LAD capacities through a knowledge test and examined the combined effect of teachers' self-regulation, emotions, perceptions of LAD usefulness and ease of use, and online teaching experience on teachers' achievements of the LAD capacity knowledge test. The results of a Bayesian path analysis based on the sample of 150 teachers show that (1) teachers' self-regulation and perceived LAD usefulness were the two main factors that made significant impacts on their LAD capacities, (2) the factors of negative emotions and perceived ease of use had effects on teachers' LAD capacities, but such effects were

mediated by self-regulation and perceived usefulness, and (3) online teaching experience had little effect on LAD capacities. This is the first study that conceptually researches teachers' capacities for LAD uses. The findings offer novel perspectives into the complexity of LAD using process and demonstrate the importance of teachers' self-regulation, emotions, and perceptions of usefulness in enhancing teachers' abilities to use LADs for pedagogical decisions and actions.

Mairal-Llebot, M., Liesa-Orús, M., & Latorre-Coscolluela, C. (2024). **Challenges in achieving educational inclusion and development in the digital era: analysis of emotions, barriers and perceived needs.** *Education and Information Technologies*, 29(9), 11421-11443. <https://doi.org/10.1007/s10639-023-12285-4>

Society is currently immersed in a highly digitalised panorama due to Information and Communication Technologies (ICT). The educational process is also in a period of constant technological change and renewal. The transformation of education and methodologies can bring positive benefits for students, but also inequalities. This study aims to analyse the perceptions of families of pupils aged 3–18 on how the use of technology influences their children's education in terms of emotions, barriers and needs. It is also intended to study whether the perceived barriers are determined by the underlying needs of the households and/or the emotions they experience from the use of technological resources. Finally, the consequences of perceived barriers on needs are studied. For this purpose, 720 parents completed an online questionnaire. The application of the Structural Equation Model reveals that negative emotions have a positive and significant effect on perceived barriers. On the other hand, a positive and significant effect of perceived barriers on expressed needs is found. The results of the research show the inequalities that ICT generate in the school environment, which are determined by the characteristics of the pupils' family context. Knowing about the situations and perceptions of families is a first step towards carrying out actions to break down barriers and meet needs, the ultimate goal of inclusive education.

Martinet, B., Vermeulen, M., Heutte, J., Mandran, N., & Mawas, N. E. (2023). **L'Hybridation : anatomie d'un concept polysémique.** *Sciences et Technologies de l'Information et de la Communication pour l'Education et la Formation*, 30(2), 110-145. <https://doi.org/10.23709/sticef.30.2.5>

Le système de formation de l'enseignement supérieur doit faire face depuis quelques années à un cadre socio-économique en pleine mutation (e.g. massification des étudiants, profils hétérogènes, formation tout au long de la vie, COVID-19). L'une des clefs reposerait sur l'apparition de nouvelles formes d'apprentissage et d'enseignement, issues d'une pédagogie renouvelée soutenue par l'intégration des nouvelles technologies. Plusieurs auteurs s'accordent pour penser que des situations éducatives mixtes combinant des parties distantes et en présentiel sont en mesure de relever ces défis. Les travaux de recherche du collectif Européen « Hy-Sup », ont permis de combler des travaux jusqu'à lors essentiellement descriptifs. Pour autant le concept d'hybridation est polysémique et il semble qu'il n'existe pas encore de consensus. Face à cet état de fait, nous souhaitons dans le cadre de ce travail contribuer à la clarification du concept de « l'hybridation » à travers une analyse approfondie des définitions et des caractéristiques issues de la littérature, dans le but d'en tirer profit du point de vue de l'ingénierie pédagogique. Ce travail de recherche propose ainsi trois contributions, un état de l'art, une définition opérationnelle, ainsi qu'un cadre définitoire pour une ingénierie de l'hybridation. Abstract : For several years now, the higher education training

system has had to face a rapidly changing socio-economic framework (e.g. massification of students, heterogeneous profiles, lifelong training, COVID-19). One of the keys would lie in the appearance of new forms of learning and teaching, resulting from a renewed pedagogy supported by the integration of new technologies. Several authors agree that mixed educational situations combining remote and face-to-face parts are able to address these challenges. The research efforts of the European collective « Hy-Sup » have filled gaps that were previously primarily descriptive. However, the concept of hybridization is polysemous and it seems that there is no consensus yet. Faced with this state of affairs, within the framework of this work, we aim to contribute to the clarification of the concept of "hybridization" through an in-depth analysis of the definitions and characteristics taken from the literature, with the goal of taking advantage of the educational engineering point of view. This research work thus proposes three contributions: a state-of-the-art review, an operational definition, and a defining framework for hybridization engineering.

Mocquet, B. (2024). **Vers une transformation numérique durable dans le Sup'**. *Chaire pluridisciplinaire "Transformation numérique responsable"*. Présenté à Mulhouse, France. Consulté à l'adresse <https://hal.science/hal-04627712>

Le système universitaire public français est aujourd'hui caractérisé par une régulation fréquente (lois, décrets, etc.), une augmentation de l'offre des établissements privés et des répercussions du Covid-19 sur son fonctionnement interne, ce qui le rend en constante évolution. Nos travaux de recherche concernent le numérique universitaire (Mocquet, 2020, 2021, 2022), i.e. les technologies numériques qui sous-tendent le fonctionnement et la gestion de l'enseignement supérieur. C'est un système complexe qui ne cesse de bouger par et avec ses acteurs (usagers comme membre) organisés en rhizome (Mocquet, 2024) et évoluant par des dispositifs financés par appel à projet, comme ce Demoes, qui incite les établissements à opérer voire accélérer ses changements. Transition ? transformation ? Nous concentrerons votre attention sur la clarification de nos rôles en tant que parties prenantes au sein des organisations, en défendant l'hypothèse que seule la transformation est durable, au sens de la Responsabilité Sociétale des Organisations (RSO) publiques, contrairement à la simple transition.

Mouta, A., Torrecilla-Sánchez, E. M., & Pinto-Llorente, A. M. (2024). **Design of a future scenarios toolkit for an ethical implementation of artificial intelligence in education.** *Education and Information Technologies*, 29(9), 10473-10498. <https://doi.org/10.1007/s10639-023-12229-y>

In the 1970s, research on artificial intelligence in education emerged with the aim of acknowledging and accommodating the psychological aspects of the learning process. Since then, its applications have evolved and it is now used for student learning and assessment, teachers' pedagogical practice, management of educational institutions, and lifelong learning. Nevertheless, the ethical challenges of educational programmes using these systems have not been thoroughly studied. Anchored on the theoretical frame of dialogic ethics, this paper presents a section of a participatory futures research project. The goal of the research is to develop a toolkit that educators can use to ensure a smooth and ethical transition to artificial intelligence-based education while preserving the interests of educational development. This paper emphasises the need for an informed and participatory process that involves all stakeholders and begins with an expert consultation through the Delphi method, the results of which allowed the

construction of eight hypothetical futures scenarios. These scenarios provide evidence that examining the ethics of using artificial intelligence systems presents an opportunity to reflect on the ethics of education as a whole. They highlight the challenge of balancing the benefits and drawbacks of such systems, especially concerning educational goals and the interplay between diverse educational actors and personal development in educational settings. The study outcomes are intended to encourage discussions on the integration of ethical artificial intelligence in education and facilitate the continuing professional development of teachers by equipping them with scenarios that can be used as a resource for training purposes.

Mraihi, S. (2024). **Ce que les interactions nous disent sur l'activité de l'enseignant et des étudiants pendant le cours par visioconférence en situation de contrainte.** *Distances et Médiations des Savoirs*, (46). <https://doi.org/10.4000/11vll>

This paper focuses on the analysis of teacher and student activity during the videoconference course which has grown considerably during the COVID-19 health crisis, by taking as object of study the interactions that take place between these two actors. The urgent transition to distance learning has forced teachers and students to adapt their activity to new training modalities. The classroom is transported to the private space or to another professional space such as the office and the teacher and students take part in the course in a virtual space through a screen. Our research aims to understand how teachers and students interact in this new environment. In this paper, we present the theoretical framework that guided our research, we outline our mixed research methodology based on qualitative and quantitative data and finally we share specific elements of our result by focusing on the degree of multimodality of interactions in videoconference course and the effects induced by physical and technical environment.

Ouoba, N. E. (2023). **L'environnement informatique d'apprentissage : un dispositif pour faciliter l'éducation inclusive des élèves avec un trouble des fonctions auditives (TFA)** (Phdthesis, Université de Strasbourg ; Université de Koudougou). Consulté à l'adresse <https://hal.science/tel-04629705>

L'objectif de notre recherche est d'évaluer l'impact des dispositifs informatiques d'apprentissage dans le processus d'éducation inclusive des élèves avec un Trouble des Fonctions Auditives (TFA). Nous avons étudié plus spécifiquement quelques facteurs comportementaux : l'estime de soi, l'autonomie dans l'apprentissage, l'engagement dans la réalisation des activités pédagogiques. Dans une démarche expérimentale, nous avons mis en œuvre un protocole à cas unique qui permet de comparer le sujet à lui-même à travers une mesure répétitive des valeurs avec une observation avant et après l'introduction du dispositif. Plusieurs échelles standardisées et un questionnaire ont été utilisées pour collecter les données durant l'expérimentation. A l'issue des différents traitements des données, les résultats montrent que l'utilisation d'un dispositif informatique d'apprentissage pourrait contribuer à rehausser le niveau d'estime de soi des élèves avec un TFA, augmenter leur engagement dans les activités pédagogiques tout en leur permettant de travailler de façon plus autonome.

Pantoja Yépez, W. L., Hurtado Alegría, J. A., Bandi, A., & Kiwelekar, A. W. (2024). **Training software architects suiting software industry needs: A literature review.** *Education and Information Technologies*, 29(9), 10931-10994. <https://doi.org/10.1007/s10639-023-12149-x>

The ability to define, evaluate, and implement software architectures is a fundamental skill for software engineers. However, teaching software architecture can be challenging as it requires students to be involved in real-context projects with high degrees of complexity. This involves making trade-off decisions among several quality attributes. Furthermore, the academic perception of software architecture differs from the industrial viewpoint. To address this issue, a study was conducted to identify and analyze the strategies, challenges, and course experiences used for teaching software architectures. The study analyzed 56 articles reporting on teaching experiences focused specifically on software architectures or focused on software engineering in general but discussing software architecture. The main contributions of this work include identifying strategies used in educating software architecture students aligned with the needs of the software industry. These strategies include short design projects, large development projects, and projects with actual clients. Additionally, the study compared curriculum contents in software development and architecture courses and identified recurring topics such as architecture patterns, quality attributes, and architectural views. This study also recognizes the set of skills that students of software architecture should develop during training, such as leadership and negotiation. The challenges in software architecture training were discussed, such as instructors' lack of experience in actual projects, the abstract and fuzzy nature of software architectures, and the difficulty of involving clients and industry experts. Evaluation methods commonly used in training software architects, such as surveys, pre-test/post-test, and quality metrics on architectural artifacts, were identified and described. Overall, this study guides researchers and educators in improving their software architecture courses by incorporating strategies reported by the literature review. These strategies can bring architecture courses closer to the needs and conditions of the software industry.

Qu, M. (2024). **Exploring patron behavior in an academic library: A wi-fi-connection data analysis.** *Education and Information Technologies*, 29(9), 11235-11256. <https://doi.org/10.1007/s10639-023-12248-9>

This paper introduces a Patron Counting and Analysis (PCA) system that leverages Wi-Fi-connection data to monitor space utilization and analyze visitor patterns in academic libraries. The PCA system offers real-time crowding information to the public and a comprehensive visitor analysis dashboard for library administrators. The system's development was driven by the need for occupancy restrictions during the pandemic, ensuring a spacious environment for library visitors as well as balancing between efficient utilization and adhering to social distancing regulations. Traditional methods of patron behavior performance and library spatial analysis, such as manual head counting or card-swiping systems, often incur additional costs for labor, hardware installation, or software subscription. The PCA system, however, utilizes existing Wi-Fi-connection data, providing a cost-effective solution to represent patron demographics and spatial usage. Limitations may arise when patrons do not carry Wi-Fi-enabled devices or during periods of low Wi-Fi service functionality. Implemented in Node.js and integrated with Python Flask framework and related libraries, the PCA system was piloted at the King Library in Miami University, successfully demonstrating a high validity compared to manually collected data. It filters out noise and redundancy, visualizes the occupancy index meter in real time, and generates statistical reports by linking user IDs with demographic information. The PCA system's reliability was validated through manually head counting data collected at the King Library in Miami University, establishing it as a reliable tool for library space management and patron analysis.

Regmi, K. D. (2024). **The rise of learning technology in an unequal world: potentials and limitations in enhancing lifelong learning.** *International Review of Education*, 70(3), 433-452. <https://doi.org/10.1007/s11159-023-10058-2>

Even though technologies have always been useful for promoting lifelong learning, in recent decades, the use of generative Artificial Intelligence like ChatGPT has come to radically influence the way we perceive learning, learner and educator. Technology positivists assume that newer technologies will enhance lifelong learning whereas its critics argue that the learning gap that currently exists will widen further because, given the existing global inequalities, its benefits will continue to be disproportionate. Nested in an unequal history of technological innovation, this paper investigates the potentials and limitations of learning technologies in enhancing lifelong learning. The paper argues that digital inequality, artificial community, and epistemic exclusion are three major limitations of learning technologies; therefore, they have almost no resonance with life-wide and life-deep approaches to lifelong learning. The findings are crucial for setting post-2030 global goals on education.

Rodrigues, L., Pereira, F. D., Marinho, M., Macario, V., Bittencourt, I. I., Isotani, S., ... Mello, R. (2024). **Mathematics intelligent tutoring systems with handwritten input: a scoping review.** *Education and Information Technologies*, 29(9), 11183-11209. <https://doi.org/10.1007/s10639-023-12245-y>

Intelligent Tutoring Systems (ITS) have been widely used to enhance math learning, wherein teacher's involvement is prominent to achieve their full potential. Usually, ITSs depend on direct interaction between the students and a computer. Recently, researchers started exploring handwritten input (e.g., from paper sheets) aiming to provide equitable access to ITSs' benefits. However, research on math ITSs ability to handle handwritten input is limited and, to our best knowledge, no study has summarized its state of the art. This article fulfills that gap with a scoping review of handwritten recognition methods, characteristics, and applications of math ITSs compatible with handwritten input. Based on a search of 11 databases, we found eight primary studies that met our criteria. Mainly, we found that all ITSs depend on receiving handwritten input from a touchscreen interface, in contrast to recognizing solutions developed on paper. We also found that most ITSs focus on similar audiences (e.g., English speakers students), subjects (e.g., algebraic questions), and applications (e.g., in-class to understand student perceptions). Thus, towards enabling equitable access to ITSs, we propose ITS Unplugged (i.e., ITSs that i) run on low-cost, resource-restricted devices with little to no internet connection and ii) receive as well as return information in the format target users usually use) and contribute a research agenda concerning challenges of developing such ITSs.

Sanders, D. A., & Mukhari, S. S. (2024). **The perceptions of lecturers about blended learning at a particular higher institution in South Africa.** *Education and Information Technologies*, 29(9), 11517-11532. <https://doi.org/10.1007/s10639-023-12302-6>

The purpose of this research is to analyse the support that lecturers need to be able to implement a blended learning approach successfully. Blended learning is now seen as an approach that can create engaging learning environments, to enhance students' self-directed learning and improve the whole learning experience. The study investigated the perceptions of thirteen lecturers, at a particular higher education institution, regarding the advantages and challenges of blended learning in South Africa. A qualitative research design was chosen for this study because it enabled the authors to

explore the theme in detail. Semi-structured open-ended interviews were conducted to collect the necessary data from the lecturers, who were chosen through the use of homogenous purposeful sampling. The data collected were coded, using the induction method. This helped to reveal relevant codes, which were categorised. A literature review was conducted, in which recent research on this topic was analysed and used to correlate the findings of the field research of this study. This study reports on the actual views and experiences of the participants. The research findings and relevance for teaching in higher education institutions are discussed. The conclusion is that, for such an approach to be successful, lecturers would require support from management, more training, improved professional development, as well as reliable technology and internet connections. In addition, lecturers would require additional time to implement such an approach.

Sarr, E., Estay, C., & Faye, M. (2023). **L'acceptation des systèmes d'enseignement en ligne par les étudiants des établissements d'enseignement supérieur privé au Sénégal.** *Management & Sciences Sociales*, 35(2), 107-120. <https://doi.org/10.3917/mss.035.0107>

Cet article vise à apporter une meilleure compréhension des problèmes liés à l'acceptation des systèmes d'enseignement en ligne par les étudiants des établissements d'enseignement supérieur privé au Sénégal. Le modèle de la théorie unifiée de l'acceptation et de l'utilisation de la technologie (Unified Theory of Acceptance and Use of Technology, UTAUT) de Venkatesh, Morris, Davis et Davis est utilisé pour déterminer la force des prédicteurs de l'intention des étudiants d'accepter et d'utiliser les systèmes d'enseignement en ligne. Notre recherche démontre que l'espérance d'effort et l'influence sociale constituent deux variables dont l'effet n'influence pas de manière significative l'intention comportementale des étudiants à utiliser les systèmes d'enseignement en ligne. Les résultats démontrent en outre que l'intention comportementale influence négativement le comportement d'utilisation.

Schewior, L., & Lindner, M. A. (2024). **Revisiting Picture Functions in Multimedia Testing: A Systematic Narrative Review and Taxonomy Extension.** *Educational Psychology Review*, 36(2), 49. <https://doi.org/10.1007/s10648-024-09883-0>

Studies have indicated that pictures in test items can impact item-solving performance, information processing (e.g., time on task) and metacognition as well as test-taking affect and motivation. The present review aims to better organize the existing and somewhat scattered research on multimedia effects in testing and problem solving while considering several potential moderators. We conducted a systematic literature search with liberal study inclusion criteria to cover the still young research field as broadly as possible. Due to the complexity and heterogeneity of the relevant studies, we present empirical findings in a narrative review style. Included studies were classified by four categories, coding the moderating function of the pictures investigated. The evaluation of 62 studies allowed for some tentative main conclusions: Decorative pictures did not appear to have a meaningful effect on test-taker performance, time on task, test-taking affect, and metacognition. Both representational and organizational pictures tended to increase performance. Representational pictures further seem to enhance test-taker enjoyment and response certainty. Regarding the contradictory effects of informational pictures on performance and time on task that we found across studies, more differentiated research is needed. Conclusions on other potential moderators at the item-level and test-taker level were often not possible due to the sparse data available. Future research should therefore increasingly incorporate potential moderators into

experimental designs. Finally, we propose a simplification and extension of the functional picture taxonomy in multimedia testing, resulting in a simple hierarchical approach that incorporates several additional aspects for picture classification beyond its function.

Sellami, H. M. (2024). **Sensitize engineers to serious games via scratch.** *Education and Information Technologies*, 29(9), 11077-11086. <https://doi.org/10.1007/s10639-023-12264-9>
This study describes an experiment in which engineering students create serious games (SG) that tackle problems relevant to their jobs. This experiment was conducted as part of the "Business Games" module we taught students enrolled in the Master's program "Innovation Management" at the National School of Engineers of Tunis. By asking these engineers to create their games, we first aim to confirm that this reinforces their mastery of the course content. It also allows them to apply the concepts they have learned. We also intend to innovate by basing the module evaluation on students' games. Sensitizing these engineers to the value of SG within the organization is a crucial part of our objectives. To create their games, we asked the students to use the Scratch environment. At the end of the semester, the students presented their achievements and completed a questionnaire. Its results reveal that the experiment was highly appreciated by the students and that, overall, we achieved our objectives. This article discusses SGs and how their development affects student learning. Moreover, these engineers indicated that before developing their games, they carefully reviewed the course material. To create their games, they also studied job details. Students generally liked Scratch and mentioned some of its weaknesses. The students asked that the experiment be repeated with other modules the following year. Although we have achieved our goals, improvements should be made if this experiment is repeated.

Simon, S., Coelho, R., Marfisi-Schottman, I., & Pea, R. (2024, juin 10). **Generative AI Tools in an Undergraduate Computer Science Program.** 2133. <https://doi.org/10.22318/icls2024.271910>

We surveyed all undergraduate students (N = 121) enrolled in a three-year Computer Science (CS) program in France to learn about their use of generative AI tools. Our findings reveal widespread use of these tools across all academic years, with a higher proportion of later-year students reporting using these tools for a wider range of coding tasks compared to first-year students.

Skulmowski, A. (2024). **Placebo or Assistant? Generative AI Between Externalization and Anthropomorphization.** *Educational Psychology Review*, 36(2), 58. <https://doi.org/10.1007/s10648-024-09894-x>

Generative AIs have been embraced by learners wishing to offload (parts of) complex tasks. However, recent research suggests that AI users are at risk of failing to correctly monitor the extent of their own contribution when being assisted by an AI. This difficulty in keeping track of the division of labor has been shown to result in placebo and ghostwriter effects. In case of the AI-based placebo effect, users overestimate their ability while or after being assisted by an AI. The ghostwriter effect occurs when AI users do not disclose their AI use despite being aware of the contribution made by an AI. These two troubling effects are discussed in the context of the conflict between cognitive externalization and anthropomorphization. While people tend to offload cognitive load into their environment, they also often perceive technology as human-like. However, despite the natural conversations that can be had with current AIs, the desire to attribute human-like qualities that would require the acknowledgment of AI contributions appears

to be lacking. Implications and suggestions on how to improve AI use, for example, by employing embodied AI agents, are discussed.

Švábenský, V., Vykopal, J., Čeleda, P., & Dovjak, J. (2024). **Automated feedback for participants of hands-on cybersecurity training.** *Education and Information Technologies*, 29(9), 11555-11584. <https://doi.org/10.1007/s10639-023-12265-8>

Computer-supported learning technologies are essential for conducting hands-on cybersecurity training. These technologies create environments that emulate a realistic IT infrastructure for the training. Within the environment, training participants use various software tools to perform offensive or defensive actions. Usage of these tools generates data that can be employed to support learning. This paper investigates innovative methods for leveraging the trainee data to provide automated feedback about the performed actions. We proposed and implemented feedback software with four modules that are based on analyzing command-line data captured during the training. The modules feature progress graphs, conformance analysis, activity timeline, and error analysis. Then, we performed field studies with 58 trainees who completed cybersecurity training, used the feedback modules, and rated them in a survey. Quantitative evaluation of responses from 45 trainees showed that the feedback is valuable and supports the training process, even though some features are not fine-tuned yet. The graph visualizations were perceived as the most understandable and useful. Qualitative evaluation of trainees' comments revealed specific aspects of feedback that can be improved. We publish the software as an open-source component of the KYPO Cyber Range Platform. Moreover, the principles of the automated feedback generalize to different learning contexts, such as operating systems, networking, databases, and other areas of computing. Our results contribute to applied research, the development of learning technologies, and the current teaching practice.

Takaki, P., & Dutra, M. L. (2024). **Text mining applied to distance higher education: A systematic literature review.** *Education and Information Technologies*, 29(9), 10851-10878. <https://doi.org/10.1007/s10639-023-12235-0>

Much of the data produced and consumed by students, teachers, and educational managers is in textual format. Text Mining (TM) and Natural Language Processing (NLP) have been applied in the educational context in different ways. Ideally, such applications combine computational, linguistic, pedagogical, and psychological aspects. This article aims to gather and analyze scientific publications that have applied TM and NLP techniques in textual corpora from distance-higher education through a Systematic Literature Review. Eight scientific databases were searched (ACM DL, Scopus, Web of Science, IEEE Xplore, ArXiv, SpringerLink, ScienceDirect, and ERIC), and publications from 2017 to 2021 were selected. 718 unique publications were screened to identify primary research capable of characterizing this scientific area. 52 resulting publications were fully analyzed, and some consolidated results include: 38% of works had the professors as end users, followed by students (27%) and managers (25%); the English language was present in 50% of publications, followed by the Portuguese language (13,5%) and others languages; the text mining tasks most used were text classification (27%), sentiment analysis (17%), information extraction (15%), chatbot (15%) and topic modeling (13%); LDA (Latent Dirichlet Analysis) was the technique most used (19%); the Python language was the programming language most prevalent (42%), and 54% of works do not mention any educational construct or theory. Thus, this article presents an unprecedented overview of the field of Educational Text Mining (ETM) in

distance higher education and analyses the main results obtained, aiming for future research in the area.

Taridi, M., Risnita, Yaakob, M. F. M., & Khairani, M. (2024). **An evaluative study for communicative language teaching (CLT) on online teaching and learning in higher education: Indonesian and Malaysian university context.** *Education and Information Technologies*, 29(9), 10611-10647. <https://doi.org/10.1007/s10639-023-12221-6>

The higher education landscape is continually evolving, with educators adapting to meet the needs, aspirations, and expectations of their students. Data technology and virtual-learning systems have become vital components in higher education operations, with many institutions incorporating online frameworks and innovations. The aims of the study to evaluate the effectiveness of Communicative Language Teaching (CLT) using university platforms for online teaching and learning in Indonesia and Malaysia, focusing on students' perspectives. The research utilizes the CIPP, which stands for Context, Input, Process, and Product appraisal framework proposed by Stufflebeam (*Journal of Research and Development in Education*, 5, 19-25, 1971). The study includes all students who take English as their subject in the English Department Program, as well as English lecturers. The stratified random sampling approach was employed for data collection. Qualitative data gathered through interviews with educators from both institutions, while written papers provide additional insights. For quantitative data, a modified questionnaire with 63 items divided into six sections and five score scales were disseminated online through the Survey123 program. Descriptive and inferential statistics were used to analyze the questionnaire results. Smart-PLS was utilized for barrier element analysis, using PLS-SEM for causal predictive analysis and consideration of reflective and formative factors. Figure 1 presents the conceptual model, illustrating the connections between exogenous and endogenous latent components in the study. By integrating qualitative and quantitative approaches, this research provides valuable contributions to the understanding of CLT's impact on online education in these settings.

Tian, S., & Yang, W. (2024). **Modeling the use behavior of interpreting technology for student interpreters: An extension of UTAUT model.** *Education and Information Technologies*, 29(9), 10499-10528. <https://doi.org/10.1007/s10639-023-12225-2>

The growing popularity of interpreting technology in the industry has raised awareness of incorporating it into interpreter education. However, it is unclear what factors may contribute to students' behavioral use and the consequent effects of using it. With the addition of three external factors (motivation, task-technology fit, and technology self-efficacy) to the unified theory of acceptance and use of technology model (UTAUT), we surveyed 182 Chinese student interpreters and tested 14 proposed hypotheses using their response data. Data were analyzed using descriptive statistics and structural equation modeling (SEM). The findings indicate that students' actual use of interpreting technology is primarily predicted by their behavioral intention, followed by facilitating conditions. Three factors are found to positively and significantly affect students' behavioral intention, of which task-technology fit and performance expectancy have the most significant influence. Furthermore, performance expectancy can positively affect students' motivation to learn interpreting, whereas motivation could exert an effect on use behavior. The enhanced UTAUT model identifies significant factors associated with students' use of interpreting technology and confirms its positive effects. Theoretical implications and practical significance for interpreting teaching and education policy-making regarding the findings are also discussed.

Ustun, A. B., Karaoglan-Yilmaz, F. G., Yilmaz, R., Ceylan, M., & Uzun, O. (2024). **Development of UTAUT-based augmented reality acceptance scale: a validity and reliability study.** *Education and Information Technologies*, 29(9), 11533-11554. <https://doi.org/10.1007/s10639-023-12321-3>

The primary aim of the study is to develop an augmented reality (AR) acceptance scale within the framework of the unified theory of acceptance and use of technology (UTAUT) model to measure individuals' acceptance and use of AR technology. The study was performed with a total of 546 university students with three participant groups in the 2022–2023 academic year. Reliability and validity studies of the scale were also carried out. The face validity and content validity of the scale were investigated by receiving constructive feedback from various field experts. To scrutinize the construct validity, exploratory factor analysis (EFA) was applied to the first participant group (n = 315) while confirmatory factor analysis (CFA) was conducted with the second participant group (n = 182). The EFA results confirmed the four-factor structure with 21 items accounting for 71.86% of the total variance, while the CFA results showed that the four-factor model had a sufficient fit. The reliability of the UTAUT-based AR acceptance measurement tool was investigated using Cronbach's alpha and test-retest methods. The Cronbach's alpha coefficient of the scale was 0.95 whereas the test-retest reliability of the tool was 0.97. To investigate the discriminative power of the items, corrected item-total correlations and 27% upper and lower comparison of the participants were made. In conclusion, the UTAUT-based AR acceptance measurement tool is valid and reliable in measuring users' AR acceptance and use levels.

Wan, C. L. J., Cheung, K., Tsang, H., & Yip, T. L. (2024). **Exploring the explanatory variables of peer support: perspectives from direct-entry and transfer students.** *Education and Information Technologies*, 29(9), 11445-11481. <https://doi.org/10.1007/s10639-023-12162-0>

Peers can play an invaluable role in helping a student to learn, and peer support is a means to help collaborative students learn well in teams. Students who communicate well with peers understand multiple points of view, and peer support allows students to achieve a shared goal. In higher education, a student can enroll on an undergraduate program directly after completing high school/secondary school or as a transfer student after finishing an associate degree/a higher diploma. Compared to direct-entry students, transfer students are believed to have more psychological issues and receive less peer support because they spend less time in university. However, there is a lack of studies to investigate the factors affecting peer support among direct-entry and transfer students in higher education. This article is aimed at addressing this research gap. The online questionnaire survey was conducted in 2018 with 1,819 responses. Through regression analysis, the results indicated that teaching for understanding & encouraging learning, alignment & constructive feedback, deep & organized approach, social connections, and heard of English learning centre are related to peer support. In addition, self-efficacy, generic skills, and general support & advising may help to explain the differences between direct-entry and transfer students. Despite the two different admission pathways, the majority of the explanatory variables of peer support are common and the whole learning experience influences students' perception on peer support. This study suggests strategies and resource allocation to cope with their differences so as to encourage peer support in universities.

Wang, L. (2024). **Applying automated machine translation to educational video courses.** *Education and Information Technologies*, 29(9), 10377-10390. <https://doi.org/10.1007/s10639-023-12219-0>

We studied the capability of automated machine translation in the online video education space by automatically translating Khan Academy videos with state-of-the-art translation models and applying text-to-speech synthesis and audio/video synchronization to build engaging videos in target languages. We also analyzed and established two reliable translation confidence estimators based on round-trip translations in order to efficiently manage translation quality and reduce human translation effort. Finally, we developed a deployable system to deliver translated videos to end users and collect user corrections for iterative improvement.

Wang, Y.-J., Gao, C.-L., & Ye, X.-D. (2024). **A data-driven precision teaching intervention mechanism to improve secondary school students' learning effectiveness.** *Education and Information Technologies*, 29(9), 11645-11673. <https://doi.org/10.1007/s10639-023-12238-x>

The continuous development of Educational Data Mining (EDM) and Learning Analytics (LA) technologies has provided more effective technical support for accurate early warning and interventions for student academic performance. However, the existing body of research on EDM and LA needs more empirical studies that provide feedback interventions, and more attention should be paid to primary and secondary school students. This study proposed a data-driven precision teaching intervention mechanism combining EDM and LA technologies. The proposed mechanism aims to assist teachers in predicting students' academic performance and implementing corresponding interventions. This approach enables early warnings and reminders for students in crisis, and offers teaching assistance and support tailored to students at different levels. A quasi-experimental design was employed to examine the impact of the data-driven precision teaching intervention mechanism on secondary school students' learning outcomes. A total of 142 seventh-grade students participated in the intervention experiment, with an experimental group (50) receiving the data-driven precision teaching intervention, control group2 (48) receiving a group intervention stratified by teacher experience, and control group1 (44) receiving a traditional group intervention. Posttest data were collected after three rounds of intervention. Compared to the two control groups, students in the experimental group demonstrated superior academic achievement, intrinsic motivation, self-efficacy, and meta-cognitive awareness. These findings indicate that the data-driven precision teaching intervention approach positively impacted students' academic development, and effectively promoted their personalized learning. The findings provide pedagogical insights into the application of EDM in conjunction with LA prediction and actionable interventions.

Wang, Z., Chen, Z., Gong, B., & Feng, Z. (2024). **The interactive effects of instructors' guidance frequency and type on Chinese secondary school students' learning.** *Education and Information Technologies*, 29(9), 11257-11280. <https://doi.org/10.1007/s10639-023-12148-y>

As an important resource in online learning, video lectures have attracted considerable research attention in the impact of teachers' nonverbal guidance behaviors on learning. However, few studies have focused on secondary education, and it remains unclear whether the interaction between different guidance frequencies and types leads to variations in the effectiveness of guidance. This study tested the mutual effects of

instructor's guidance frequency and type on secondary school students' learning performance (retention scores, transfer scores) and affective experiences (cognitive load, learning experience, learning satisfaction). A total of 202 secondary school students were randomly assigned to watch one of the four video lectures, using a 2 (guidance frequency: low-frequency guidance, high-frequency guidance) × 2 (guidance type: gesture guidance, gesture + gaze guidance) between-groups design. The study was conducted in a multimedia classroom setting. The results showed that low-frequency guidance by instructors contributed to improved learning performance. Specifically, under low-frequency guidance conditions, gesture guidance was more effective in enhancing retention, while gesture + gaze guidance facilitated learners' transfer. Moreover, low-frequency gesture + gaze guidance by teachers resulted in better affective experiences for students, as evident in cognitive load, learning experience, and learning satisfaction. Therefore, it is recommended that instructors lecturing for secondary students adopt appropriate types of low-frequency guidance according to the level of learning difficulty to improve teaching effectiveness.

Weibel, M., Bergdahl, N., Hallström, I. K., Skoubo, S., Bertel, L. B., Schmiegelow, K., & Larsen, H. B. (2024). **Robots2school: telepresence-mediated learning in the hybrid classroom – experiences in education support for children during cancer treatment: a qualitative study.** *Education and Information Technologies*, 29(9), 11339-11366. <https://doi.org/10.1007/s10639-023-12243-0>

Children with cancer experience recurring hospitalizations and isolation during treatment, which affect their school attendance. This study explores experiences of children with cancer, their classmates, and teachers with using the telepresence robot as a learning mediator in the hybrid classroom during treatment periods. 31 children with cancer (aged 7–17 years), 30 teachers, and 118 classmates participated in interviews and 19 h of participant observations were undertaken in nine classrooms. The Agential Realism Theory and Situational Analysis framed the data analysis. There was a single overarching theme, “Telepresence robot didactic,” and five sub-themes (Telepresence mediated learning, school-home collaboration, hybrid robot teaching, intra-actions in class, and inclusive spatiality). This study advocates the complexity of telepresence robot didactics, emphasizing that numerous human and other factors must intra-act and work simultaneously to achieve optimal learning conditions for children during cancer treatment. This includes considerations such as modality availability for the remote child; the teacher's understanding of telepresence robot didactic and hybrid learning; the classmate's ability to involve the remote child in groupwork; the child's own treatment protocol, the robot's functionalities, and spatiality in the class. Strategies for use and the systematic surveillance of telepresence robots are needed to ensure that children during cancer treatment do not lag in academic achievement. This study proposes that children with cancer can continue participating in class while hospitalized or isolated and consequently reduce social and academic setbacks.

Wu, R., & Yu, Z. (2024). **Relationship between university students' personalities and e-learning engagement mediated by achievement emotions and adaptability.** *Education and Information Technologies*, 29(9), 10821-10850. <https://doi.org/10.1007/s10639-023-12222-5>

Since the outbreak of the pandemic, a large number of university students have been required to adapt to e-learning. E-learning engagement, a key indicator of academic success, is thus a great concern of educational partitioners and researchers. Although

previous studies have identified various determinants of e-learning engagement, there is a paucity of research that examines the associations between university students' personalities and their engagement in e-learning. Moreover, the mechanisms underlying the personality-engagement relationship are still poorly understood. The present study used the five-factor model of personality as the main theoretical framework to explore how students with different personality traits engaged in e-learning. Additionally, it examined whether achievement emotions and adaptability mediated the personality-engagement relationship in the e-learning context. A sample of 1004 students enrolled at Guizhou University participated in an online survey to collect data for the study. Employing structural equation modeling, the findings unveiled several significant results: (1) extroversion, agreeableness, openness to new experiences, and conscientiousness exhibited positive associations with e-learning engagement, (2) neuroticism demonstrated a negative relationship with e-learning engagement, (3) the mediating effect of enjoyment as an achievement emotion was observed between personality traits (excluding neuroticism) and e-learning engagement, (4) adaptability played a mediating role in the relationship between personality traits (excluding conscientiousness and neuroticism) and e-learning engagement, and (5) the negative achievement emotion of anxiety did not operate as a mediator between personality traits and e-learning engagement. This study enriches the understanding of the relationship between personality and engagement in the emerging field of e-learning. Moreover, it offers a fresh perspective on how to investigate mechanisms underlying the relationship between personality and engagement in the e-learning context. The findings could provide a basis for instructors who wish to deploy emotional and adaptability interventions to increase university students' engagement in e-learning.

Yan, J., Liu, S., Armwood-Gordon, C., & Li, L. (2024). **Factors affecting Active Flipped Learning on Underrepresented students in Three STEM Courses.** *Education and Information Technologies*, 29(9), 10791-10804. <https://doi.org/10.1007/s10639-023-12234-1>

According to NSF (2017), even though the number of minority students in America's college-age population has been on the rise, those who choose Science, technology, engineering, and mathematics (STEM) as their majors are significantly fewer. There is an urgent need for African Americans, being the underrepresented minorities in STEM-related domains, be provided with opportunities to increase their presence and achievements (Hansen, Palakal & White, *Journal for STEM Education Research*, 1–26 2023). This paper was to develop an active flipped learning (AFL) model to enhance engineering students learning. Instructional video, audio, lecture notes, and reading materials are developed while initiating active learning activities in class to engage students in active flipped learning. By monitoring 103 students' engagement and identifying their motivation and learning strategies, a custom-tailored plan to fit each underrepresented student in STEM was formed, valued by two indicators: Engaged Learning Index and Motivated Strategies for Learning Questionnaire. After practicing the longitudinal research for three years from 2016 to 2018, some results were found during the procedure through ANOVA and correlation analysis on the collected data. The AFL model effectively promotes underrepresented students' performance in various science disciplines such as engineering, physics, and mathematics, such as helpful to foster underrepresented students' deep understanding of STEM disciplines and making them more engaged in STEM learning. In the future, the AFL can be potentially expanded to other institutions to help all students succeed in STEM classrooms and careers, to increase the national STEM literacy and be applied to non-STEM majors.

Yildirim, Y., Alptekin, G., Altinpulluk, H., Kilinc, H., & Yumurtaci, O. (2024). **Loneliness and intrinsic motivation levels of distance learners in virtual environments.** *Education and Information Technologies*, 29(9), 11023-11041. <https://doi.org/10.1007/s10639-023-12274-7>

This study aims to determine the relationship between the loneliness levels and intrinsic motivation levels felt by distance learners in a virtual environment. To this end, predictive design was used as a quantitative research method. The results obtained from 330 distance learner participants revealed a medium level negative statistically significant relationship between the intrinsic motivation levels and loneliness levels of students. Additionally, a medium level positive statistically significant relationship was found between students' intrinsic motivation levels and the sub-factors of virtual socializing and virtual sharing, while a medium level negative statistically significant relationship was found for the virtual seclusion sub-factor. The regression analysis conducted within the study revealed that 48.3% of the intrinsic motivation can be explained by the feeling of virtual loneliness. The analysis shows a medium level negative effect of virtual loneliness on intrinsic motivation. Furthermore, the regression model developed to explain the relationship between intrinsic motivation levels and virtual loneliness sub-factors explained the intrinsic motivation levels by 49.5%. As such, a statistically significant negative effect of the virtual seclusion variable on intrinsic motivation levels of students was observed. A statistically significant positive effect was found for the variables virtual sharing and virtual socializing. The findings of the study led to the conclusion that communication and interaction should be emphasized in order to minimize the feeling of virtual loneliness in learners.

Yıldırım, B. (2024). **Flipped TRIZ-STEM: Enhancing teacher training through innovative pedagogy?** *Education and Information Technologies*, 29(9), 10899-10929. <https://doi.org/10.1007/s10639-023-12242-1>

This study aimed to examine the effects of TRIZ-STEM applications within an online flipped learning model on teachers' problem-solving skills, creative thinking dispositions, STEM teaching, and their understanding of the nature of engineering. The sample consisted of 57 teachers (24 in the control group and 33 in the experimental group) recruited using purposive convenience sampling. The study adopted a mixed embedded design. Quantitative data analysis included independent samples t-tests, paired samples t-tests, Wilcoxon signed-rank tests, and effect size calculations. Descriptive statistics were used to analyze qualitative data, including the nature of the engineering questionnaire and lesson plans. The experimental group engaged in TRIZ-STEM activities using an online flipped learning model, while the control group engaged in face-to-face TRIZ-STEM education activities. The results showed that online TRIZ-STEM education had a greater positive impact on teachers' perspectives on engineering nature than face-to-face TRIZ-STEM education. On the other hand, face-to-face TRIZ-STEM education was much more effective in helping participants develop problem-solving skills than online flipped learning TRIZ-STEM education. However, the online flipped learning model did not show superiority in improving teachers' creative thinking education and STEM teaching compared to the face-to-face approach. Based on the results, suggestions for future research were provided, emphasizing the potential of online flipped learning models for STEM teacher education.

Zheng, L., Fan, Y., Chen, B., Huang, Z., LeiGao, & Long, M. (2024). **An AI-enabled feedback-feedforward approach to promoting online collaborative learning.** *Education*

and Information Technologies, 29(9), 11385-11406. <https://doi.org/10.1007/s10639-023-12292-5>

Online collaborative learning has been broadly applied in higher education. However, learners face many challenges in collaborating with one another and coregulating their learning, leading to low group performance. To address the gaps, this study proposed an artificial intelligence (AI)-enabled feedback and feedforward approach that not only provide feedback but also offer recommendations for future actions to support online collaborative learning. In total, 153 college students participated in this study, and they were divided into three conditions. Fifty-one students conducted online collaborative learning with the AI-enabled feedback and feedforward approach, another 51 students carried out online collaborative learning with the AI-enabled feedback approach, and the remaining 51 students participated in traditional online collaborative learning without either type of support. The results indicated that the AI-enabled feedback and feedforward approach could significantly boost the level of collaborative knowledge building, coregulated behaviours, and group performance. Research and practical implications of the findings are discussed in depth.

Zhu, Y., Yan, S., Tao, J., & Zhang, L. (2024). **The perspective of teaching systems: The effectiveness of two online teaching approaches in K-12 and school stages differences.** *Education and Information Technologies*, 29(9), 11585-11624. <https://doi.org/10.1007/s10639-023-12257-8>

This study explores the relationship between teacher teaching support, student involvement, technical environment support, and online teaching effectiveness among K-12 students from the perspective of teaching systems (teacher teaching support, student involvement, and technical environment support) and the differences between online teaching methods and school levels, to provide guidance for teachers to teach using different online teaching methods and at different school levels. The data came from 13,225 primary and secondary school students who participated in online teaching in a district of Beijing. This study used the quantitative research method, we established a model of factors influencing the effectiveness of online teaching through Structural Equation Modelling, and analysed the survey data to explore the factors influencing the effectiveness of online teaching, the paths and their mediating effects. It is worth noting that this study found that student involvement and teacher teaching support significantly and negatively affected the perceived learning effect; teacher teaching support significantly and negatively affected continuance intention; and that the effects of teacher teaching support, student involvement, and technical environment support on satisfaction and the effects of student involvement on continuance intention showed significant differences. These differences affect related mediated pathways, resulting in significant differences in them. In addition, we found that “teacher teaching support → student involvement → perceived learning effect” was different from “teacher teaching support → technical environment support → perceived learning effect.” We also found a masking effect for the “teacher teaching support → student involvement → perceived learning effect” and “teacher teaching support → technical environment support → continuance intention” pathways. These findings provide suggestions for teachers at different levels to design appropriate online teaching strategies to improve student learning.

Zviel-Girshin, R., Kukliansky, I., & Rosenberg, N. (2024). **Twenty-first century parents' attitudes and beliefs on early childhood robotics education.** *Education and Information Technologies*, 29(9), 11211-11233. <https://doi.org/10.1007/s10639-023-12218-1>

Early Age Robotics (EAR) education has become extremely popular throughout the world. It has proven to be not only interesting and enjoyable, but also effective at helping even the youngest of children (aged 4–7) develop skills and reap educational benefits. But what about their families? Are parents as happy with EAR programs as are the children? What are their attitudes and beliefs regarding it? In this novel empirical study, we seek to answer these questions and succeed in refuting some commonly held beliefs. This study is based on a unique EAR program running since 2016 for over 2000 children. Using qualitative and quantitative research methods, we analyzed interviews with 29 parents and surveys submitted to 203 parents whose children (aged 4–7) studied technology and robotics as a compulsory component of their curriculum. We uncovered an interesting phenomenon of parents becoming transformed from being passive consumers of the educational system into new, twenty-first-century parents, more confident about their ability to learn and to help promote their children's abilities. They are more motivated and involved, and ready to invest in both their own and their children's learning. Also encouraging is the gender equality found in this technological area. We recommend introducing a new PEAR (Parents in EAR) model, offering practical proposals for enhancing and expanding robotics education. The study confirms parents' satisfaction with technology, their willingness to learn more about robotics, and their satisfaction with their children's participation in an EAR program. This transformation should be considered by EAR stakeholders.

Orientation scolaire et professionnelle

Atkin, S. (2024). **Des jeunes immigrants au Québec. Interroger la densité de leurs parcours.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 177-185). <https://doi.org/10.4000/11uuu>

Ball, I., Banerjee, M., Holliman, A., & Tyndall, I. (2024). **Investigating Success in the Transition to University: A Systematic Review of Personal Risk and Protective Factors Influencing Academic Achievement.** *Educational Psychology Review*, 36(2), 52. <https://doi.org/10.1007/s10648-024-09891-0>

The transition to university is a time of great change and adjustment. The challenges of university life can lead to numerous negative consequences for the students. Despite the importance of successful transition for both the student and the university, the current body of literature comprises methodological inconsistencies and disparate analytical goals that make it difficult to identify the most salient and effective factors that help predict transition success. This paper presents a systematic review of research linking personal level risk and protective factors to the outcome of academic achievement among students making the transition to university. This is part of a larger review, following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) and Synthesis Without Meta-analysis (SWiM) guidelines, preregistered on the International Prospective Register of Systematic Reviews (PROSPERO, CRD42022330515), searching PsychInfo, Web of Science, and ERIC databases. Records were included if they studied 'traditional' first year students transitioning to university and were longitudinal in design

and excluded if they looked at specific subgroups of students (e.g. international students). The search yielded 27 articles that were eligible, highlighting a broad range of salient factors ranging from personality traits to procrastination and perfectionism. The findings are discussed in relation to moving the research forward towards an intervention to enhance the probability of successful student transition to university.

Beckmann, J., Wicht, A., Siembab, M., & Herrmann, L. (2024). **D'où viennent-ils et où vont-ils ? Changement de profession dans la formation en apprentissage en Allemagne : Résumé.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 85-86). <https://doi.org/10.4000/11uuuv>

Bidart, C., Machut, A., Mercklé, P., & Perdoncin, A. (2024). **Quelles données pour analyser les conséquences sociales de la crise sanitaire de la Covid-19 ? : L'expérience de PanelVico.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 305-315). <https://doi.org/10.4000/11utp>

Blanchard, M. (2024). **Les dispositions socialement situées d'une « bonne orientation » : une approche à partir des aspirations scolaires et professionnelles de lycéens scientifiques.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 275-285). <https://doi.org/10.4000/11ut3>

Bonnard, C., Danner, M., & Olympio, N. (2024). **Orientation et conditions d'emploi des diplômés de l'enseignement professionnel : questionner l'inadéquation horizontale : Résumé.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 287-288). <https://doi.org/10.4000/11uu7>

Boyer, P., & Gossa, J. (2024). **Si Parcoursup m'était compté.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w24>

Cette étude propose d'évaluer la mise en œuvre de la plateforme Parcoursup, introduite par la loi ORE en 2018, à partir des données ouvertes mises à disposition par le Ministère de l'Enseignement supérieur. En nous intéressant à la fois aux indicateurs officiels et aux mesures rendues possibles par ces données, nous tentons d'éclairer l'action publique de l'orientation post-bac. Cet éclairage est rendu délicat par des données partielles, à la fiabilité inégale, et surtout complexes à interpréter. Ces travaux ouvrent des perspectives dans leur consolidation, et la conception d'indicateurs nationaux permettant de mieux qualifier l'action publique de l'orientation post-bac.

Bugeja-Bloch, F., Couto, M.-P., Frouillou, L., & Valarcher, M. (2024). **Faire avec les normes de Parcoursup : le cas des réorientés.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w20>

Une des nouveautés de Parcoursup est d'intégrer de plus en plus les réorientations vers une première année d'enseignement supérieur français. À partir d'une étude qualitative des dossiers de réorientation en sociologie, cet article interroge la manière dont le fonctionnement du dispositif Parcoursup impose des normes institutionnelles désajustées aux parcours non linéaires des étudiantes en réorientation. Les désajustements sont

doubles : d'une part, les catégories de la plateforme sont en décalage avec les temporalités des parcours étudiant·es, et d'autre part, l'ordre de remplissage des dossiers ne correspond pas nécessairement à la lecture qui en est faite par les commissions. Cela explique en partie que les classements soient souvent défavorables aux réorienté·es par rapport aux néo-bachelier·es.

Buissonnet, A. (2023a). **Impacts liés aux territorialités sur l'éducation : étude comparative territoriale des projets et des choix d'orientation des élèves de 3ème issus du piémont alpin - rural isolé moyenne montagne - urbain défavorisé. Enquête 2018-2022 sur l'académie de Grenoble.** *Journée d'étude - Séminaire Territorialité et éducation.* Présenté à Lyon Université Lyon 2, France. Consulté à l'adresse <https://hal.science/hal-04643867>

A doctoral research was conducted from 2018 to 2022 to shed light on the influence of territorialities in the orientation process of middle school students. Three types of territories are under study: isolated rural mid-mountain - Alpine foothills - disadvantaged urban. Territorialities encompass the symbolic dimension of a territory, its representations, values, and territorial identities shared collectively by its inhabitants. In what ways do territorialities influence students' aspirations? Do they also impact the educational stance and professional actions of educational actors in their guidance for orientation? A quantitative methodology for collecting statistical orientation data, supplemented by qualitative interviews and ethnographic observation in each research field, identifies a strong territorial anchoring, both from students and their parents, in the orientation process.

Buissonnet, A. (2023b). **Influence des territorialités dans l'accompagnement pédagogique à l'orientation scolaire des élèves de 3ème.** *10ème colloque international en éducation - CRIFPE.* Présenté à Montréal (Québec), Canada. Consulté à l'adresse <https://hal.science/hal-04644623>

The purpose of this communication is to present different territorial contexts impacting the guidance for school orientation of middle school students. How do territories and their territorialities influence the orientation process from the perspective of professionals? Within a territorial comparative study of 9 schools, 90 qualitative interviews were conducted with educational teams and 100 biographical interviews with students (with an equal distribution of boys and girls). An ethnographic observation was carried out in the 9 middle schools. Supporting students and their families in their orientation choices, within the chosen tracks, remains an educational societal issue as it contributes to the emancipation of the individual. The often anxiety-inducing and complex nature of the orientation process leads students to prioritize the choice of a geographically nearby high school over the choice of a track. In the face of this geographical « self-censorship, » territorialities play a role in the actions and stance of orientation professionals, whether working in a village, at the foot, in the heart of the mountain, or in a priority neighborhood of a large city. The factors influencing the construction of students' and parents' projects are impacted by the territorial context, linked to specific pedagogical support.

Buissonnet, A. (2024). **L'influence des territorialités dans les choix d'orientation. Recherche doctorale de comparaison tripartite territoriale du piémont alpin, rural isolé moyenne montagne, urbain défavorisé.** *Séminaire Observatoire Éducation et Territoires.* Présenté à Digne-les-Bains, France. Consulté à l'adresse <https://hal.science/hal-04644689>

A tripartite territorial comparison in the construction of orientation choices for middle school students was conducted. The aim is to shed light on the influence of territorialities in the orientation process, both from the perspective of students and their families, as well as from the perspective of teachers in their pedagogical guidance for orientation. Three territories are under study: Alpine foothills, isolated rural mid-mountain, disadvantaged urban. Within each territory, we investigated three middle schools. Three sports-study boarding schools in the mountainous area, three priority education network schools in the urban area, and three so-called « ordinary » schools in the Alpine foothills. The territorial variable is analyzed to identify a strong territorial anchoring on the part of students and their parents, thus influencing the choices of educational tracks or careers after middle school. This variable is also considered in the educational stance and professional actions of educational actors in their orientation guidance. The methodology is mixed: processing statistical orientation data and a questionnaire, supplemented by qualitative interviews to gain a finer understanding of the orientation process, and ethnographic observation to highlight the territorialities shared by the inhabitants of the surveyed territories.

Cardon, V., Machut, A., & Perdoncin, A. (2024). **Discontinuités professionnelles en contexte de crise. Atouts et limites d'une enquête panélisée sur les effets sociaux de la pandémie de Covid-19.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 317-328). <https://doi.org/10.4000/11uuc>

Chamkhi, A., Lainé, F., & Rodriguez, O. (2024). **Les transitions professionnelles des demandeurs d'emploi vers des métiers en tension.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 89-105). <https://doi.org/10.4000/11usz>

Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence. (2024). In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence*. Consulté à l'adresse <https://books.openedition.org/cereq/3951>

Chaque année depuis 1994, les journées du longitudinal (JDL) constituent un temps fort de la vie scientifique du Céreq. Elles sont co-organisées par le Céreq et un des centres associés de son réseau et réunissent des chercheurs et chercheuses autour d'une problématique inscrite dans une approche longitudinale de l'analyse de la relation formation-emploi. Les actes des rencontres sont édités tous les ans par le Céreq. C'est le centre associé d'Aix-en-Provence (Laboratoire d'économie et de sociologie du travail [LEST], UMR 7317) qui accueille les 29e journées sur la thématique : « Crises et transitions : quelles données pour quelles analyses ? ». Comment les crises et les transitions (économique, sociale, migratoire, sanitaire...) affectent les parcours de vie ? Quelles transformations imposent-elles ? Il s'agit de penser en particulier les recompositions des parcours éducatifs et professionnels mais aussi de s'intéresser aux types de données et méthodes permettant de saisir la multidimensionnalité des éléments constitutifs de ces trajectoires.

Cuny, G. (2024). **Une approche constructiviste de la « crise des vocations » dans les métiers du soin : une articulation macro-micro.** In V. di Paola & C. Guitton (Éd.), *Crises et*

transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence (p. 123-131). <https://doi.org/10.4000/11uuh>

Dirani, A., & Piquée, C. (2024). **Analyse du processus d'admission en L1 dans les filières universitaires non sélectives.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w28>

À partir des données Parcoursup, nous cherchons à comprendre la cohabitation de différentes logiques d'acteurs dans la procédure d'admission en première année à l'université. L'objectif est de rendre compte de l'articulation des rôles des uns et des autres (les élèves, les équipes pédagogiques des lycées, les membres des commissions d'examens des vœux des universités) dans la procédure. Plus précisément, il s'agit de d'interroger le caractère juste du processus en identifiant les principes de sélection mis en œuvre, pris entre méritocratie scolaire et intervention humaine, et leur effectivité. Une première partie des analyses a pour objectif de mettre au jour la tension qui s'exerce entre le rôle des commissions d'examen des vœux qui proposent des places à l'université et le rôle des candidats qui choisissent de s'inscrire. Puis, pour différentes filières, nous examinons la place de « l'intervention humaine », c'est-à-dire ce que les avis qualitatifs de la Fiche Avenir, formulés par les équipes pédagogiques du secondaire, et leur degré de prise en compte dans les pré-classements, définis par les équipes pédagogiques du supérieur, font à la procédure Parcoursup et à sa lisibilité. Nous interrogeons ainsi la procédure d'affectation dans l'enseignement supérieur, fondée sur la méritocratie scolaire mais censée être régulée par « l'intervention humaine » des acteurs du secondaire et du supérieur.

Domens, J., & Rinallo, J. (2024). **Trajectoires professionnelles et résidentielles : une analyse de séquences à partir du dispositif EVA 2007 : Résumé.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence (p. 235-236).* <https://doi.org/10.4000/11uu0>

Doray, P., Laplante, B., Prats, N., & Saint-Denis, X. (2024). **La pandémie de la COVID-19 dans l'enseignement postsecondaire : les parcours scolaires ont-ils été en crise ?** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence (p. 331-342).* <https://doi.org/10.4000/11uuw>

Dumas, A., & Lignon, V. (2024). **Transitions vers l'âge adulte des non-diplômés du supérieur : une analyse comparative générationnelle basée sur les enquêtes EVA : Résumé.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence (p. 163-164).* <https://doi.org/10.4000/11uua>

Feuillet, P. (2024). **Les parcours de reconversion professionnelle vers le métier enseignant.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence (p. 133-143).* <https://doi.org/10.4000/11uus>

Gayraud, L. (2024). **Redonner du sens au parcours des jeunes NEET à l'heure de la transition écologique.** *Céreq Bref*, (453), 1-4. Consulté à l'adresse <https://www.cereq.fr/parcours-jeunes-neet-transition-ecologique>

Les approches traditionnelles de l'orientation et de l'insertion s'avèrent souvent insuffisantes pour aider les jeunes en situation de NEET, c'est-à-dire ni en emploi, ni en études, ni en formation, à trouver leur voie. Pour expérimenter d'autres approches, le programme d'accompagnement « 100% transition » voit dans la transition écologique l'occasion, pour les jeunes comme pour les accompagnateur·trices, d'apprendre à se projeter au-delà du seul horizon professionnel. Chargé d'évaluer les impacts sociétaux de ce projet sur les participant·es, le Céreq livre ici ses résultats après trois sessions de cette expérimentation originale.

Geers, A., Legendre, F., & Pinto, S. (2024). **Opacités et implicites : ce que Parcoursup fait au groupe professionnel des enseignant·es**. *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w29>

Nous proposons de comprendre les effets des récentes réformes relatives aux parcours d'orientation, dont Parcoursup, sur la division du travail dans le monde scolaire et en particulier sur le groupe professionnel des enseignant·es de lycée. Notre analyse s'appuie sur une recherche socio-ethnographique menée dans un lycée polyvalent. Les prescriptions, multiples et nébuleuses, redéfinissent la license et le mandat (Hughes, 1996) des enseignant·es en élargissant, de manière opaque, leur champ d'action. Ces nouveaux modes de régulation remettent en cause les frontières et les juridictions (Abbott, 2016) de leur travail. Pour éclairer les opacités du dispositif, sans formation et avec peu de recul ils et elles bricolent. Dans ce contexte, leurs engagements varient selon les profils scolaires des élèves et à l'aune de leurs dispositions sociales et professionnelles.

Geuring, E. (2024). **L'expérience de Parcoursup des néo-bacheliers**. *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w27>

Outre la transformation des modalités d'accès à l'enseignement supérieur, la procédure Parcoursup renforce l'engagement des établissements et des acteurs professionnels du secondaire dans l'orientation des élèves de terminale. Ces derniers, informés et accompagnés, sont invités à réifier leurs aspirations de poursuite d'études à travers des vœux non-hiérarchisés. En empruntant à la sociologie de l'expérience (Dubet, 1994), cette contribution interroge la manière à travers laquelle les lycéens ont éprouvé cette procédure Parcoursup qui engage leur processus d'orientation. À partir d'une double enquête menée par questionnaire (n=713) et par entretien (n=37) auprès de néo-bacheliers inscrits en première année de licence, les résultats montrent que si leur expérience de la procédure dans sa dimension technique est facilitée par l'accompagnement reçu, les discours perçus sur leurs vœux sont plus nuancés.

Guichard, A. (2024). **En quête de projet**. *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w22>

La demande de formalisation d'un « projet de formation motivé » sur Parcoursup introduit une épreuve de justification de la cohérence du parcours dès lors partie prenante de la sélection-orientation à l'entrée des formations universitaires. À partir d'une étude de cas portant sur les étudiant·es qui se sont réorienté·es malgré l'adéquation de leur choix d'orientation, l'article montre que le projet ne permet pas nécessairement de répondre à l'exigence de cohérence en cours d'études, et qu'il nécessite même parfois un travail de justification supplémentaire. L'analyse des argumentaires mobilisés pour justifier le passage d'un projet à un autre met en évidence la manière dont les étudiant·es se sont progressivement acculturé·es à une conception temporalisée de la réussite. En

s'appropriant le projet en tant qu'instrument de réflexivité, les étudiant·es travaillent finalement à accepter le fait d'avoir renoncé à leurs aspirations initiales.

Launay, J., & Gaillard, R. (2024). **Les parcours étudiants au prisme des allocations de ressources : quelles évolutions depuis 15 ans ?** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 165-176). <https://doi.org/10.4000/11uuk>

Lehner, P., & Pin, C. (2024). **L'accompagnement à l'orientation par les professeurs principaux de Terminale.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w21>

Cet article interroge au prisme du concept de mandat les conditions sociales et l'effectivité de l'élargissement du rôle des professeurs principaux en matière d'orientation. Après avoir resitué le mandat dans sa configuration historico-politique, l'article examine la fréquence et la nature de l'accompagnement fourni aux élèves et le degré d'engagement des enseignants. À partir de ces deux axes, l'article esquisse une typologie de quatre figures d'accompagnement.

Lehoux, E. (2024). **Une anticipation rationnelle de son orientation.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w25>

La mise en œuvre de Parcoursup s'inscrit dans le cadre d'une mutation globale de l'orientation. Les élèves et leurs parents, considérés comme acteurs de leur éducation, sont invités à faire des choix d'orientation rationnels, en se référant notamment à un projet préalablement élaboré. Cet article montre que les lycéennes et lycéens sont réceptifs à cette attente, tout en entretenant un rapport plus ou moins instrumental à leur scolarité. S'ils se réfèrent quasiment tous à un projet, celui-ci prend cependant, en pratique, des significations différentes selon les élèves. L'article propose d'étudier la diversité des usages et des expressions de la logique de projet chez des élèves de seconde.

Lemistre, P. (2024). **Expansion scolaire, nouveaux parcours d'études des diplômés du supérieur : une crise inégalitaire à relativiser ?** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 225-234). <https://doi.org/10.4000/11uue>

Longo, M. E., Lechaume, A., Supeno, E., & Noël, M. (2024). **Ni en emploi, ni aux études, ni en formation (NEEF) : un éclairage temporel des catégories d'action publique pour saisir les parcours de jeunes à la lisière du marché du travail.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 189-198). <https://doi.org/10.4000/11uts>

Masy, J., & Étienne, R. (2024). **Parcoursup et l'introduction de la sélection à l'université.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w1x>

Introduction Depuis plus de trente ans, la priorité est accordée en France à l'élève et à l'étudiant par la loi d'orientation de 1989 (Étienne, Baldy et Benedetto, 1992). « L'école orientante » (Pelletier, 2001) et les circulaires (MEN, 1996a et 1996b) puis l'université d'été sur l'éducation à l'orientation (Étienne, 2002, 2009) ont conduit les Établissements publics locaux d'enseignement (EPL) à s'engager toujours plus activement dans le processus d'orientation des élèves. Pourtant, les pro...

Mathivat, N., Rey, J., & Kloetzer, L. (2024). **Entre inclusion et sélection : l'orientation des élèves primo-arrivants allophones dans les conseils de classe d'accueil en Suisse.** *Éducation et Sociétés*, 52(2), 41-61. <https://doi.org/10.3917/es.052.0041>

La Suisse peut être décrite comme un laboratoire pour l'étude des migrations du fait de sa pluralité culturelle et linguistique nationale et immigrée, mais aussi de la multiplicité des réglementations propres à chaque canton. Dans le canton de Vaud, les élèves primo-arrivants allophones (EPAA) peuvent être scolarisés dans des classes d'accueil séparées. Chaque fin d'année, l'enjeu pour les enseignantes est d'évaluer chaque élève en train d'acquérir la langue d'enseignement locale, pour l'orienter dans un système à filières visant l'homogénéité des groupes. Ces moments charnières représentent un point aveugle dans la construction des trajectoires scolaires. Cette recherche étudie comment les EPAA sont orientés dans un système scolaire secondaire sélectif et d'après quels éléments. L'analyse des données montre que la prolongation de la scolarité en classe d'accueil est favorisée par les enseignantes pour protéger les élèves d'une scolarisation en classe ordinaire perçue comme à rebours de l'école inclusive.

Mouad, R., Rastoldo, F., & Scalabrini, L. (2024). **Jeunes en situation difficile de formation : analyser leurs parcours et comprendre leurs discours.** In V. di Paola & C. Guillon (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 237-248). <https://doi.org/10.4000/11uup>

Nakhili, N. (2024). **Entre socialisation à l'individualisation et sélection : expériences de la transition secondaire-supérieur des nouveaux bacheliers généraux.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w2a>

La période récente est marquée par des réformes (ORE et Nouveau Baccalauréat Général) qui ont transformé la transition secondaire-supérieur, introduisant une forme de régulation des flux via la plateforme Parcoursup d'une part, et davantage de flexibilité via une logique d'individualisation des parcours d'autre part. Dans cet article, nous analysons les processus de socialisation à l'individualisation en amont et lors de la transition secondaire-supérieur à l'heure de la mise en place de cette nouvelle organisation. À partir d'une enquête qualitative auprès de 20 bacheliers 2021 nous décrivons la manière dont ils se sont appropriés ces nouvelles règles. In fine, le cadre, les agents et les processus de socialisation mis à jour sont : la déstabilisation de la sociabilité lycéenne, une liberté de choix amenant les lycéens à gérer les incertitudes et à peser ou assumer les conséquences de leurs choix, un accompagnement procédural invitant à la prudence et à la multiplication des choix d'études supérieures en terminale. Tout cela prépare les lycéens à une expérience de la transition secondaire-supérieur éprouvante, opaque et souvent inégalitaire.

Pannier, C., & Michaut, C. (2024). **Les enseignants de lycée à l'épreuve de l'éducation à l'orientation.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w23>

En France, la loi « Orientation et Réussite des Étudiants » du 8 mars 2018 a créé la plateforme Parcoursup et renforcé le rôle des enseignants du secondaire dans l'accompagnement à l'orientation des jeunes. Non formés à cela, ces derniers ont pourtant à composer avec cette mission et les nouveautés induites par la plateforme qui fait l'objet de vives critiques en raison notamment des inégalités qu'elle génère. Les potentiels ajustements nécessaires pour y faire face questionnent alors l'identité

professionnelle des enseignants du secondaire. La recherche s'intéresse à la façon dont ces derniers acceptent ou résistent à la réforme au prisme de sa réception et de sa mise en œuvre. 23 enseignants de lycée ont été interrogés dans le cadre d'entretiens semi-directifs compréhensifs. Les résultats révèlent un manque de formation et de compétences en la matière chez les enquêtés. Ces derniers se sentent illégitimes et demeurent incertains quant aux effets que leur accompagnement peut avoir sur le parcours des élèves. Malgré leurs perceptions convergentes en matière d'orientation, ces derniers réinterprètent et s'ajustent à cette mission en fonction de leur ancienneté, de leur discipline et du contexte de leur établissement. Ils sont amenés à opérer un « bricolage » pour s'adapter au mieux aux injonctions.

Prosperi, E., Cordazzo, P., & Doignon, Y. (2024). **Partir ou rester : l'impact de la Covid-19 sur la mobilité étudiante entre la licence et le master en France**. In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 29-43). <https://doi.org/10.4000/11uu9>

Romanens, M. (2024). **Parcours d'apprentis du dispositif dual suisse : santé et souffrances au travail**. In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 289-299). <https://doi.org/10.4000/11uui>

Vero, J., Sigot, J.-C., & Stephanus, C. (2024). **Prendre la mesure du rôle des organisations dans les capacités de reconversion : retour sur les parcours des salariés en emploi peu qualifié : Résumé**. In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 271-272). <https://doi.org/10.4000/11uuq>

Politique de l'éducation et système éducatif

Akther, J. (2024). **Educational inequality and emancipation: A Rohingya case study**. *International Review of Education*, 70(3), 397-415. <https://doi.org/10.1007/s11159-023-10056-4>

In 2017, Rohingya people experienced forced migration from their native land of Myanmar to the neighbouring country of Bangladesh. They fled in massive numbers and took shelter in Cox's Bazar where they now live in a diaspora community. The qualitative study presented in this article aimed to illustrate and analyse the contemporary educational situation of the Rohingya community in Bangladesh, in light of Paulo Freire's and Henry A. Giroux's philosophies. Data were collected using document analysis, focus group discussions with 20 Rohingya community members, and in-depth interviews with three development workers, two Rohingya school teachers and a host country representative. Results were analysed and grouped into themes. The education of Rohingya appears to be in preparation for repatriation to their home country; however, the process and timeline remain uncertain. Meanwhile, their movement in Bangladesh is restricted, and they cannot go outside the refugee camps for any education or training purposes. They remain in a "culture of silence", including a lack of acknowledgement of their opinions and voices. Political hegemony, absence of democracy, structural inequality and the language barrier deprive these Rohingya of access to state education

and job opportunities. Cooperation between the Bangladeshi government and international non-governmental organisations could help to empower Rohingya people to develop more awareness about the structural oppression and encourage their emancipation through education.

Almoayad, S., Favari, E., Halabi, S., Krishnaswamy, S., Music, A., & Tandon, S. (2024). **Active conflict and access to education: Evidence from a series of conflict-related shocks in Yemen.** *Review of Development Economics*, 28(3), 1005-1030. <https://doi.org/10.1111/rode.13081>

Using a high-frequency survey in Yemen, we demonstrate how school attendance responds to a series of conflict-related shocks. First, there are a number of plausibly exogenous events that significantly change the severity of violence but have limited impacts on school attendance. These events include the capture of the southern capital by secessionist forces, an unexpected partial ceasefire, and the capture of a governorate from the internationally recognized government by Houthi forces. Second, we demonstrate how shocks aside from living in close proximity to violence—institutional declines and macroeconomic shocks associated with the conflict—can have large impacts on school attendance and the ability to afford essential services. For example, a teacher strike associated with conflict-induced institutional declines caused an immediate doubling of the share of households with poor school attendance. Combined, the results better illustrate some of the mechanisms by which conflict impedes school attendance and human capital formation, and the results have implications for education assistance being delivered in conflict settings.

Bećirović, S. (2024). **Examining learning management system success: a multiperspective framework.** *Education and Information Technologies*, 29(9), 11675-11699. <https://doi.org/10.1007/s10639-023-12308-0>

This study aims to determine the factors influencing the efficient and successful use of LMS among university-level students. A multiperspective approach was performed using TAM3 and ISS framework to achieve the aforementioned aim. The survey was administered to 371 university students. Structural equation modeling (SEM) has been conducted to test the model. The findings showed that information quality significantly impacts output and system quality, while output quality significantly affects perceived usefulness. However, there was an insignificant relationship between output quality and system quality, information quality and user satisfaction, and information quality and perceived usefulness. Likewise, system quality does not significantly affect perceived usefulness and system success. The test of the structural model demonstrated the negative relationship between user satisfaction and system and output quality and system success. Thus, the success of the LMS system should be enhanced through improvements of the content, system, and output quality, which lead to increased students' satisfaction and perceived usefulness of LMS. This study provides valuable theoretical and practical implications. Given that most previous studies focused on student satisfaction with LMS, this study adds to the literature on LMS system success at the tertiary level of education. Further, the results of this research may contribute to improvements in educational policy, teachers' pre-service and in-service training and practices, and the effectiveness of students' LMS use.

Bélangier, N., Goastellec, G., & Verhoeven, M. (2024). **Le référentiel de l'inclusion en actes : expansion et brouillage des frontières dans les organisations scolaires.** *Éducation et Sociétés*, 52(2), 5-19. <https://doi.org/10.3917/es.052.0005>

À l'agenda politique international depuis les années 1990, le référentiel de l'inclusion demande à toute institution éducative de s'adapter à la diversité des apprenants, dans une perspective d'accessibilité, de reconnaissance et de développement du potentiel de chacun. Ce préambule pose les jalons d'un dossier consacré aux traductions organisationnelles concrètes de ce nouvel impératif. L'exploration de différents systèmes nationaux montre que ce référentiel épouse les contours de réalités historiques et structurelles variées, ce qui en colore, selon une logique de dépendance au sentier, les interprétations et mises en forme locales. Trois arguments sont avancés pour problématiser ce processus de traduction. Le premier concerne la manière dont l'injonction à l'inclusion reconfigure les lignes de division et de hiérarchisation scolaire existantes, tout en étant façonnée par elles. Le deuxième porte sur son impact sur la division du travail éducatif et sur la renégociation des territoires et des frontières entre professionnels concernés par l'inclusion, entre collaboration et concurrence. Le troisième interroge le rôle des parents dans sa mise en œuvre, entre injonction d'accessibilité et production de nouvelles asymétries.

Bernal Gonzalez, A., Dumay, X., Dupriez, V., & März, V. (2024). **L'écologie professionnelle de l'école inclusive en Fédération Wallonie-Bruxelles : aires de tâches et luttes concurrentielles entre groupes professionnels.** *Éducation et Sociétés*, 52(2), 83-100. <https://doi.org/10.3917/es.052.0083>

Cet article analyse la division du travail éducatif dans l'école inclusive en Belgique francophone, en se focalisant sur les acteurs externes aux établissements scolaires. En s'appuyant sur la théorie des écologies professionnelles d'Abbott (1988), l'étude examine l'émergence de l'écologie de l'école inclusive et ses conséquences sur la reconfiguration des territoires professionnels. Partant d'une analyse documentaire, une cartographie précise des entités mobilisées en lien avec les publics cibles à risque est établie. Elle révèle une expansion significative du nombre d'acteurs éducatifs, ainsi qu'une diversité d'écologies politiques liées. Ensuite, l'analyse d'entretiens réalisés auprès des professionnels de ces entités met en évidence les enjeux de légitimation autour d'aires de tâches et l'importance d'investiguer les luttes concurrentielles caractérisant cette nouvelle écologie.

Billings, M. S., Rubin, P. G., Gándara, D., & Hammond, L. (2024). **Higher Education Policy Narratives during COVID-19: How are Budget Requests Justified to State Legislatures?** *Research in Higher Education*, 65(4), 625-654. <https://doi.org/10.1007/s11162-024-09798-3>

During economic recessions, state funding for higher education contracts (Delaney & Doyle, 2011; Hovey, 1999; SHEEO, 2022). Despite this reality, public higher education officials need to offer insights and explanations to state legislators about the current status of their institutions and their needs when discussing their budget requests. We use a multiple case-study design, framed by the narrative policy framework, to examine how campus officials in California and Texas justify their budget requests to the state legislature during the COVID-19 pandemic. Drawing on 131 h of transcribed legislative budget meetings and 62 documents, our findings suggest that higher education leaders emphasize the economic functions of higher education and center their ability to successfully manage during these uncertain and difficult times by highlighting improved or stable accountability measures such as enrollment, persistence, graduation, and job

placement rates. During these budget requests, there are commonalities between the states regarding the structure, justifications, and narrative strategies used. However, higher education leaders evoked different narrative objects depending on the perceived values, beliefs, and norms of their state legislators.

Bovey, L. (2024). **Les effets des politiques inclusives sur le mandat et le travail des enseignantes spécialisées dans le canton de Vaud.** *Éducation et Sociétés*, 52(2), 119-134. <https://doi.org/10.3917/es.052.0119>

À partir d'entretiens informels et d'observations recueillies lors d'une recherche doctorale, deux effets des politiques inclusives menées dans le canton de Vaud sur le métier d'enseignante spécialisée sont étudiés. Premièrement, les enseignantes spécialisées sont de plus en plus incitées à intervenir dans les classes ordinaires où les élèves désignés à besoins éducatifs particuliers sont maintenus ou réintégré. Elles sont ainsi en contact étroit avec leurs collègues de cette école et les autres métiers de l'éducation qui gravitent autour des élèves en difficulté. Ce partage des territoires leur demande un important travail de négociation pour faire et tenir leur place ainsi que celle de leurs élèves. Deuxièmement, les dispositifs étant conçus –dans une visée inclusive– pour être transitoires, les enseignantes spécialisées sont amenées à préparer et évaluer les élèves pour juger lesquels pourront raccrocher le programme normal et ceux qui devront être redirigés vers d'autres dispositifs plus spécialisés. De manière antagonique avec la philosophie inclusive et en porte-à-faux avec leurs idéaux professionnels, elles endossent désormais une fonction de tri scolaire.

Capdevielle, V., Courtinat-Camps, A., de Léonardis, M., Lespine, L., Savournin, F., Chevallier-Rodrigues, É., & Brossais, E. (2024). **Mise en œuvre du paradigme inclusif dans deux lycées professionnels français : organisation institutionnelle et pratiques professionnelles.** *Éducation et Sociétés*, 52(2), 23-40. <https://doi.org/10.3917/es.052.0023>

Cette contribution pluridisciplinaire –psychologie, sciences de l'éducation et de la formation– s'intéresse à la mise en œuvre du paradigme inclusif dans deux lycées professionnels. À partir d'une épistémologie compréhensive qui affirme la centralité du sujet dans l'analyse des situations sociales, le recueil de données s'appuie sur des entretiens individuels et collectifs réalisés auprès de chefs d'établissement et d'équipes éducatives. Elle montre la manière dont la prescription inclusive se concrétise à travers des dispositifs et pratiques fondés sur des modes d'organisation et de fonctionnement différents. Les professionnels repèrent les obstacles et leviers à la scolarisation et à l'insertion des élèves bénéficiant d'un dispositif Ulis pro et les paradoxes inhérents aux politiques inclusives. Finalement, le LP (lycée professionnel) a des atouts. Il constitue un espace favorable à l'accessibilité des savoirs et à la participation sociale des élèves, notamment en situation de handicap psychique et cognitif.

Carlana, M., Miglino, E., & Tincani, M. M. (2024). **How Far Can Inclusion Go? The Long-term Impacts of Preferential College Admissions** (NBER Working Paper N° 32525). Consulté à l'adresse National Bureau of Economic Research, Inc website: <https://econpapers.repec.org/paper/nbrnberwo/32525.htm>

Affirmative action and preferential admission policies play a crucial role in fostering social mobility by bolstering the prospects of disadvantaged groups. In this paper, we analyze the long-term effects of a Chilean policy (PACE) that targets students in underprivileged schools, offering guaranteed admission to selective colleges to those graduating in the top 15 percent of their high school class. Leveraging both the randomized expansion of

PACE and the admission discontinuity, our analysis reveals that PACE yields positive labor market effects for the average targeted student, especially women, driven by the selectivity of the attended colleges. However, for marginally eligible students, higher dropout rates and negative labor market outcomes emerge, suggesting PACE may induce a mismatch between their skills and the academic rigor of selective programs. Finally, we find that students in the bottom 85 percent of their schools experience positive effects on labor market outcomes. We identify equilibrium effects on local labor markets as a potential mechanism. The results suggest that there is a limit to how far preferential admissions can go while delivering on their promises.

Cart, B., & Toutin-Trelcat, M.-H. (2024). **De la nécessité de combiner données administratives, données d'enquêtes quantitatives et qualitatives pour mesurer et comprendre les ruptures de contrat d'apprentissage.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 49-60). <https://doi.org/10.4000/11uuf>

Conter, B. (2024). **Politiques européennes de crises et pression aux réformes sociales en Belgique : une perspective de long terme.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 261-269). <https://doi.org/10.4000/11uuf>

Corral-Granados, A., Rogers, C., & Kruse, F. (2024). **The forgotten ECEC staff working with birth-to-3-year-olds: The imbalances between the workforce policies and ECEC staff employment conditions in Spain.** *Management in Education*, 38(3), 125-137. <https://doi.org/10.1177/08920206211057979>

In response to an international focus on Early Childhood Education and Care (ECEC), Spanish scholars have recently started to explore the participation of early years practitioners in their educational organisations and their views on working conditions. However, a comprehensive review of the current challenges experienced by the Under 3s early years educators and the examination of the imbalances in workforce policy and working conditions on literature, has thus far not been conducted. Three themes are identified related to the professional developmental path within the school settings that the Spanish ECEC educators follow. The first relates to the educators' initial ECEC education and training, who the staff caring for this age group are, and how prepared they are. The second is linked to the ECEC programs available for children from birth until they reach three years, and how and where the inclusive programs are delivered to this age group, as well as the early years educators' working conditions and the impact of the professional roles. Whereas the third relates to in-service professional development derived from interaction and collective learning. The article concludes with suggestions on how the practitioners' professional development could operationalise policy requirements in order to achieve more inclusive and child-centred learning.

de Gendre, A., Karbownik, K., Salamanca, N., & Zenou, Y. (2024). **Integrating Minorities in the Classroom: The Role of Students, Parents, and Teachers** (IZA Discussion Paper N° 16969). Consulté à l'adresse Institute of Labor Economics (IZA) website: <https://econpapers.repec.org/paper/izaizadps/dp16969.htm>

We develop a multi-agent model of the education production function where investments of students, parents, and teachers are linked to the presence of minorities in the classroom. We then test the key implications of this model using rich survey data and

a mandate to randomly assign students to classrooms. Consistent with our model, we show that exposure to minority peers decreases student effort, parental investments, and teacher engagement and it results in lower student test scores. Observables correlated with minority status explain less than a third of the reduced-form test score effect while over a third can be descriptively attributed to endogenous responses of the agents.

Demongeot, A., & Lombard, F. (2024). **L'apprentissage au 31 décembre 2023**. *Note d'Information*, (24.28), 1-4. Consulté à l'adresse <https://www.education.gouv.fr/l-apprentissage-au-31-decembre-2023-414743>

Au 31 décembre 2023, les centres de formation d'apprentis accueillent 1 021 500 apprentis, soit une augmentation de 7,1 % par rapport à 2022, après trois années de hausse historique, entre 14 % et 30 %.

Dirani, A., & Piquée, C. (2024). **Analyse du processus d'admission en L1 dans les filières universitaires non sélectives**. *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w28>

À partir des données Parcoursup, nous cherchons à comprendre la cohabitation de différentes logiques d'acteurs dans la procédure d'admission en première année à l'université. L'objectif est de rendre compte de l'articulation des rôles des uns et des autres (les élèves, les équipes pédagogiques des lycées, les membres des commissions d'examens des vœux des universités) dans la procédure. Plus précisément, il s'agit de d'interroger le caractère juste du processus en identifiant les principes de sélection mis en œuvre, pris entre méritocratie scolaire et intervention humaine, et leur effectivité. Une première partie des analyses a pour objectif de mettre au jour la tension qui s'exerce entre le rôle des commissions d'examen des vœux qui proposent des places à l'université et le rôle des candidats qui choisissent de s'inscrire. Puis, pour différentes filières, nous examinons la place de « l'intervention humaine », c'est-à-dire ce que les avis qualitatifs de la Fiche Avenir, formulés par les équipes pédagogiques du secondaire, et leur degré de prise en compte dans les pré-classements, définis par les équipes pédagogiques du supérieur, font à la procédure Parcoursup et à sa lisibilité. Nous interrogeons ainsi la procédure d'affectation dans l'enseignement supérieur, fondée sur la méritocratie scolaire mais censée être régulée par « l'intervention humaine » des acteurs du secondaire et du supérieur.

El-Hamamsy, L., Monnier, E.-C., Avry, S., Chessel-Lazarotto, F., Liégeois, G., Bruno, B., ... Mondada, F. (2024). **An adapted cascade model to scale primary school digital education curricular reforms and teacher professional development programs**. *Education and Information Technologies*, 29(9), 10391-10436. <https://doi.org/10.1007/s10639-023-12043-6>

Many countries struggle to effectively introduce Digital Education (DE) to all K-12 students as they lack adequately trained teachers. While cascade models of in-service teacher-professional development (PD) can rapidly deploy PD-programs through multiple levels of trainers to reach all teachers, they suffer from many limitations and are often ineffective. We therefore propose an adapted cascade model to deploy a primary school DE teacher-PD program throughout an administrative region. The model relies on teacher-trainers who (i) are active teachers in the region, (ii) have a prolonged trainer-PD with experts who piloted the teacher-PD program to acquire adult-trainer and DE-related competences, and (iii) are supported by the experts throughout the deployment. To validate the deployment model we used data from 14 teacher-trainers,

the 700 teachers they trained, and 350 teachers trained by experts. The teacher-trainer findings demonstrate that the adapted cascade model effectively addresses most cascade models' limitations. The teacher-related findings further validate the adapted cascade model in terms of perception, motivation and adoption which are at least equivalent to those obtained with the experts. To conclude, the adapted cascade model is an effective means of spreading primary school DE PD-programs at a large scale and can be used in other DE reforms.

Granato, M., Beckmann, J., & Athanasiadi, E. (2024). **Est-ce que les ambassadeurs de formation en alternance peuvent contribuer à réduire les tensions dans les professions STIM sur le marché des places d'apprentissage en Allemagne ? : Premiers résultats d'une étude longitudinale. Résumé.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal*, 24-25 juin 2024, Aix-en-Provence (p. 301-302). <https://doi.org/10.4000/11uut>

llabaca Turri, T., Cecchi Bernales, C., & Moreno Matus, K. (2024). **Les significations renouvelées de l'inclusion dans l'enseignement supérieur au Chili : le Programme d'Accès à l'Enseignement Supérieur (PACE).** *Éducation et Sociétés*, 52(2), 63-80. <https://doi.org/10.3917/es.052.0063>

Face à la sous-représentation des étudiants des classes populaires dans l'enseignement supérieur chilien, un Programme d'accès à l'enseignement supérieur (intitulé PACE) a été mis en place en 2014. Ce programme, se réclamant d'une politique d'inclusion, consiste à ouvrir une voie d'accès propre aux étudiants les plus performants des lycées publics considérés comme vulnérables. Le dispositif entend ainsi atténuer les effets de la sélection académique et sociale à l'œuvre dans le système éducatif chilien. Cet article propose une étude critique de la notion d'inclusion qui sous-tend cette politique publique, à partir de l'analyse discursive des termes du programme ainsi que d'entretiens menés avec des responsables de la mise en œuvre de PACE dans cinq universités qui l'ont adopté. Cette analyse met en lumière une interprétation dominante de l'inclusion en termes de redistribution des opportunités d'accès à l'enseignement, mais aussi l'émergence progressive d'orientations faisant appel à une rhétorique de la reconnaissance ainsi qu'à une logique d'accompagnement intégral de l'étudiant dans ses dimensions académiques et extra-académiques.

Jacques, M.-H. (2024). **De la transition inclusive à la transition de prime insertion de jeunes porteurs de handicap mental : chronique longitudinale d'une mise en accessibilité.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal*, 24-25 juin 2024, Aix-en-Provence (p. 209-218). <https://doi.org/10.4000/11uum>

James, D. M., Wicker, K., Street, M., Bibby, R. J., & Robinson, J. (2024). **Systems leadership in the early years.** *Management in Education*, 38(3), 99-106. <https://doi.org/10.1177/08920206211031913>

This paper describes a new leadership coaching model that was delivered as part of Manchester city region's delivery of the Department for Education's Early Outcomes Fund. The coaching model explicitly paralleled the relational practices that are increasingly shaping early intervention policy and practice. Goodwin's theory of professional vision (1994) and Shotter's theorisation of with-ness (2011) provided the conceptual lens for this paper. The coaching facilitation aimed to afford the emergence

of a new way of seeing leadership by scrutinising events of relational practice between participants in the coaching sessions (using video recording and review) and creating discursive practices using strengths-based analysis. We exemplify the coaching model using notes from a collaborative ethnographic evaluation of the six half-day group coaching sessions, surfacing how a new way of seeing silence may have seeded a new 'object of knowledge' in the group's emerging professional vision of leadership in the early years.

Jarvis, A. (2024). **Untangling collegiality and distributed leadership: Equality versus utility. A perspective piece.** *Management in Education*, 38(3), 138-143. <https://doi.org/10.1177/08920206211057980>

Both 'collegiality' and 'distributed leadership' have, as terms, occasioned a good deal of debate. Conceptually elastic, they are often used interchangeably, or not appreciated as embodying a range of leadership styles and relationships. Spurred by an unanswered query from a research project, this theoretical article attempts to clarify what the two words mean – especially in relation to each other. Collegiality is defined as an approach, characterised by equality, whereas distributed leadership is seen to be much more closely aligned to the goals of a team or organisation, thus making it more to do with utility. While formal distributed leadership is indifferent to collegiality - although not hostile to it - informal distributed leadership, it is argued, requires collegiality to be in place before it can exist, much less thrive.

Joly, N., & Berriet-Sollicec, M. (2024). **Débatte des transitions pour reconcevoir les formations.** *Norois. Environnement, aménagement, société*, (271), 83-93. <https://doi.org/10.4000/11w0y>

Cet article fait le bilan d'actions menées entre 2022 et 2023 dans un établissement d'enseignement supérieur en vue de mobiliser enseignants et étudiants autour d'une réflexion d'ensemble sur les façons d'adapter les formations aux défis de l'anthropocène. Les deux auteures analysent leur portage d'initiatives à la lueur des concepts de la sociologie des mobilisations et des recherches sur la participation du public en démocratie. En s'appuyant plus spécialement sur les travaux consacrés à l'institutionnalisation de la participation, elles distinguent parmi les initiatives impulsées celles qui relèvent d'une « participation conventionnelle » (création d'un groupe de travail Transitions, large sondage auprès des élèves-ingénieurs) et celles liées à une « participation non conventionnelle » (tribune publiée dans un média national et soumise à signature), ce choix étant destiné à impliquer un nombre plus étendu d'acteurs et à élargir l'échelle du débat, du local au national. In fine, la faiblesse des ressources et la quasi-absence de réseaux de sociabilité préexistants entre les différents protagonistes conduisent à un échec de la mobilisation nationale, tandis qu'un processus de transformation des contenus et des situations d'enseignement s'enclenche à petits pas, en l'absence de modes de gouvernance clairement établis pour leur accompagnement.

Joutard, X., & Pérez, P. (2024). **Le dispositif des E2C face à la Garantie jeunes : une analyse mixte et longitudinale des impacts d'un choc sur le quasi-marché des actions de formation adressées aux NEETS : Résumé.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal*, 24-25 juin 2024, Aix-en-Provence (p. 219-220). <https://doi.org/10.4000/11uuy>

Laville, M., & Mazereau, P. (2024). **Entre coupures et coutures, le jeu de frontières professionnelles dans l'éducation inclusive en France.** *Éducation et Sociétés*, 52(2), 101-118. <https://doi.org/10.3917/es.052.0101>

À partir d'une approche qui articule des apports de l'anthropologie de l'activité et de la sociologie des groupes professionnels, deux dispositifs produits par la politique d'inclusion éducative en France sont examinés : l'un dans un collège, l'autre dans une unité d'enseignement maternelle autisme. Après avoir explicité le cadre théorique avec lequel la notion de frontière est pensée, l'article analyse la manière dont les politiques publiques d'inclusion éducative se sont déployées en France au regard de l'international. Puis, selon les questions que se posent les acteurs au cœur des situations d'interprofessionnalité, il rend compte de différents arrangements déployés dans le jeu complexe des divisions du travail. Ceux-ci se révèlent dépendants des contradictions maintenues entre l'échelon organisationnel et celui des valeurs gouvernant les politiques éducatives, ce qui fragilise leur pérennisation. La notion de frontière permet ainsi d'apprécier la manière dont les relations entre professionnels reconfigurent les professionnalités qu'elles relient en produisant ou non des milieux associés.

Le Breton, S., Neirac, L., Andreu, S., Conceicao, P., Desclaux, J., Eteve, Y., ... Thumerelle, J. (2024). **Évaluations point d'étape à mi-CP 2023-2024 : amélioration des résultats par rapport à 2023 et réduction des écarts entre secteurs de scolarisation.** *Note d'Information*, (24.24), 1-4. Consulté à l'adresse <https://www.education.gouv.fr/evaluations-point-d-etape-mi-cp-2023-2024-amelioration-des-resultats-par-rapport-2023-et-reduction-414710>

En janvier 2024, l'ensemble des élèves de CP ont été évalués en français et en mathématiques. Ce point d'étape, en milieu d'année scolaire, permet de mesurer l'évolution des acquis des élèves dans certains domaines de la lecture, de l'écriture et de la numération.

Mairal-Llebot, M., Liesa-Orús, M., & Latorre-Coscolluela, C. (2024). **Challenges in achieving educational inclusion and development in the digital era: analysis of emotions, barriers and perceived needs.** *Education and Information Technologies*, 29(9), 11421-11443. <https://doi.org/10.1007/s10639-023-12285-4>

Society is currently immersed in a highly digitalised panorama due to Information and Communication Technologies (ICT). The educational process is also in a period of constant technological change and renewal. The transformation of education and methodologies can bring positive benefits for students, but also inequalities. This study aims to analyse the perceptions of families of pupils aged 3–18 on how the use of technology influences their children's education in terms of emotions, barriers and needs. It is also intended to study whether the perceived barriers are determined by the underlying needs of the households and/or the emotions they experience from the use of technological resources. Finally, the consequences of perceived barriers on needs are studied. For this purpose, 720 parents completed an online questionnaire. The application of the Structural Equation Model reveals that negative emotions have a positive and significant effect on perceived barriers. On the other hand, a positive and significant effect of perceived barriers on expressed needs is found. The results of the research show the inequalities that ICT generate in the school environment, which are determined by the characteristics of the pupils' family context. Knowing about the situations and perceptions of families is a first step towards carrying out actions to break down barriers and meet needs, the ultimate goal of inclusive education.

Marande, G., Garcia Bacete, F. J., & Muñoz Tinoco, V. (2024). **Une intervention curriculaire pour combattre le rejet par les pairs en école primaire en Espagne.** Consulté à l'adresse Cnesco-Cnam website: <https://hal.science/hal-04641956>

Cette étude de cas traite d'un programme d'intervention contre le rejet par les pairs en école primaire, mis en œuvre en Espagne pendant quatre ans et suivi sur deux ans. L'équipe de recherche a examiné la qualité des relations entre élèves dans les écoles primaires en soulignant la nécessité d'un apprentissage socio-émotionnel curriculaire. Les approches et principes utilisés pour l'élaboration et la mise en œuvre du programme d'intervention sont décrites, mettant l'accent sur la position centrale du professeur pour réaliser une mise en œuvre de qualité. Cette contribution présente des résultats en tenant compte des difficultés rencontrées.

Mathivat, N., Rey, J., & Kloetzer, L. (2024). **Entre inclusion et sélection : l'orientation des élèves primo-arrivants allophones dans les conseils de classe d'accueil en Suisse.** *Éducation et Sociétés*, 52(2), 41-61. <https://doi.org/10.3917/es.052.0041>

La Suisse peut être décrite comme un laboratoire pour l'étude des migrations du fait de sa pluralité culturelle et linguistique nationale et immigrée, mais aussi de la multiplicité des réglementations propres à chaque canton. Dans le canton de Vaud, les élèves primo-arrivants allophones (EPAA) peuvent être scolarisés dans des classes d'accueil séparées. Chaque fin d'année, l'enjeu pour les enseignantes est d'évaluer chaque élève en train d'acquérir la langue d'enseignement locale, pour l'orienter dans un système à filières visant l'homogénéité des groupes. Ces moments charnières représentent un point aveugle dans la construction des trajectoires scolaires. Cette recherche étudie comment les EPAA sont orientés dans un système scolaire secondaire sélectif et d'après quels éléments. L'analyse des données montre que la prolongation de la scolarité en classe d'accueil est favorisée par les enseignantes pour protéger les élèves d'une scolarisation en classe ordinaire perçue comme à rebours de l'école inclusive.

Reversé, C., & Ramneehorah, R. (2024). **Crise commune et chemins divergents. Comparaison de la réception des politiques liées à l'absence de diplôme chez des jeunes en QPV urbain et en zone rurale pauvre.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal*, 24-25 juin 2024, Aix-en-Provence (p. 199-207). <https://doi.org/10.4000/11uud>

Rocha, J., Coronella, T., Reyes, M., & Romasanta, L. (2024). **The value of scholar-practitioner cultural intuition in transforming educational systems.** *International Journal of Qualitative Studies in Education*, 37(6), 1752-1771. <https://doi.org/10.1080/09518398.2023.2218828>

In this manuscript, we discuss how we, four women scholar-practitioners of color (WSPoC), utilize their cultural intuition (CI) to navigate the work place and academia in the context of our professional roles situated within STEM-M (Science, Technology, Engineering, Mathematics-Medicine) K-16 setting. We collectively shared our testimonios through platicás in writing group sessions creating a virtual counterspace that allowed us to examine the role of CI in our lives. From that examination, we developed a conceptual model of Scholar-Practitioner Cultural Intuition (SP-CI) consisting of five tenets. The objectives of this manuscript are to describe the testimonio process, the conceptual model that emerged from the analysis of the testimonios, and the model itself. Thus, this manuscript strives to reconstruct and reimagine the understanding of how scholar

practitioners (SP) navigate and advocate for themselves and students within racist educational structures and systems.

Shakeel, M. D., Wolf, P. J., Johnson, A. H., Harris, M. A., & Morris, S. R. (2024). **The Public Purposes of Private Education: a Civic Outcomes Meta-Analysis.** *Educational Psychology Review*, 36(2), 40. <https://doi.org/10.1007/s10648-024-09874-1>

Since Plato and Aristotle, political theorists have discussed the important role of education in forming democratic citizens. They disagree, however, over whether public or private schools are more effective at nurturing citizenship. We conduct a statistical meta-analysis to identify the average association between private schooling and measures of four central civic outcomes: political tolerance, political participation, civic knowledge and skills, and voluntarism and social capital. Our search identifies 13,301 initial target studies, ultimately yielding 531 effects from 57 qualified studies drawing from 40 different databases. Using Robust Variance Estimation, we determine that, on average, private schooling boosts any civic outcome by 0.055 standard deviations over public schooling. Religious private schooling, particularly, is strongly associated with positive civic outcomes. The evidence is especially strong that private schooling is correlated with higher levels of political tolerance and political knowledge and skills. We discuss heterogeneities, robustness checks, and implications.

Sotirov, A. (2024). **Le droit à l'inclusion, toutes choses inégales par ailleurs.** *Éducation et Sociétés*, 52(2), 137-154. <https://doi.org/10.3917/es.052.0137>

Comment, en Suisse, des parents et des professionnels luttent-ils autour de la scolarisation des enfants identifiés comme ayant des besoins éducatifs particuliers et donc autour de leur droit à bénéficier d'une inclusion scolaire ? Ce texte s'appuie sur une enquête ethnographique menée dans le canton de Vaud pour une thèse de doctorat sur l'examen des relations supposées partenariales entre ces protagonistes lors du passage vers la scolarité obligatoire. L'article documente les normes de participation au travailler ensemble auxquelles sont censés se conformer les parents et cerne en quoi elles favorisent ceux qui appartiennent aux classes moyennes et supérieures, donnant davantage de chance à leur enfant d'être inclus. Il montre en quoi la voix parentale souffre encore bien souvent d'un déficit de légitimité et comment celui-ci permet aux professionnels de faire consentir les parents à des choix qu'ils n'ont pas faits.

Taridi, M., Risnita, Yaakob, M. F. M., & Khairani, M. (2024). **An evaluative study for communicative language teaching (CLT) on online teaching and learning in higher education: Indonesian and Malaysian university context.** *Education and Information Technologies*, 29(9), 10611-10647. <https://doi.org/10.1007/s10639-023-12221-6>

The higher education landscape is continually evolving, with educators adapting to meet the needs, aspirations, and expectations of their students. Data technology and virtual-learning systems have become vital components in higher education operations, with many institutions incorporating online frameworks and innovations. The aims of the study to evaluate the effectiveness of Communicative Language Teaching (CLT) using university platforms for online teaching and learning in Indonesia and Malaysia, focusing on students' perspectives. The research utilizes the CIPP, which stands for Context, Input, Process, and Product appraisal framework proposed by Stufflebeam (*Journal of Research and Development in Education*, 5, 19-25, 1971). The study includes all students who take English as their subject in the English Department Program, as well as English lecturers. The stratified random sampling approach was employed for data collection.

Qualitative data gathered through interviews with educators from both institutions, while written papers provide additional insights. For quantitative data, a modified questionnaire with 63 items divided into six sections and five score scales were disseminated online through the Survey123 program. Descriptive and inferential statistics were used to analyze the questionnaire results. Smart-PLS was utilized for barrier element analysis, using PLS-SEM for causal predictive analysis and consideration of reflective and formative factors. Figure 1 presents the conceptual model, illustrating the connections between exogenous and endogenous latent components in the study. By integrating qualitative and quantitative approaches, this research provides valuable contributions to the understanding of CLT's impact on online education in these settings.

Thomas, F. (s. d.). **Le baccalauréat 2024 - Session de juin**. *Note d'Information*, (24.29), 1-4. <https://doi.org/10.48464/ni-24-29>

À la session du baccalauréat de juin 2024, avec 91,4 % d'admis en France, le taux de réussite global est légèrement en hausse par rapport à celui de juin 2023 (91,0 %, soit + 0,4 point).

Vanner, C. (2024). **What do you want your teachers to know? Using intergenerational reflections in education research**. *International Journal of Qualitative Studies in Education*, 37(6), 1788-1803. <https://doi.org/10.1080/09518398.2023.2233916>

The Intergenerational Reflections technique was developed to bring together the voices of connected stakeholders of different ages and positions—in this case, students and teachers—to create recommendations that build on both groups' perspectives. This article describes its use and results as piloted in the Time to Teach about Gender-Based Violence in Canada project. The project gathered 11 teacher participants in a participatory workshop to mobilize teachers' reflections on student-produced cellphlms responding to the prompt: "What do you want your teachers to know when teaching about gender-based violence?" Framed using hooks' engaged pedagogy, analysis describes teachers' identification of potential pedagogical adaptations responding to student recommendations, demonstrating Intergenerational Reflections' value in getting teachers to actively listen to student messages in educational research and practice. Results identify the need to involve other educational stakeholders in Intergenerational Reflections, particularly in addressing a lack of multi-level institutional support to enhance pedagogy about gender-based violence.

Vero, J., Sigot, J.-C., & Stephanus, C. (2024). **Prendre la mesure du rôle des organisations dans les capacités de reconversion : retour sur les parcours des salariés en emploi peu qualifié : Résumé**. In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal*, 24-25 juin 2024, Aix-en-Provence (p. 271-272). <https://doi.org/10.4000/11uuq>

von der Bank, F., Pilz, M., & Venkatram, R. (2024). **Farming is charming: Informal learning of farmers in Coimbatore, Tamil Nadu, India**. *International Review of Education*, 70(3), 497-518. <https://doi.org/10.1007/s11159-023-10049-3>

The agricultural sector in India has come to prominence as a source of employment and livelihood. It is one of the most significant informal sectors in the country, and one in which informal learning plays a major role. This article analyses the informal learning of farmers in Coimbatore, Tamil Nadu, India. In the course of this research, qualitative interviews with 34 farmers in Coimbatore were conducted and analysed with regard to informal

learning. The findings show that informal learning is lifelong and chiefly takes place at home in a family and peer group context. Informal learning is facilitated by training courses specifically adapted to farmers' needs, which can help them improve their situation on their respective farms. However, not every farmer attends these courses, indicating a need to strengthen the programmes, conduct information campaigns to raise awareness, and improve accessibility, especially for farmers and agricultural labourers.

Wahjusaputri, S., Nastiti, T. I., & Liu, Y.-D. (2024). **Development of a hybrid teaching factory model based on school governance in improving employability skills of vocational students.** *Jurnal Pendidikan Vokasi*, 14(1), 53-62. <https://doi.org/10.21831/jpv.v14i1.65108>
This research aims to develop a framework for a hybrid teaching factory model that combines face-to-face and online learning with information and communication technology to improve employability skills in the new normal era. The research method uses the ADDIE Research and Development model, which consists of five stages: analysis, design, development, implementation, and evaluation. The research was conducted in several vocational high schools in DKI Jakarta Region, Indonesia. The findings in the research prove that the implementation of hybrid learning has an impact on students and teachers. Hybrid learning teaching factory is proven to be able to overcome frustrations and limitations between teachers and students in the learning process through online facilities, making teaching factory learning more innovative because there are variations of learning to interact and discuss, and making the classroom atmosphere conducive because students become happy and active in learning and skilled in working. The success of a hybrid teaching factory is considered mutually beneficial for both students and teachers who complete one of the teaching factory learning curriculums while industry instructors develop and work on collaborative platforms that provide useful services such as augmented reality and virtual reality-based applications.

Whitbourne, S. K., Bowen, L. M., Silverstein, N. M., Montepare, J. M., & Stokes, J. E. (2024). **Promoting Age Inclusivity in Higher Education: Campus Practices and Perceptions by Students, Faculty, and Staff.** *Research in Higher Education*, 65(4), 601-624. <https://doi.org/10.1007/s11162-024-09785-8>

Population aging presents opportunities and challenges for higher education. Increasingly, age-diverse student populations are entering into or returning to postsecondary education; meanwhile, campuses are workplaces where faculty and staff are aging-in-place. Yet, age bias and discrimination continue to exist in institutions of higher education. As encouraged by the Age-Friendly University (AFU) initiative, higher education should foster age-inclusive environments. However, empirical measures are needed to document what it means to be age inclusive. To this end, the present study used the Inventory and Campus Climate Survey (ICCS; Silverstein et al., Silverstein et al., *The Gerontologist* 62:e48–e61, 2022), based on social-ecological theory, to assess age-inclusive practices and awareness of these practices across seven campus domains, along with personal beliefs regarding age inclusivity, as predictors of perceived age-friendliness. AFU network institutions in the U.S. (23 campuses) provided data from a total sample of 1549 faculty, 2582 staff, and 2700 students. Confirmatory Factor Analysis established the proposed structure of the Age-Friendliness and Personal Beliefs scales of the Campus Climate Survey. Model testing revealed that campus constituents, regardless of role, were largely unaware of age-friendly practices reported by campus

administrators, and that the degree of fit between actual practices and constituents' awareness of them predicted perceptions of age inclusivity. Constituents differed in their assessment of which age-friendly practices most contributed to their own sense of age inclusivity, with physical environment playing an important predictive role across all groups. The findings indicated that, even among institutions that endorse AFU principles, there is an overall disconnect between practices and perceptions that can impede the impact of age-inclusive efforts for age-diverse individuals who might benefit from them.

Williams, J., Tractenberg, R., Batut, B., Becker, E., Brown, A., Burke, M., ... Woodley, L. (2024). **Optimizing Short-format Training: an International Consensus on Effective, Inclusive, and Career-spanning Professional Development in the Life Sciences and Beyond.** <https://doi.org/10.1101/2023.03.10.531570>

Science, technology, engineering, mathematics, and medicine (STEMM) fields change rapidly and are increasingly interdisciplinary. Commonly, STEMM practitioners use short-format training (SFT) such as workshops and short courses for upskilling and reskilling, but unaddressed challenges limit SFT's effectiveness and inclusiveness. Prior work, including the NSF 2026 Reinventing Scientific Talent proposal, called for addressing SFT challenges, and a diverse international group of experts in education, accessibility, and life sciences came together to do so. This paper describes the phenomenography and content analyses that produced a set of 14 actionable recommendations to systematically strengthen SFT. Recommendations were derived from findings in the educational sciences and the experiences of several of the largest life science SFT programs. Recommendations cover the breadth of SFT contexts and stakeholder groups and include actions for instructors (e.g., make equity and inclusion an ethical obligation), programs (e.g., centralize infrastructure for assessment and evaluation), as well as organizations and funders (e.g., professionalize training SFT instructors; deploy SFT to counter inequity). Recommendations are aligned into a purpose-built framework—"The Bicycle Principles"—that prioritizes evidenced-based teaching, inclusiveness, and equity, as well as the ability to scale, share, and sustain SFT. We also describe how the Bicycle Principles and recommendations are consistent with educational change theories and can overcome systemic barriers to delivering consistently effective, inclusive, and career-spanning SFT. SIGNIFICANCE STATEMENT STEMM practitioners need sustained and customized professional development to keep up with innovations. Short-format training (SFT) such as workshops and short-courses are relied upon widely but have unaddressed limitations. This project generated principles and recommendations to make SFT consistently effective, inclusive, and career-spanning. Optimizing SFT could broaden participation in STEMM by preparing practitioners more equitably with transformative skills. Better SFT would also serve members of the STEMM workforce who have several decades of productivity ahead, but who may not benefit from education reforms that predominantly focus on undergraduate STEMM. The Bicycle Principles and accompanying recommendations apply to any SFT instruction and may be especially useful in rapidly evolving and multidisciplinary fields such as artificial intelligence, genomics, and precision medicine.

Zhu, Y., Yan, S., Tao, J., & Zhang, L. (2024). **The perspective of teaching systems: The effectiveness of two online teaching approaches in K-12 and school stages differences.** *Education and Information Technologies*, 29(9), 11585-11624. <https://doi.org/10.1007/s10639-023-12257-8>

This study explores the relationship between teacher teaching support, student involvement, technical environment support, and online teaching effectiveness among K-12 students from the perspective of teaching systems (teacher teaching support, student involvement, and technical environment support) and the differences between online teaching methods and school levels, to provide guidance for teachers to teach using different online teaching methods and at different school levels. The data came from 13,225 primary and secondary school students who participated in online teaching in a district of Beijing. This study used the quantitative research method, we established a model of factors influencing the effectiveness of online teaching through Structural Equation Modelling, and analysed the survey data to explore the factors influencing the effectiveness of online teaching, the paths and their mediating effects. It is worth noting that this study found that student involvement and teacher teaching support significantly and negatively affected the perceived learning effect; teacher teaching support significantly and negatively affected continuance intention; and that the effects of teacher teaching support, student involvement, and technical environment support on satisfaction and the effects of student involvement on continuance intention showed significant differences. These differences affect related mediated pathways, resulting in significant differences in them. In addition, we found that "teacher teaching support → student involvement → perceived learning effect" was different from "teacher teaching support → technical environment support → perceived learning effect." We also found a masking effect for the "teacher teaching support → student involvement → perceived learning effect" and "teacher teaching support → technical environment support → continuance intention" pathways. These findings provide suggestions for teachers at different levels to design appropriate online teaching strategies to improve student learning.

Pratiques enseignantes

Bächtold, M., Papet, J., Barbe Asensio, D., & Ngoua Ondo, A. (2024). **Direct instruction or active learning? The spectrum of first-year university teaching practices.** *Higher Education Research and Development*, 1-17.
<https://doi.org/10.1080/07294360.2024.2366318>

This study aims to gain a better understanding of the practices of first-year university teachers by considering the distinction between direct instruction and active learning. It is based on the responses of 356 teachers to questions relating to three areas of teaching practice: preparation, implementation and use of digital technology. Principal component analysis reveals a continuous spectrum of varied practices, distinguished by a combination of more or less frequent use of direct instruction and active learning. Cluster analysis was used to identify practice profiles by considering each of the three practice areas separately. This analysis reveals that teachers whose preparation corresponds to active learning methods rely more on teaching resources, but also on their expertise in the subject. The profiles of teaching implementation show a division between direct instruction and active learning methods, with specific profiles associated with either the use of flipped classrooms or serious games. It appears that the teachers who make the most use of digital technology to get their students active are also those who use it most to deliver content. Results also show that the majority of teachers are involved in a transition to active learning, but that half still alternate it with direct instruction.

Balslev, K., & Naef, L. (2024). **Enseigner en intégrant l'urgence climatique : propos d'enseignantes en formation.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w2b>

Face aux défis du réchauffement climatique impactant probablement fortement la génération actuellement sur les bancs de l'école, le rôle de cette dernière est questionné par des enseignantes et enseignants soutenant les mouvements de jeunes, comme la grève du climat. Une recherche-formation destinée à des enseignant·es souhaitant développer et partager leurs pratiques pour y intégrer l'urgence climatique est décrite et les discours, produits dans ce cadre, analysés. De cette analyse se dégagent plusieurs thématiques fortes, notamment sous forme de préoccupations et de pistes projetées. Les propos des enseignant·es sont discutés à la lumière de courants visant à faire de l'environnement un sujet scolaire existant depuis les années 1970. Les résultats mettent en lumière la diversité et la richesse des activités proposées et le fort engagement qu'offrent ces enseignant·es pour intégrer l'urgence climatique dans leurs pratiques. Ils pointent également le rôle paradoxal accordé aux élèves, passant du rôle de moteur à celui de frein à l'engagement.

Blat, M., Boilevin, J.-M., & Marzin-Janvier, P. (2024). **Organisation de l'activité de conduite des apprentissages en situation d'enseignement-apprentissage des sciences fondé sur l'investigation.** *Éducation et didactique*, 18(2), 117-146. <https://doi.org/10.4000/11xa8>

La recherche présentée dans cet article s'appuie sur des méthodes issues des approches ergonomiques de la psychologie du travail pour analyser l'organisation de l'activité d'un professeur des écoles expérimenté en situation d'Enseignement des Sciences Fondé sur l'Investigation. Elle met à l'épreuve la robustesse d'un cadre théorique articulant la théorie de la conceptualisation dans l'action avec un modèle dynamique des intentions porté par une perspective phénoménologique du didactique. L'étude veut contribuer à l'effort de compréhension de l'activité enseignante de conduite des apprentissages en situation d'interaction entre l'enseignant et les élèves. Les résultats nous invitent à discuter des différents positionnements épistémologiques mis au jour entre les différentes échelles d'organisation de cette activité enseignante.

Bovey, L. (2024). **Les effets des politiques inclusives sur le mandat et le travail des enseignantes spécialisées dans le canton de Vaud.** *Éducation et Sociétés*, 52(2), 119-134. <https://doi.org/10.3917/es.052.0119>

À partir d'entretiens informels et d'observations recueillies lors d'une recherche doctorale, deux effets des politiques inclusives menées dans le canton de Vaud sur le métier d'enseignante spécialisée sont étudiés. Premièrement, les enseignantes spécialisées sont de plus en plus incitées à intervenir dans les classes ordinaires où les élèves désignés à besoins éducatifs particuliers sont maintenus ou réintégrés. Elles sont ainsi en contact étroit avec leurs collègues de cette école et les autres métiers de l'éducation qui gravitent autour des élèves en difficulté. Ce partage des territoires leur demande un important travail de négociation pour faire et tenir leur place ainsi que celle de leurs élèves. Deuxièmement, les dispositifs étant conçus –dans une visée inclusive– pour être transitoires, les enseignantes spécialisées sont amenées à préparer et évaluer les élèves pour juger lesquels pourront raccrocher le programme normal et ceux qui devront être redirigés vers d'autres dispositifs plus spécialisés. De manière antagonique avec la philosophie inclusive et en porte-à-faux avec leurs idéaux professionnels, elles endossent désormais une fonction de tri scolaire.

Buissonnet, A. (2023). **Influence des territorialités dans l'accompagnement pédagogique à l'orientation scolaire des élèves de 3ème**. *10ème colloque international en éducation - CRIFPE*. Présenté à Montréal (Québec), Canada. Consulté à l'adresse <https://hal.science/hal-04644623>

The purpose of this communication is to present different territorial contexts impacting the guidance for school orientation of middle school students. How do territories and their territorialities influence the orientation process from the perspective of professionals? Within a territorial comparative study of 9 schools, 90 qualitative interviews were conducted with educational teams and 100 biographical interviews with students (with an equal distribution of boys and girls). An ethnographic observation was carried out in the 9 middle schools. Supporting students and their families in their orientation choices, within the chosen tracks, remains an educational societal issue as it contributes to the emancipation of the individual. The often anxiety-inducing and complex nature of the orientation process leads students to prioritize the choice of a geographically nearby high school over the choice of a track. In the face of this geographical « self-censorship, » territorialities play a role in the actions and stance of orientation professionals, whether working in a village, at the foot, in the heart of the mountain, or in a priority neighborhood of a large city. The factors influencing the construction of students' and parents' projects are impacted by the territorial context, linked to specific pedagogical support.

Bunnik, B. (2024). **La difficile prise en compte de l'expérience spatiale des élèves dans l'enseignement de la géographie au cycle 3 de l'école primaire**. *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w2c>

La prise en compte de l'expérience spatiale des élèves en géographie au CM1 et CM2 permet de partir du quotidien vécu et pratiqué des élèves pour leur permettre de comprendre leur rôle d'acteur spatial dans un monde complexe. C'est une des demandes du programme scolaire en vigueur. Or, une grande partie des enseignantes du primaire ont des difficultés à intégrer dans leur enseignement cette prise en compte de l'expérience. Cet article vise à montrer et comprendre l'écart qui existe entre le curriculum prescrit et le curriculum réel en s'appuyant sur les représentations d'enseignantes interrogées au cours de l'été 2021. Si l'expérience spatiale des élèves est pensée comme un outil pertinent, celle-ci entre difficilement dans les pratiques de cours d'enseignantes chez qui domine l'idée que la géographie est une discipline de la mise à distance du monde dans laquelle on n'apprend peu à comprendre le rôle des acteurs spatiaux, dont celui des élèves, dans la construction du monde contemporain.

Capdevielle, V., Courtinat-Camps, A., de Léonardis, M., Lespine, L., Savournin, F., Chevallier-Rodrigues, É., & Brossais, E. (2024). **Mise en œuvre du paradigme inclusif dans deux lycées professionnels français : organisation institutionnelle et pratiques professionnelles**. *Éducation et Sociétés*, 52(2), 23-40. <https://doi.org/10.3917/es.052.0023>

Cette contribution pluridisciplinaire –psychologie, sciences de l'éducation et de la formation– s'intéresse à la mise en œuvre du paradigme inclusif dans deux lycées professionnels. À partir d'une épistémologie compréhensive qui affirme la centralité du sujet dans l'analyse des situations sociales, le recueil de données s'appuie sur des entretiens individuels et collectifs réalisés auprès de chefs d'établissement et d'équipes éducatives. Elle montre la manière dont la prescription inclusive se concrétise à travers des dispositifs et pratiques fondés sur des modes d'organisation et de fonctionnement différents. Les professionnels repèrent les obstacles et leviers à la scolarisation et à l'insertion des élèves bénéficiant d'un dispositif Ulis pro et les paradoxes inhérents aux

politiques inclusives. Finalement, le LP (lycée professionnel) a des atouts. Il constitue un espace favorable à l'accessibilité des savoirs et à la participation sociale des élèves, notamment en situation de handicap psychique et cognitif.

Carr, R. C., Jenkins, J. M., Watts, T. W., Peisner-Feinberg, E. S., & Dodge, K. A. (2024). **Investigating if high-quality kindergarten teachers sustain the pre-K boost to children's emergent literacy skill development in North Carolina.** *Child Development*, 95(4), 1200-1217. <https://doi.org/10.1111/cdev.14076>

This study tested the hypothesis that high-quality kindergarten teachers sustain and amplify the skill development of children who participated in North Carolina's NC Pre-K program during the previous year, compared to matched non-participants (N = 17,330; 42% African American, 40% Non-Hispanic White, 15% Hispanic; 51% male; Mage = 4.5 years at fall of pre-K). Kindergarten teacher quality was measured using a "value-added" approach. NC Pre-K participants outperformed non-participants in the fall of kindergarten ($\beta = .22$) and 11% of this boost remained evident by the spring of kindergarten. Higher value-added teachers promoted the skill development of all children ($\beta = .30$ in the spring) but did not differentially benefit the skill development of former NC Pre-K participants compared to non-participants.

de Checchi, K., Bächtold, M., Barbe Asensio, D., Papet, J., Roebroek, E., & Huang, Y. (2024). **Differences Between Blended and Face-To-Face Teaching in Students' Perception.** *American Journal of Distance Education*, 1-15. <https://doi.org/10.1080/08923647.2024.2366590>

This study investigates student perceptions of blended and face-to-face teaching and their connection to perceived learning and satisfaction. Five dimensions are examined: relation to the subject matter, self-efficacy to complete the course, to interact with the teacher and peers, and the teacher's pedagogical stance. We used a questionnaire which was completed by 134 students following seven different blended teaching courses. Results show that students felt more able to interact with teacher and peers in face-to-face compared to blended teaching condition. Self-efficacy to complete the course, to interact with peers and teacher's pedagogical stance emerged as key predictors in blended teaching courses for both perceived learning and satisfaction. These findings emphasize that enhancing interactions and teacher support are two important aspects to take into account to help students in blended courses.

Derouet, C., Doukhan, C., Flavier, E., Sabra, H., Rolland, A., & Yvain-Prébiski, S. (2024). **DidaStatExpl : présentation d'un projet de recherche sur les pratiques enseignantes en statistique dans la formation professionnelle des futurs statisticiens.** *JdS 2024 : 55^e journées de statistique de la SFdS*, 1246-1250. Consulté à l'adresse <https://hal.science/hal-04633964>

In this paper we will present a research project currently underway in the field of mathematics education focusing on teaching practices in statistics. The aim of this exploratory study is to describe the practices of a statistics teacher in a professional training course for future statistical researchers: the Bachelor Universitaire de Technologie Science des Données. The teaching studied concerns survey techniques. We will present the institutional context of our study area, then outline our research objectives and the general methodology of this multidisciplinary project (mathematics education, education and training science, statistics).

Duan, S., Bissaker, K., & Xu, Z. (2024). **Correlates of teachers' classroom management self-efficacy: A systematic review and meta-analysis.** *Educational Psychology Review*, 36(2), 43. <https://doi.org/10.1007/s10648-024-09881-2>

This meta-analysis examined literature from the last two decades to identify factors that correlate with teachers' classroom management self-efficacy (CMSE) and to estimate the effect size of these relationships. Online and reference list searches from international and Chinese databases yielded 1085 unique results. However, with a focus on empirical research the final sample consisted of 87 studies and 22 correlates. The findings cluster the correlates of CMSE into three categories: teacher-level factors (working experience, constructivist beliefs, teacher stress, job satisfaction, teacher commitment, teacher personality, and teacher burnout), classroom-level factors (classroom climate, classroom management, students' misbehaviour, students' achievement, classroom interaction, and student-teacher relationship), and school-level factors (principal leadership and school culture). The results of this meta-analysis show small to large correlations between these 15 factors with CMSE. How these factors are associated with teachers' CMSE and recommendations for future CMSE research are discussed.

El-Hamamsy, L., Monnier, E.-C., Avry, S., Chessel-Lazarotto, F., Liégeois, G., Bruno, B., ... Mondada, F. (2024). **An adapted cascade model to scale primary school digital education curricular reforms and teacher professional development programs.** *Education and Information Technologies*, 29(9), 10391-10436. <https://doi.org/10.1007/s10639-023-12043-6>

Many countries struggle to effectively introduce Digital Education (DE) to all K-12 students as they lack adequately trained teachers. While cascade models of in-service teacher-professional development (PD) can rapidly deploy PD-programs through multiple levels of trainers to reach all teachers, they suffer from many limitations and are often ineffective. We therefore propose an adapted cascade model to deploy a primary school DE teacher-PD program throughout an administrative region. The model relies on teacher-trainers who (i) are active teachers in the region, (ii) have a prolonged trainer-PD with experts who piloted the teacher-PD program to acquire adult-trainer and DE-related competences, and (iii) are supported by the experts throughout the deployment. To validate the deployment model we used data from 14 teacher-trainers, the 700 teachers they trained, and 350 teachers trained by experts. The teacher-trainer findings demonstrate that the adapted cascade model effectively addresses most cascade models' limitations. The teacher-related findings further validate the adapted cascade model in terms of perception, motivation and adoption which are at least equivalent to those obtained with the experts. To conclude, the adapted cascade model is an effective means of spreading primary school DE PD-programs at a large scale and can be used in other DE reforms.

Gao, C., Li, Z., & Zheng, L. (2024). **Develop and validate a scale to measure primary and secondary teachers' digital teaching competence.** *Education and Information Technologies*, 29(9), 10763-10789. <https://doi.org/10.1007/s10639-023-12228-z>

Teachers' digital teaching competence is a prerequisite for efficient teaching. This study aimed to develop a scale to assess primary and secondary teachers' digital teaching competence (PSTDTC). We analyzed and generalized definitions, models, and frameworks for PSTDTC, proposed a five-dimension model (digital teaching design competence, digital teaching implementation competence, digital teaching evaluation competence, digital teaching responsibility, and digital teaching attitude),

and developed a scale. Three specialists and seven in-service teachers tested the content validity of the PSTDTC scale. An exploratory factor analysis (n = 473) revealed a 5-factor structure corresponding to the theoretical model. Confirmatory factor analysis (n = 574) was used to assess the structural validity of the final scale. Other statistical findings indicate that the scale is scientific and reliable. In the study, we also used latent class analysis (LCA) to identify unobserved structures and the subpopulations of teachers. According to the LCA results, three latent classes were obtained, including low-level, intermediate- and high-level digital teaching competence. Through multiple logistic regression, we discovered that urban and secondary teachers are more likely to enter intermediate- and high-level digital teaching competence classes. Therefore, the PSTDTC scale provides educators and researchers an effective diagnostic instrument for evaluating the present state of teachers' digital teaching.

Gardiès, C., & Fauré, L. (2024). **Changements dans les pratiques d'enseignement et ancrage des élèves : une analyse des leviers menée au sein d'un LÉA enseignement agricole.** *Éducation et didactique*, 18(2), 9-22. <https://doi.org/10.4000/11xa2>

Cet article propose une analyse des changements initiés dans les pratiques d'enseignement pour favoriser l'ancrage des élèves au sein d'un Lieu d'Éducation Associé (LÉA) de l'enseignement agricole. Du point de vue théorique nous mobilisons le modèle quaternaire des pratiques d'enseignement, les différents niveaux de collaboration et le concept de médiation des savoirs. Le recueil des données est effectué au sein de la recherche collaborative et l'analyse en suit les étapes. Les résultats montrent que l'engagement dans une recherche collaborative au sein d'un LÉA est une forme de contrat pour un changement avec ici une entrée par les savoirs.

Goldberg, M., & Gustave, M. (2024). **L'imagier : une approche pédagogique des controverses à l'université. Aspects politiques, économiques, scientifiques et moyens persuasifs des différents acteurs au sujet de la capture accidentelle des dauphins.** *Études & Pédagogies*, (2024), 122-135. <https://doi.org/10.20870/eep.2024.8109>

In three scientific university courses, we are experimenting with the study of a controversy over the accidental captures of dolphins in the Bay of Biscay. In our system (9-12 p.m.), students create a picture book which allows them to compare the representations offered by the different actors: issues, alliances and oppositions, powers, arguments and means of persuasion. Students discover the controversy through videos and articles that contextualize the controversy, while the corpus of study that they analyze is mainly made up of brief communiqués (500-1000 words) produced by the actors during a discursive moment particularly significant: a decision of the Council of State which imposes restrictions on fishing activities. Creating this picture book puts students in a position to discover the different actors (political, industrial, associative, scientific, media), as well as the questions and points of view linked to the social, cultural and economic context of the controversy. Students also analyze the persuasive means put in place by these actors to exercise their influence.

Hajji, A., Baillet, D., Libotte, D., & Barrier, T. (2024). **Le tutorat par les pairs en contexte universitaire : quels effets en termes de milieu et contrat didactique ?** *Éducation et didactique*, 18(2), 87-103. <https://doi.org/10.4000/11xa6>

Cette recherche porte sur un dispositif de tutorat par les pairs mis en œuvre en Belgique francophone dans le cadre d'un enseignement universitaire. Elle vise à en étudier les effets sur le système didactique qui se met en place, plus particulièrement en termes de

milieu et de contrat didactique. À cette fin, un questionnaire et des entretiens avec des tutorés et tutrices ont été mobilisés. Les données recueillies suggèrent des effets positifs sur le sentiment des tutorés d'être soutenus dans leur travail. Surtout, il apparaît que les interventions tutorales semblent jouer en quelque sorte un rôle de « rétroactions » du milieu favorisant l'acculturation des tutorés aux normes du travail universitaire.

Heine, S., Krepf, M., Jäger-Biela, D. J., Gerhard, K., Stollenwerk, R., & König, J. (2024). **Preservice teachers' professional knowledge for ICT integration in the classroom: Analysing its structure and its link to teacher education.** *Education and Information Technologies*, 29(9), 11043-11075. <https://doi.org/10.1007/s10639-023-12212-7>

As digitalisation is becoming increasingly important in educational settings, teachers' key competencies – in particular, their professional knowledge regarding the integration of information and communication technology (ICT) in the classroom – warrant targeted development. Aside from their general pedagogical knowledge (GPK), teachers' technological pedagogical knowledge (TPK) and technological knowledge (TK) are becoming increasingly necessary for mastering professional teaching-related tasks (as outlined in the well-known technological pedagogical content knowledge (TPACK) model). To date, however, the question of whether these knowledge facets are discrete or interrelated – at least, on the basis of standardised assessments – has remained largely unanswered. In the present study, therefore, a sample of 619 preservice teachers (320 bachelor's and 299 master's students in their second semesters) were considered via an online survey with three different knowledge tests. In this article, we investigate hypotheses concerning the structures of those knowledge facets and further hypothesise that initial teacher education learning opportunities relate to preservice teachers' GPK, TPK, and TK. Our findings reveal that the three knowledge facets can be empirically separated. Master's students outperform bachelor's students in all three tests, however, with effects varying from strong (GPK) to medium (TPK, TK). As expected, pedagogical learning opportunities – surveyed through students' self-reports – directly correlate with GPK. By contrast, technological pedagogical and technological learning opportunities are not correlated with TPK and TK, respectively. We discuss the findings' implications for future initial teacher education design – in particular, the evident need to update the curriculum to meet the needs of the current era of digitalisation.

Holt, B., Wiater, A., & Rivens Mompean, A. (2023). **Evaluation and validation of informal language activities with open badges.** In G. D. Cristofaro, F. Silva, & B. Samu (Éd.), *Language MOOCs and OERs: new trends nad challenges* (p. 519-534). Consulté à l'adresse <https://hal.science/hal-04638019>

This article describes the creation of an open badge system meant to increase recognition of informal language learning. After laying the theoretical groundwork of informal language learning, we introduce open badges and the underlying blockchain technology that allows for their existence. While open badges can be used to recognize all kinds of informal learning and skill development, our focus is on how this technology can be used to recognize and promote foreign language learning in informal contexts. We present a system of micro badges designed for the specific purpose of allowing learners to gain official recognition for informal language learning activities that were completed outside the classroom. The badge system was developed as part of the Erasmus+ project called DIAL4U (Digital pedagogy to develop Autonomy, mediate and certify Lifewide and Lifelong Language Learning for (European) Universities, 2021–2023). We then raise essential questions concerning the evaluation and validation of these

activities. Finally, we discuss the future prospects of this system of micro badges and the long-term implications that this technology has on language learning.

Holubnycha, L., Shchokina, T., & Soroka, N. (2024). **Enseigner et apprendre en présentiel** (C. et R. Étienne, Trad.). *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w1y>

Cet article traite de la forme traditionnelle d'enseignement et d'apprentissage du point de vue de la qualité des apprentissages, en particulier des avantages et des inconvénients de l'enseignement en présentiel par rapport à la formation en ligne. L'objectif est de vérifier si le processus d'enseignement en classe est de meilleure qualité que l'enseignement et l'apprentissage en ligne sur la base d'un cas réel d'enseignement de l'anglais à l'Université nationale de droit Yaroslav Mudryi. Les tâches consistent à découvrir les avantages de l'enseignement en classe par rapport à celui en ligne, à révéler les inconvénients de l'enseignement traditionnel par rapport au format en ligne sur la base d'une expérience d'enseignement réelle et à vérifier si les avantages ou les inconvénients de la formation en classe ont une plus grande influence sur les résultats d'apprentissage des étudiants de niveau licence. Les méthodes de recherches sont empiriques (enquêtes, observations) et théoriques (analyses, synthèses et comparaisons). Les résultats ont mis en évidence les points suivants 1) les avantages de la formation en présentiel sont les suivants : interaction en temps réel, amélioration des compétences sociales, collaboration, organisation, motivation, accessibilité et meilleure évaluation ; 2) les inconvénients de la formation en présentiel ont été révélés : traitement d'une plus petite partie du programme ; problèmes de discipline ; impossibilité d'écouter le matériel de cours à plusieurs reprises si nécessaire ; problèmes d'accès au matériel d'apprentissage à partir d'Internet ; et la tendance de certains étudiants à avoir une barrière psychologique à parler une langue étrangère « en direct » devant d'autres étudiants ; 3) les résultats d'apprentissage des étudiants de niveau licence ont démontré que les étudiants en présentiel obtiennent de moins bons résultats académiques que les étudiants étudiant en ligne. Nous en concluons que les inconvénients de la formation en présentiel déterminent un plus grand effet sur les résultats d'apprentissage des étudiants que les avantages. Afin de déterminer quel format d'enseignement est de meilleure qualité, il est nécessaire de continuer à étudier le problème.

Lehner, P., & Pin, C. (2024). **L'accompagnement à l'orientation par les professeurs principaux de Terminale**. *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w21>

Cet article interroge au prisme du concept de mandat les conditions sociales et l'effectivité de l'élargissement du rôle des professeurs principaux en matière d'orientation. Après avoir resitué le mandat dans sa configuration historico-politique, l'article examine la fréquence et la nature de l'accompagnement fourni aux élèves et le degré d'engagement des enseignants. À partir de ces deux axes, l'article esquisse une typologie de quatre figures d'accompagnement.

Liu, Y., Huang, L., & Doleck, T. (2024). **How teachers' self-regulation, emotions, perceptions, and experiences predict their capacities for learning analytics dashboard: A Bayesian approach**. *Education and Information Technologies*, 29(9), 10437-10472. <https://doi.org/10.1007/s10639-023-12163-z>

Learning analytics dashboards (LADs) are emerging tools that convert abstract, complex information with visualizations to facilitate teachers' data-driven pedagogical decision-

making. While many LADs have been designed, teachers' capacities for using such LADs are not well articulated in the literature. To fill the gap, this study provided a conceptual definition highlighting data visualization literacy and integrating abilities as two critical components in LAD capacities. Moreover, this study assessed teachers' LAD capacities through a knowledge test and examined the combined effect of teachers' self-regulation, emotions, perceptions of LAD usefulness and ease of use, and online teaching experience on teachers' achievements of the LAD capacity knowledge test. The results of a Bayesian path analysis based on the sample of 150 teachers show that (1) teachers' self-regulation and perceived LAD usefulness were the two main factors that made significant impacts on their LAD capacities, (2) the factors of negative emotions and perceived ease of use had effects on teachers' LAD capacities, but such effects were mediated by self-regulation and perceived usefulness, and (3) online teaching experience had little effect on LAD capacities. This is the first study that conceptually researches teachers' capacities for LAD uses. The findings offer novel perspectives into the complexity of LAD using process and demonstrate the importance of teachers' self-regulation, emotions, and perceptions of usefulness in enhancing teachers' abilities to use LADs for pedagogical decisions and actions.

Marlot, C., Boivin-Delpieu, G., & Küll, C. (2024). **Le rôle de l'épistémologie pratique du professeur dans la mobilisation de certaines normes auto prescrites, en classe de sciences au premier degré.** *Éducation et didactique*, 18(2), 43-67. <https://doi.org/10.4000/11xa4>

Cette contribution vise à l'enrichissement de la notion d'épistémologie pratique dans le cadre de la TACD (Théorie de l'action conjointe en didactique). Elle tente de comprendre les déterminations de l'action conjointe dans la mise en œuvre de la démarche scientifique en classe, en étudiant la relation entre les normes autoprescrites (NAP) et l'épistémologie pratique (EP) des enseignants. Pour cela, elle met à l'épreuve, à travers deux études de cas contrastées, l'une en France et l'autre en Suisse romande, une méthodologie originale propre à saisir la relation NAP/EP dans le continuum d'action enseignante et, in fine, à modéliser grâce au profil NAP/EP ainsi établi, le rapport des enseignants à la Démarche scientifique à l'école (DSE). La comparaison des profils chez ces deux professeurs a permis de mieux comprendre et expliquer les déterminations de ce rapport spécifique à la DSE et son impact sur la nature des apprentissages scientifiques des élèves.

Martinache, I., Cléménçon, Y., Maurin, L., Meynier, F., & Mabut, M. (2024). **Ce que dialoguer veut dire.** *Éducation et didactique*, 18(2), 69-86. <https://doi.org/10.4000/11xa5>
Les échanges verbaux entre enseignants et élèves font l'objet d'appréciations contrastées : considérés par les uns comme un moyen d'impliquer les élèves en rompant avec la solennité du cours magistral, accusés par les autres d'être des vecteurs privilégiés d'une « pédagogie invisible » favorisant la reproduction des inégalités d'apprentissage. S'appuyant sur l'enregistrement et l'analyse d'une quarantaine de séquences de cours de SES en classe de seconde recueillies dans le cadre d'une recherche collective, cet article propose de dépasser cette alternative en montrant que le dialogue scolaire ne relève pas nécessairement d'une pédagogie implicite et peut même à certaines conditions contribuer à favoriser l'atteinte de certains objectifs éducatifs.

Mayeko, T. (2024). **Mettre au travail les élèves en classe relais.** *Éducation et didactique*, 18(2), 105-115. <https://doi.org/10.4000/11xa7>

Cet article se donne pour ambition de comprendre la façon dont les enseignants mettent au travail des élèves de classe relais. Pour cela, nous étudierons les types d'agencements spatiaux mis en œuvre au cours d'une leçon et leur influence sur l'activité des élèves. Plus précisément, à travers une approche descriptive et compréhensive, nous réaliserons une analyse comparative visant à mesurer l'impact des dispositifs investis pendant le cours de Sciences et Vie de la Terre (SVT) et pendant celui d'Éducation Physique et Sportive (EPS). Les résultats montrent que la manière de penser l'espace diffère au sein des deux disciplines. En outre, nous verrons que dans chacune des disciplines la question du corps est étroitement liée à la question des spatialités et apparaît comme un enjeu central.

Miller, E. B., Canfield, C. F., Roby, E., Wippick, H., Shaw, D. S., Mendelsohn, A. L., & Morris-Perez, P. A. (2024). **Enhancing early language and literacy skills for racial/ethnic minority children with low incomes through a randomized clinical trial: The mediating role of cognitively stimulating parent-child interactions.** *Child Development*, 95(4), 1172-1185. <https://doi.org/10.1111/cdev.14064>

Parenting is a critical mediator of children's school readiness. In line with this theory of change, data from the randomized clinical trial of Smart Beginnings (tiered Video Interaction Project and Family Check-Up; N = 403, treatment arm n = 201) were used to examine treatment impacts on early language and literacy skills at child age 4 years (nLatinx = 168, nBlack = 198, nMale = 203), as well as indirect impacts through parental support of cognitive stimulation at child age 2 years. Although results did not reveal direct effects on children's early skills, there were significant indirect effects for early literacy ($\beta = .03$, $p = .05$) and early language ($\beta = .04$, $p = .04$) via improvements in parental cognitive stimulation. Implications for interventions targeting parenting to improve children's school readiness beginning at birth are discussed.

Mraihi, S. (2024). **Ce que les interactions nous disent sur l'activité de l'enseignant et des étudiants pendant le cours par visioconférence en situation de contrainte.** *Distances et Médiations des Savoirs*, (46). <https://doi.org/10.4000/11vll>

This paper focuses on the analysis of teacher and student activity during the videoconference course which has grown considerably during the COVID-19 health crisis, by taking as object of study the interactions that take place between these two actors. The urgent transition to distance learning has forced teachers and students to adapt their activity to new training modalities. The classroom is transported to the private space or to another professional space such as the office and the teacher and students take part in the course in a virtual space through a screen. Our research aims to understand how teachers and students interact in this new environment. In this paper, we present the theoretical framework that guided our research, we outline our mixed research methodology based on qualitative and quantitative data and finally we share specific elements of our result by focusing on the degree of multimodality of interactions in videoconference course and the effects induced by physical and technical environment.

Pannier, C., & Michaut, C. (2024). **Les enseignants de lycée à l'épreuve de l'éducation à l'orientation.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w23>

En France, la loi « Orientation et Réussite des Étudiants » du 8 mars 2018 a créé la plateforme Parcoursup et renforcé le rôle des enseignants du secondaire dans

l'accompagnement à l'orientation des jeunes. Non formés à cela, ces derniers ont pourtant à composer avec cette mission et les nouveautés induites par la plateforme qui fait l'objet de vives critiques en raison notamment des inégalités qu'elle génère. Les potentiels ajustements nécessaires pour y faire face questionnent alors l'identité professionnelle des enseignants du secondaire. La recherche s'intéresse à la façon dont ces derniers acceptent ou résistent à la réforme au prisme de sa réception et de sa mise en œuvre. 23 enseignants de lycée ont été interrogés dans le cadre d'entretiens semi-directifs compréhensifs. Les résultats révèlent un manque de formation et de compétences en la matière chez les enquêtés. Ces derniers se sentent illégitimes et demeurent incertains quant aux effets que leur accompagnement peut avoir sur le parcours des élèves. Malgré leurs perceptions convergentes en matière d'orientation, ces derniers réinterprètent et s'ajustent à cette mission en fonction de leur ancienneté, de leur discipline et du contexte de leur établissement. Ils sont amenés à opérer un « bricolage » pour s'adapter au mieux aux injonctions.

Perego, C. (2023). **Elèves migrant.e.s plurilingues en classe ordinaire. Identification des leviers et des obstacles pour la formation des enseignant.e.s** (Phdthesis, Université Michel de Montaigne - Bordeaux III). Consulté à l'adresse <https://theses.hal.science/tel-04633444>

Les conditions migratoires multipliées rendent courante dans les classes la présence d'enfants connaissant d'autres langues que le français. La recherche qui fait l'objet de cette thèse s'enracine dans une expérience de terrain. D'abord enseignante puis formatrice pour les enseignant.e.s recevant des jeunes venu.e.s d'ailleurs, nous nous demandons pourquoi les enseignant.e.s de classe dites « ordinaires », toutes disciplines confondues, a priori convaincu.e.s de la validité des principes d'insertion, d'accueil, de plurilinguisme dans leurs classes, ne mettent pas en pratique ces mêmes principes avec leurs élèves. D'où vient ce divorce entre discours et pratiques ? Notre travail essaie donc de mettre au jour les obstacles qui entraveraient l'avancée des pratiques didactiques d'accueil dans les classes. S'appuyant sur une bibliographie relevant de plusieurs champs scientifiques en connexion et selon une approche prioritairement ethnographique, nous avons réuni un corpus fait de questionnaires et d'entretiens, pour questionner la notion d'inclusion, analyser les discours en présence et les thématiques qui pourraient servir de leviers pour des formations futures. Notre recherche s'inscrit résolument dans une approche sociodidactique qui donne une large place au contexte mondial, européen puis français de la migration. Elle se veut empirique dans son objectif de décrire et d'expliquer sans jugement un phénomène, et affirme un engagement éthique sans lequel on se fourvoie dans une fausse neutralité. Elle se donne enfin comme visée concrète une amélioration de la formation des enseignant.e.s et de l'accueil des enfants plurilingues dans les classes.

Perraud, C. (2024). **Décrire pour comprendre et transformer les pratiques : un travail coopératif dans un ESAT**. *Éducation et didactique*, 18(2), 23-41. <https://doi.org/10.4000/11xa3>

La question d'une « société inclusive », en particulier dans le cas des personnes avec un handicap mental, reste une question vive. Pour travailler certains aspects de cette question, nous avons mis en œuvre et étudié une ingénierie coopérative réunissant des professionnels, une chercheuse et des personnes en situation de handicap, dans un établissement et service d'aide par le travail (ESAT), du secteur médico-social. Dans cet article, à partir de deux exemples empiriques, nous montrons la spécificité d'une tel

dispositif coopératif, dispositif de recherche inscrit dans le paradigme général du design-based research.

Radford, L. (2024). **The dialectic between knowledge, knowing, and concept in the theory of objectification.** *Éducation et Didactique*, 18(2), 147-159. <https://doi.org/10.4000/11xa9>

The theory of objectification (TO) is a theory of learning that seeks to foster conceptually rich, and critical, inclusive, and democratic pedagogical practices. The conception of these practices is based on a new understanding of learning as a cultural-historical process. In turn, the theoretical formulation of learning is anchored in a conception of knowledge that departs from the accounts of rationalists and (new and old) empiricists. The purpose of this article is to offer an overview of knowledge and learning as conceived in the TO. This overview is, of necessity, philosophical, as it addresses a problem that has often been overlooked in educational research: the ontological problem of the nature of knowledge – such as mathematical and scientific knowledge. The philosophical overview presented here is based on a specific philosophy that inspires the theory of objectification: dialectical materialism. Drawing on this philosophy, I theorize learning as a social, embodied, affective, semiotic, and material process where individuals encounter knowledge. In this encounter knowledge manifests itself in sensible practical and material activity through what it is called here knowing and concept. As argued in this article, knowledge, knowing, and concept are three modes of existence of a same entity that is invoked in the movement of learning.

Sanders, D. A., & Mukhari, S. S. (2024). **The perceptions of lecturers about blended learning at a particular higher institution in South Africa.** *Education and Information Technologies*, 29(9), 11517-11532. <https://doi.org/10.1007/s10639-023-12302-6>

The purpose of this research is to analyse the support that lecturers need to be able to implement a blended learning approach successfully. Blended learning is now seen as an approach that can create engaging learning environments, to enhance students' self-directed learning and improve the whole learning experience. The study investigated the perceptions of thirteen lecturers, at a particular higher education institution, regarding the advantages and challenges of blended learning in South Africa. A qualitative research design was chosen for this study because it enabled the authors to explore the theme in detail. Semi-structured open-ended interviews were conducted to collect the necessary data from the lecturers, who were chosen through the use of homogenous purposeful sampling. The data collected were coded, using the induction method. This helped to reveal relevant codes, which were categorised. A literature review was conducted, in which recent research on this topic was analysed and used to correlate the findings of the field research of this study. This study reports on the actual views and experiences of the participants. The research findings and relevance for teaching in higher education institutions are discussed. The conclusion is that, for such an approach to be successful, lecturers would require support from management, more training, improved professional development, as well as reliable technology and internet connections. In addition, lecturers would require additional time to implement such an approach.

Vives, E., Poletti, C., Robert, A., Butera, F., Huguet, P., & Régner, I. (2024). **Learning With Jigsaw: A Systematic Review Gathering All the Pieces of the Puzzle More Than 40 Years**

Later. *Review of Educational Research*, 8, 913-917.
<https://doi.org/10.3102/00346543241230064>

The jigsaw classroom is a cooperative learning method designed in the late 1970s to improve the academic performance of minority children by reducing intergroup conflict and increasing self-evaluations. Despite its high popularity, the available evidence for the effectiveness of this method seems scant and mixed, with neither meta-analysis nor systematic review. To fill this gap, the authors conducted a systematic review of studies conducted from 1978 through 2022 to assess the effects of jigsaw on both academic performance and psychosocial variables (e.g., intergroup relationships, self-evaluations). Sixty-nine studies met the inclusion criteria. This review revealed the research trends, research gaps, and issues of research integrity of the jigsaw literature. If the results indicate that the jigsaw classroom overall leads to positive effects, findings vary depending on the academic subjects and psychosocial variables measured. The authors discuss the challenges of jigsaw activities and the limitations of studies reviewed and conclude with practical recommendations in the context of digital education.

Wang, Z., Chen, Z., Gong, B., & Feng, Z. (2024). **The interactive effects of instructors' guidance frequency and type on Chinese secondary school students' learning.** *Education and Information Technologies*, 29(9), 11257-11280.
<https://doi.org/10.1007/s10639-023-12148-y>

As an important resource in online learning, video lectures have attracted considerable research attention in the impact of teachers' nonverbal guidance behaviors on learning. However, few studies have focused on secondary education, and it remains unclear whether the interaction between different guidance frequencies and types leads to variations in the effectiveness of guidance. This study tested the mutual effects of instructor's guidance frequency and type on secondary school students' learning performance (retention scores, transfer scores) and affective experiences (cognitive load, learning experience, learning satisfaction). A total of 202 secondary school students were randomly assigned to watch one of the four video lectures, using a 2 (guidance frequency: low-frequency guidance, high-frequency guidance) × 2 (guidance type: gesture guidance, gesture + gaze guidance) between-groups design. The study was conducted in a multimedia classroom setting. The results showed that low-frequency guidance by instructors contributed to improved learning performance. Specifically, under low-frequency guidance conditions, gesture guidance was more effective in enhancing retention, while gesture + gaze guidance facilitated learners' transfer. Moreover, low-frequency gesture + gaze guidance by teachers resulted in better affective experiences for students, as evident in cognitive load, learning experience, and learning satisfaction. Therefore, it is recommended that instructors lecturing for secondary students adopt appropriate types of low-frequency guidance according to the level of learning difficulty to improve teaching effectiveness.

Yan, J., Liu, S., Armwood-Gordon, C., & Li, L. (2024). **Factors affecting Active Flipped Learning on Underrepresented students in Three STEM Courses.** *Education and Information Technologies*, 29(9), 10791-10804. <https://doi.org/10.1007/s10639-023-12234-1>

According to NSF (2017), even though the number of minority students in America's college-age population has been on the rise, those who choose Science, technology, engineering, and mathematics (STEM) as their majors are significantly fewer. There is an urgent need for African Americans, being the underrepresented minorities in STEM-related domains, be provided with opportunities to increase their presence and

achievements (Hansen, Palakal & White, *Journal for STEM Education Research*, 1–26 2023). This paper was to develop an active flipped learning (AFL) model to enhance engineering students learning. Instructional video, audio, lecture notes, and reading materials are developed while initiating active learning activities in class to engage students in active flipped learning. By monitoring 103 students' engagement and identifying their motivation and learning strategies, a custom-tailored plan to fit each underrepresented student in STEM was formed, valued by two indicators: Engaged Learning Index and Motivated Strategies for Learning Questionnaire. After practicing the longitudinal research for three years from 2016 to 2018, some results were found during the procedure through ANOVA and correlation analysis on the collected data. The AFL model effectively promotes underrepresented students' performance in various science disciplines such as engineering, physics, and mathematics, such as helpful to foster underrepresented students' deep understanding of STEM disciplines and making them more engaged in STEM learning. In the future, the AFL can be potentially expanded to other institutions to help all students succeed in STEM classrooms and careers, to increase the national STEM literacy and be applied to non-STEM majors.

Yıldırım, B. (2024). **Flipped TRIZ-STEM: Enhancing teacher training through innovative pedagogy?** *Education and Information Technologies*, 29(9), 10899-10929. <https://doi.org/10.1007/s10639-023-12242-1>

This study aimed to examine the effects of TRIZ-STEM applications within an online flipped learning model on teachers' problem-solving skills, creative thinking dispositions, STEM teaching, and their understanding of the nature of engineering. The sample consisted of 57 teachers (24 in the control group and 33 in the experimental group) recruited using purposive convenience sampling. The study adopted a mixed embedded design. Quantitative data analysis included independent samples t-tests, paired samples t-tests, Wilcoxon signed-rank tests, and effect size calculations. Descriptive statistics were used to analyze qualitative data, including the nature of the engineering questionnaire and lesson plans. The experimental group engaged in TRIZ-STEM activities using an online flipped learning model, while the control group engaged in face-to-face TRIZ-STEM education activities. The results showed that online TRIZ-STEM education had a greater positive impact on teachers' perspectives on engineering nature than face-to-face TRIZ-STEM education. On the other hand, face-to-face TRIZ-STEM education was much more effective in helping participants develop problem-solving skills than online flipped learning TRIZ-STEM education. However, the online flipped learning model did not show superiority in improving teachers' creative thinking education and STEM teaching compared to the face-to-face approach. Based on the results, suggestions for future research were provided, emphasizing the potential of online flipped learning models for STEM teacher education.

Yousefpoori-Naeim, M., He, S., Cui, Y., & Cutumisu, M. (2024). **Predicting teachers' research reading: A machine learning approach.** *International Review of Education*. <https://doi.org/10.1007/s11159-023-10061-7>

In addition to pre- and in-service teacher education programmes, teachers' autonomous reading of content related to their work contributes significantly to their professional development. This study investigated the factors that influenced the professional reading of 10,469 language teachers in the 2018 dataset of the Programme for International Student Assessment (PISA). Two machine learning models – logistic regression and Support Vector Machines (SVM) – were used to classify light and heavy

readers. Nineteen variables related to teachers, including various aspects of their life, education and instructional practices, were used as predictors for classification. The results indicate that the two models had very similar accuracy scores around 65%. Moreover, the length of the reading texts that teachers assign to their students, instruction of reading comprehension strategies, and teachers' own general reading habits were found to be the most important predictors of professional reading time.

Zheng, L., Fan, Y., Chen, B., Huang, Z., LeiGao, & Long, M. (2024). **An AI-enabled feedback-feedforward approach to promoting online collaborative learning**. *Education and Information Technologies*, 29(9), 11385-11406. <https://doi.org/10.1007/s10639-023-12292-5>

Online collaborative learning has been broadly applied in higher education. However, learners face many challenges in collaborating with one another and coregulating their learning, leading to low group performance. To address the gaps, this study proposed an artificial intelligence (AI)-enabled feedback and feedforward approach that not only provide feedback but also offer recommendations for future actions to support online collaborative learning. In total, 153 college students participated in this study, and they were divided into three conditions. Fifty-one students conducted online collaborative learning with the AI-enabled feedback and feedforward approach, another 51 students carried out online collaborative learning with the AI-enabled feedback approach, and the remaining 51 students participated in traditional online collaborative learning without either type of support. The results indicated that the AI-enabled feedback and feedforward approach could significantly boost the level of collaborative knowledge building, coregulated behaviours, and group performance. Research and practical implications of the findings are discussed in depth.

Relation formation-emploi

Croce, G., & Ghignoni, E. (2024). **The Multifaceted Impact of Erasmus Programme on the School-to-Work Transition: A Matching Sensitivity Analysis**. *Research in Higher Education*, 65(4), 732-754. <https://doi.org/10.1007/s11162-024-09774-x>

This study investigates the effects of studying abroad through the Erasmus Programme (EP), a European Union programme launched primarily to foster international mobility and cultural exchange of University students, on the school-to-work transition of university graduates. Since a satisfactory transition does not only mean finding a job, but also concerns the wage level and the quality of work, such as stability, working hours and risk of overeducation, we consider all these aspects in order to draw a comprehensive picture of the effect of the EP. We exploit a composite dataset, built on administrative and survey data, covering all graduates from the largest Italian university from 2011 to 2015, and replicate the analysis on a national sample of graduates to verify whether the results can be extended nationwide. Estimates are provided, based on a PSM procedure, of the effects of the EP on the probability of employment, including abroad, on the quality of jobs and on wage levels at different points in time after graduation. We also investigate whether less advantaged students benefit from the Erasmus experience, and provide insights about the role of the foreign languages skills. The results show that the participation in the EP improves employment prospects at least in the short term, as well as the quality of job, and has a positive long term effect on the participants' ability to find a job abroad. The wages of participants are persistently higher than those of non-participants. Less advantaged groups also benefit from the Erasmus experience.

Matus, M. (2024). **Liens entre chômage et reconversion : complémentarités, apports et limites d'une triangulation des sources et méthodes.** In V. di Paola & C. Guitton (Éd.), *Crises et transitions : quelles données pour quelles analyses ? : XXIXes journées du longitudinal, 24-25 juin 2024, Aix-en-Provence* (p. 61-70). <https://doi.org/10.4000/11uub>

Saavedra-Caballero, F. (2024). **Recent Graduates in the Labor Market: The Efficiency Frontier of Higher Education Institutions.** *Research in Higher Education*, 65(4), 755-774. <https://doi.org/10.1007/s11162-024-09792-9>

This study assesses the technical efficiency of higher education institutions in terms of labor market outcomes for recent graduates, employing a comparative analysis of three distinct methodological approaches. Using a sample of recent graduates of Colombian universities who earned their degrees between 2007 and 2011, we estimated the institutions' efficiency scores through Data Envelopment Analysis (DEA), the Free Disposal Hull (FDH) model, and Cazals et al. (Journal of Econometrics 106:1-25, 2002) order-m estimator. Our results reveal that the estimation technique affects the results when super-efficient decision-making units are present, with the order-m technique demonstrating superiority over DEA and FDH. However, in the absence of super-efficient institutions, the efficiency rankings obtained from all three methodologies exhibit consistency. This paper contributes to the literature by highlighting the importance of methodological selection in evaluating the labor market performance efficiency of higher education institutions when recent graduates' perspective is adopted.

Réussite scolaire

Anastasiou, D., Wirngo, C. N., & Bagos, P. (2024). **The Effectiveness of Concept Maps on Students' Achievement in Science: A Meta-Analysis.** *Educational Psychology Review*, 36(2), 39. <https://doi.org/10.1007/s10648-024-09877-y>

This study aims to evaluate the effectiveness of concept maps on science achievement among elementary and secondary education students, including low-achieving students. A systematic search located 55 studies about concept mapping in science achievement published in peer-reviewed journals and dissertations between 1980 and 2020. We extracted 58 independent standardized mean difference effect sizes from 55 eligible studies involving 5,364 students from Grade 3 to Grade 12 who used concept maps for learning in physics/earth science, chemistry, and biology that met the specified design criteria. A random-effects model meta-analysis revealed that the mean effect size was moderate for overall science ($g=0.776$). The mean effect sizes varied from moderate to large based on the subject area ($g=0.671$ for biology; $g=0.590$ for chemistry; $g=1.040$ for physics and earth science); these differences between groups were not statistically significant ($p=0.220$). Concept maps were generally associated with increased science learning across several learning and teaching conditions, and methodological features (low-achieving students, higher teaching guidance, intermediate grades, low- or middle-income countries, journal publications, and late year of publication). However, we found significant heterogeneity in most subsets. Implications for future research and practice recommendations are discussed.

Ball, I., Banerjee, M., Holliman, A., & Tyndall, I. (2024). **Investigating Success in the Transition to University: A Systematic Review of Personal Risk and Protective Factors Influencing**

Academic Achievement. *Educational Psychology Review*, 36(2), 52.
<https://doi.org/10.1007/s10648-024-09891-0>

The transition to university is a time of great change and adjustment. The challenges of university life can lead to numerous negative consequences for the students. Despite the importance of successful transition for both the student and the university, the current body of literature comprises methodological inconsistencies and disparate analytical goals that make it difficult to identify the most salient and effective factors that help predict transition success. This paper presents a systematic review of research linking personal level risk and protective factors to the outcome of academic achievement among students making the transition to university. This is part of a larger review, following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) and Synthesis Without Meta-analysis (SWiM) guidelines, preregistered on the International Prospective Register of Systematic Reviews (PROSPERO, CRD42022330515), searching PsychInfo, Web of Science, and ERIC databases. Records were included if they studied 'traditional' first year students transitioning to university and were longitudinal in design and excluded if they looked at specific subgroups of students (e.g. international students). The search yielded 27 articles that were eligible, highlighting a broad range of salient factors ranging from personality traits to procrastination and perfectionism. The findings are discussed in relation to moving the research forward towards an intervention to enhance the probability of successful student transition to university.

Bećirović, S. (2024). **Examining learning management system success: a multiperspective framework.** *Education and Information Technologies*, 29(9), 11675-11699.
<https://doi.org/10.1007/s10639-023-12308-0>

This study aims to determine the factors influencing the efficient and successful use of LMS among university-level students. A multiperspective approach was performed using TAM3 and ISS framework to achieve the aforementioned aim. The survey was administered to 371 university students. Structural equation modeling (SEM) has been conducted to test the model. The findings showed that information quality significantly impacts output and system quality, while output quality significantly affects perceived usefulness. However, there was an insignificant relationship between output quality and system quality, information quality and user satisfaction, and information quality and perceived usefulness. Likewise, system quality does not significantly affect perceived usefulness and system success. The test of the structural model demonstrated the negative relationship between user satisfaction and system and output quality and system success. Thus, the success of the LMS system should be enhanced through improvements of the content, system, and output quality, which lead to increased students' satisfaction and perceived usefulness of LMS. This study provides valuable theoretical and practical implications. Given that most previous studies focused on student satisfaction with LMS, this study adds to the literature on LMS system success at the tertiary level of education. Further, the results of this research may contribute to improvements in educational policy, teachers' pre-service and in-service training and practices, and the effectiveness of students' LMS use.

Cheng, W., Nguyen, P. N. T., & Nguyen, N. D. (2024). **How active/passive social network usage relates to academic performance among high school students in Taiwan.** *Education and Information Technologies*, 29(9), 10805-10820.
<https://doi.org/10.1007/s10639-023-12254-x>

This study aimed to explore the effects of active social network usage (ASNU) and passive social network usage (PSNU) on academic performance. Using a survey sample of 621 high school students in Taiwan, the results showed that PSNU did not associate with learning results, whereas ASNU may have its function on students' learning. Specifically, ASNU interacted with PSNU to predict high school students' academic performance. Moreover, ASNU undermined the academic performance of those with high PSNU, but not of those with low or medium PSNU. Additionally, for individuals with high PSNU and high ASNU, their performance mostly suffered. The results supported the work-life conflict theory, revealing that excessive social network sites (SNS) use, especially ASNU, might distract students from studying and, therefore, negatively impact their learning performance. The findings may contribute to the clinical and educational fields regarding adolescents' SNS-using behaviors and psychological development.

Cvencek, D., Brečić, R., Sanders, E. A., Gaćeša, D., Skala, D., & Meltzoff, A. N. (2024). **Am I a good person? Academic correlates of explicit and implicit self-esteem during early childhood.** *Child Development*, 95(4), 1047-1062. <https://doi.org/10.1111/cdev.14052>

Implicit and explicit self-esteem are not commonly measured in the same children. Using a cross-sectional design, data from 354 Croatian children (184 girls) in Grade 1 (Mage = 7.55 years) and Grade 5 (Mage = 11.58 years) were collected in Spring 2019. All children completed explicit and implicit self-esteem measures; math and language grades were obtained. For the explicit measure, older children showed lower self-esteem than younger children, and girls showed lower self-esteem than boys. For the implicit measure, there were no age effects, and girls showed higher self-esteem than boys. Although both types of self-esteem were positively associated with academic achievement, implicit self-esteem was associated more strongly with language than with math achievement. Discussion is provided about why self-esteem relates to academic achievement during childhood.

Eccles, J. S., & Wigfield, A. (2024). **The Development, Testing, and Refinement of Eccles, Wigfield, and Colleagues' Situated Expectancy-Value Model of Achievement Performance and Choice.** *Educational Psychology Review*, 36(2), 51. <https://doi.org/10.1007/s10648-024-09888-9>

To address the seven guiding questions posed for authors of articles in this special issue, we begin by discussing the development (in the late 1970s-early 1980s) of Eccles' expectancy-value theory of achievement choice (EEVT), a theory developed to explain the cultural phenomenon of why girls were less likely to participate in STEM courses and careers. We then discuss how we tested key predictions from the theory, notably how expectancies and values relate to achievement choices and performance and how socialization practices at home and in school influence them. Next, we discuss three main refinements: addressing developmental aspects of the theory, refining construct definitions, and renaming the theory situated expectancy value theory. We discuss reasons for that change, and their implications. To illustrate the theory's practicality, we discuss intervention projects based in the model, and what next steps should be in SEVT-based intervention research. We close with suggestions for future research, emphasizing attaining consensus on how to measure the central constructs, expanding the model to capture better motivation of diverse groups, and the challenges of testing the increasingly complex predictions stemming from the model. Throughout the manuscript, we make suggestions for early career researchers to provide guidance for their own development of theories.

Lefeuvre, S., & Valente, G. (2024). **Accrocher les potentiels décrocheurs.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w26>

À travers les dispositifs oui-si présentés comme des « aides à la réussite », nous questionnons la manière dont les acteurs et actrices universitaires se les approprient, les font exister ou ce qu'ils en pensent. Au-delà, nous analysons les raisons de leur investissement qui n'est pas sans répercussions sur la transformation de l'université aujourd'hui. En effet, l'acceptation de ce dispositif par les composantes, pourrait donner l'illusion d'œuvrer pour l'égalité sociale et la réussite des étudiants, alors même qu'elles participent à un mécanisme de dépolitisation de la question de l'inégalité dans l'enseignement supérieur.

Li, Z., Chen, H., & Gao, X. (2024). **The influencing factors and predictability of primary school students' learning performance in online supplementary classes.** *Education and Information Technologies*, 29(9), 10995-11021. <https://doi.org/10.1007/s10639-023-12246-x>

Online supplementary education has been prevalent in recent years due to the advent of technology (e.g., live streaming) and the COVID-19 pandemic. However, the performance of students in this mode of education varies greatly, and the underlying reasons are yet to be investigated. This study aims to understand the impact of various factors and giving their quantified importance, including student information, family information, and course information by applying Machine Learning method to one of the world's largest online learning platforms. Big data analysis is employed for this purpose via leveraging the abundance of data generated from online education platforms, providing insights that are not attainable through conventional methods such as panel surveys or questionnaires used in offline education. The findings indicate that the most significant factor affecting student performance is the disparity in access to educational resources and the socioeconomic status of families. Finally, we predict students' online learning performance by using explainable machine learning with different groups of features. Our results indicate approximately 70% accuracy in predicting students' performance progress.

Marsh, H. W., Guo, J., Pekrun, R., Lüdtke, O., & Núñez-Regueiro, F. (2024). **Cracking Chicken-Egg Conundrums: Juxtaposing Contemporaneous and Lagged Reciprocal Effects Models of Academic Self-Concept and Achievement's Directional Ordering.** *Educational Psychology Review*, 36(2), 53. <https://doi.org/10.1007/s10648-024-09887-w>

Multi-wave-cross-lagged-panel models (CLPMs) of directional ordering are a focus of much controversy in educational psychology and more generally. Extending traditional analyses, methodologists have recently argued for including random intercepts and lag2 effects between non-adjacent waves and giving more attention to controlling covariates. However, the related issues of appropriate time intervals between waves (lag1 intervals across waves) and the possibility of contemporaneous (lag0) effects within each wave are largely unresolved. Although philosophers, theologians, and scientists widely debate sequential (lagged) and simultaneous (lag0) theories of causality, CLPM researchers have mostly ignored contemporaneous effects, arguing causes must precede effects. In a substantive-methodological synergy, we integrated these issues and designed new structural equation models to reanalyze one of the strongest CLPM studies of academic self-concept (ASC) and achievement (five annuals of mathematics data; 3527 secondary school students). A taxonomy of models incorporating various combinations of lag0, lag1, and lag2 effects, random intercepts, and covariates

consistently supported a priori reciprocal effect model (REM) predictions—medium or large reciprocal effects of ASC and achievement on each other. Consistent with self-concept theory, effects of ASC on achievement evolved over time (lag1, not lag0 effects), whereas effects of achievement on ASC effects were more contemporaneous (lag0, not lag1 effects). We argue that lag0 effects reflect proximal events occurring subsequent to the previous data wave, suggesting the need for shorter intervals but also leaving open the possibility of contemporaneous effects that are truly instantaneous. We discuss limitations and future directions but also note the broad applicability of our statistical models.

Perret, C., & Villeneuve, E. (2024). **Les défis de la méta-analyse pour produire des conclusions générales sur les dispositifs d'aide à la réussite dans l'enseignement supérieur.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w1z>

Face à la multiplication des dispositifs visant l'amélioration de la réussite des étudiants du 1er cycle de l'enseignement supérieur, les travaux de recherche en sciences de l'éducation et de la formation se sont multipliés. Toutefois, il reste difficile d'avoir une vue globale des effets de ces dispositifs : qu'impactent-ils ? dans quelles mesures ? sous quelles conditions ? Dans cet article, nous discutons de l'intérêt de la méta-analyse pour répondre à ces interrogations. Très répandue dans la recherche médicale, cette méthode consiste à ré-exploiter des données de recherches antérieures afin d'en proposer une revue critique ainsi qu'une combinaison évaluative pour identifier une tendance centrale. Dans le domaine des sciences de l'éducation et de la formation, il s'agit d'une méthode encore peu mobilisée. Elle possède pourtant de nombreuses forces tout en n'étant pas exempte de limites (hétérogénéité des données mobilisées, qualité méthodologique des études...). Si la mise en œuvre d'une telle méthode nécessite de déterminer des critères d'inclusion sur les études primaires mobilisées, elle suppose de surcroît la nécessité d'une forte définition de l'objet étudié, c'est-à-dire les dispositifs, leurs effets et les contextes dans lesquels ils sont déployés. En donnant à voir la pluralité des définitions possibles, des effets et des contextes dans lesquels ces dispositifs sont déployés, cet article propose une réflexion de nature méthodologique pour la mise en œuvre de futurs programmes de recherche mobilisant la méta-analyse pour étudier les dispositifs d'aide à la réussite étudiante.

Thomas, F. (s. d.). **Le baccalauréat 2024 - Session de juin.** *Note d'Information*, (24.29), 1-4. <https://doi.org/10.48464/ni-24-29>

À la session du baccalauréat de juin 2024, avec 91,4 % d'admis en France, le taux de réussite global est légèrement en hausse par rapport à celui de juin 2023 (91,0 %, soit + 0,4 point).

Wu, R., & Yu, Z. (2024). **Relationship between university students' personalities and e-learning engagement mediated by achievement emotions and adaptability.** *Education and Information Technologies*, 29(9), 10821-10850. <https://doi.org/10.1007/s10639-023-12222-5>

Since the outbreak of the pandemic, a large number of university students have been required to adapt to e-learning. E-learning engagement, a key indicator of academic success, is thus a great concern of educational partitioners and researchers. Although previous studies have identified various determinants of e-learning engagement, there is a paucity of research that examines the associations between university students'

personalities and their engagement in e-learning. Moreover, the mechanisms underlying the personality-engagement relationship are still poorly understood. The present study used the five-factor model of personality as the main theoretical framework to explore how students with different personality traits engaged in e-learning. Additionally, it examined whether achievement emotions and adaptability mediated the personality-engagement relationship in the e-learning context. A sample of 1004 students enrolled at Guizhou University participated in an online survey to collect data for the study. Employing structural equation modeling, the findings unveiled several significant results: (1) extroversion, agreeableness, openness to new experiences, and conscientiousness exhibited positive associations with e-learning engagement, (2) neuroticism demonstrated a negative relationship with e-learning engagement, (3) the mediating effect of enjoyment as an achievement emotion was observed between personality traits (excluding neuroticism) and e-learning engagement, (4) adaptability played a mediating role in the relationship between personality traits (excluding conscientiousness and neuroticism) and e-learning engagement, and (5) the negative achievement emotion of anxiety did not operate as a mediator between personality traits and e-learning engagement. This study enriches the understanding of the relationship between personality and engagement in the emerging field of e-learning. Moreover, it offers a fresh perspective on how to investigate mechanisms underlying the relationship between personality and engagement in the e-learning context. The findings could provide a basis for instructors who wish to deploy emotional and adaptability interventions to increase university students' engagement in e-learning.

Valeurs

Balslev, K., & Naef, L. (2024). **Enseigner en intégrant l'urgence climatique : propos d'enseignant·es en formation.** *Éducation et socialisation. Les Cahiers du CERFEE*, (72). <https://doi.org/10.4000/11w2b>

Face aux défis du réchauffement climatique impactant probablement fortement la génération actuellement sur les bancs de l'école, le rôle de cette dernière est questionné par des enseignantes et enseignants soutenant les mouvements de jeunes, comme la grève du climat. Une recherche-formation destinée à des enseignant·es souhaitant développer et partager leurs pratiques pour y intégrer l'urgence climatique est décrite et les discours, produits dans ce cadre, analysés. De cette analyse se dégagent plusieurs thématiques fortes, notamment sous forme de préoccupations et de pistes projetées. Les propos des enseignant·es sont discutés à la lumière de courants visant à faire de l'environnement un sujet scolaire existant depuis les années 1970. Les résultats mettent en lumière la diversité et la richesse des activités proposées et le fort engagement qu'offrent ces enseignant·es pour intégrer l'urgence climatique dans leurs pratiques. Ils pointent également le rôle paradoxal accordé aux élèves, passant du rôle de moteur à celui de frein à l'engagement.

Mouta, A., Torrecilla-Sánchez, E. M., & Pinto-Llorente, A. M. (2024). **Design of a future scenarios toolkit for an ethical implementation of artificial intelligence in education.** *Education and Information Technologies*, 29(9), 10473-10498. <https://doi.org/10.1007/s10639-023-12229-y>

In the 1970s, research on artificial intelligence in education emerged with the aim of acknowledging and accommodating the psychological aspects of the learning process. Since then, its applications have evolved and it is now used for student learning and

assessment, teachers' pedagogical practice, management of educational institutions, and lifelong learning. Nevertheless, the ethical challenges of educational programmes using these systems have not been thoroughly studied. Anchored on the theoretical frame of dialogic ethics, this paper presents a section of a participatory futures research project. The goal of the research is to develop a toolkit that educators can use to ensure a smooth and ethical transition to artificial intelligence-based education while preserving the interests of educational development. This paper emphasises the need for an informed and participatory process that involves all stakeholders and begins with an expert consultation through the Delphi method, the results of which allowed the construction of eight hypothetical futures scenarios. These scenarios provide evidence that examining the ethics of using artificial intelligence systems presents an opportunity to reflect on the ethics of education as a whole. They highlight the challenge of balancing the benefits and drawbacks of such systems, especially concerning educational goals and the interplay between diverse educational actors and personal development in educational settings. The study outcomes are intended to encourage discussions on the integration of ethical artificial intelligence in education and facilitate the continuing professional development of teachers by equipping them with scenarios that can be used as a resource for training purposes.

Poutrain, V. (2024, juillet 1). **Une nouvelle éducation à la sexualité dans les établissements scolaires ?** Consulté 3 juillet 2024, à l'adresse The Conversation website: <http://theconversation.com/une-nouvelle-education-a-la-sexualite-dans-les-etablissements-scolaires-229055>

De la prévention des violences sexistes ou sexuelles à la lutte contre les discriminations, les enjeux de l'éducation à la sexualité sont nombreux. Retour sur les évolutions de cet enseignement.

Shakeel, M. D., Wolf, P. J., Johnson, A. H., Harris, M. A., & Morris, S. R. (2024). **The Public Purposes of Private Education: a Civic Outcomes Meta-Analysis.** *Educational Psychology Review*, 36(2), 40. <https://doi.org/10.1007/s10648-024-09874-1>

Since Plato and Aristotle, political theorists have discussed the important role of education in forming democratic citizens. They disagree, however, over whether public or private schools are more effective at nurturing citizenship. We conduct a statistical meta-analysis to identify the average association between private schooling and measures of four central civic outcomes: political tolerance, political participation, civic knowledge and skills, and voluntarism and social capital. Our search identifies 13,301 initial target studies, ultimately yielding 531 effects from 57 qualified studies drawing from 40 different databases. Using Robust Variance Estimation, we determine that, on average, private schooling boosts any civic outcome by 0.055 standard deviations over public schooling. Religious private schooling, particularly, is strongly associated with positive civic outcomes. The evidence is especially strong that private schooling is correlated with higher levels of political tolerance and political knowledge and skills. We discuss heterogeneities, robustness checks, and implications.