1

Gendered Expectations? AI and the Reproduction of Social Models in Music Education

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Abstract

Gendered Expectations? AI and the Reproduction of Social Models in Music Education

This case study explores how artificial intelligence reflects the sociocultural model of music education. To conduct the analysis, I used ChatGPT 5.0 to generate two piano teachers, one fromItaly and one from the US. This approach made it possible to examine how the sociocultural modelof music education operates in different contexts. Both teachers integrate the music of womencomposers into their teaching.According to Donne, Women in Music Report 2024, only 7.5% of performed music iswritten by women. In this light, I investigated how including their works in music programssupports students in developing their personal, social and cultural identity. Through a criticalanalysis of the AI-generated answers, I also sought to understand how gendered educational modelsmay be challenged and transformed. Despite its challenges, AI can be treated as an interview subject, insofar as its outputs reflectdominant cultural discourses, given that large language models are trained on vast repertoires ofhuman-produced texts. I conducted semi-structured interviews with the two AI-generated pianoteachers to explore how and why they introduced the music of women composers, why they believeteaching this music could be a way to change our society, and how this can help develop thecultural, personal, and social identity of their students.Preliminary findings indicate that the AI-generated teachers had adapted the socioculturalmodel of music education and that they were aware of the gendered hindrances in music educationtoday. They emphasized the importance of performing the works of women composers anddiscussing their lives, providing examples of how this can be useful and beneficial for students.They also expressed regret at not having known this repertoire earlier and stressed the need toinclude it in teaching to support the development of students' identity. Music thus becomes a way ofself-discovery through the works of women who sought to overcome the gendered expectations stillpresent in our society, helping students feel part of a wider musical heritage, fostering a sense ofbelonging and awareness. Thus, I argue that this approach can challenge traditional genderedmodels of education and contribute to more inclusive music pedagogy.

2

Balanced and connected: How informal digital engagement is connected with academic achievement?

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Abstract

Social media, digital gaming and online content creation are increasingly important parts of youth's everyday lives. While this digital engagement offers a wide range of opportunities for informal learning, its relationship with formal academic learning is not entirely understood.

The purpose of this study was to identify distinct profiles of informal digital engagement among lower secondary school students and to examine how these profiles are associated with academic achievement, students' perceived ability to connect their informal and formal learning contexts and problematic technology use.

The study design is cross-sectional and person-centred, based on survey data (N = 1,108) collected in 2022 as part of the Growing Mind project from 8th graders in Helsinki metropolitan area schools. Exploratory factor analysis and latent profile analysis were used to identify latent profiles. Associations with academic achievement, connected learning and problematic technology use were examined using Analysis of variance (ANOVA) and linear regression.

Four profiles of informal digital engagement were discovered: Basic, Balanced, Gaming and Creative. Students in the Creative profile reported the lowest academic achievement scores and the highest levels of problematic technology use. Regression analysis revealed that students' perceived ability to connect informal and formal learning positively predicted academic performance, whereas problematic technology use had a negative impact. This study highlights the importance of supporting balanced, moderate, diverse and academically meaningful digital engagement, which would allow students to bridge the formal and informal contexts of learning.

3

Immigrant Nurses' Clinical Competence Assessment using Objective Structured Clinical Examination (OSCE) in Simulation-Based Environment: A Systematic Literature Review

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Abstract

The need for nursing professionals in Finland has grown due to demographic changes, including the ageing of the population and the increasing complexity of health care needs (Kubelo, Turunen, & Jokiniemi, 2024). Internationally Educated Nurses (IENs) play a key role in addressing this labour shortage. Successful integration of IENs requires accurate assessment of clinical and language skills to ensure patient safety (Martikainen et al., 2024; Oja-Lipasti, Turunen, & Jokiniemi, 2025; World Health Organization, 2022). However, IENs face challenges such as delayed professional recognition, limited language support and barriers to job integration, which often lead to underemployment (National Supervisory Authority for Welfare and Health, 2025). Comprehensive integration programs combining professional orientation, language training and mentoring are essential for smooth transition, higher job satisfaction and improved patient care outcomes (Martikainen et al., 2024, World Health Organization, 2022).

Clinical competence encompasses a combination of knowledge, technical skills, clinical reasoning, ethical behavior, and communication, enabling healthcare professionals to navigate complex clinical situations safely and effectively (International Council of Nurses, 2020; World Health Organization, 2022). Developing these interconnected capabilities is crucial for improving healthcare quality, patient safety, and professional practice standards. The present systematic literature review aims to answer the question: How is the clinical competence of immigrant nurses assessed in simulation-based environments?

A systematic search was conducted in CINAHL, PubMed, and ERIC databases in July 2025 using keywords as clinical competency, clinical competence, clinical skills, simulation, objective structural clinical examination (OSCE), immigrant nurse. Search criteria were set as peer-reviewed, English-language articles from 2000–2025 following PRISMA guidelines. The initial search yielded 2,203 records. After removing duplicates and ineligible records, 332 articles underwent title and abstract screening, leaving 46 articles. Following further exclusions, 19 studies met the inclusion criteria, encompassing quantitative, qualitative, or mixed-methods research published in peer-reviewed journals and employing OSCE, simulation, or their combination to assess competence.

The Objective Structured Clinical Examination (OSCE) is a well-validated, internationally recognized tool for evaluating clinical competence (Harden, 1979). It combines scenario-based tasks and standardized tools to evaluate knowledge, technical skills, reasoning, communication, and professional behavior. These features make OSCEs pivotal in preparing nurses for safe, effective, patient-centered care nursing.

The review highlighted a significant gap: none of the studies directly assessed the competence and language skills of immigrant nurses. In simulated learning environments, language support should be implemented gradually, where contextual relevance increases to match the developing competencies of learners. This highlights the need for future research that takes into account the linguistic needs of internationally trained nurses in simulation-based competence assessments. Clinical competence and language assessment could enhance educational programs, facilitate a smoother transition to health care systems, and ensure equal opportunities for IENs to demonstrate their skills while maintaining patient safety. Overall, combining the OSCE with socio-cultural support offers a promising approach to improve the professional growth of immigrant nurses.

4

From Resource to Learning Companion: Student Engagement with Generative AI in Higher Education

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Abstract

Generative AI necessitates pedagogical renewal in higher education, as shifts in student behavior increasingly drive changes in teaching. This development creates both pedagogical challenges and opportunities, particularly for work-oriented universities of applied sciences (UAS). Integrating GenAI into curricula is essential to equip graduates with competencies that enhance employability and support AI adoption in working life. The integration of GenAI is expected to evolve from isolated applications toward systemic transformations in curricula, pedagogy, and learning environments, positioning graduates as key actors in AI-enabled professions. Students continue to explore GenAI independently under unclear rules and limited guidance, while educators are expected to provide support but remain largely unprepared, resulting in unequal learning opportunities.

We investigated how students engaged with GenAI in their individual studying and during teamwork contexts and developed pedagogical models that promote GenAI's diverse and responsible use. By framing GenAI as a learning companion within learning tasks guided assignments, we sought to empower students to take greater ownership of their learning and strengthen competences relevant for future work-life.

RQ's

- How do students experience GenAI as a learning companion in individual and team learning?

- Who benefits from GenAI use, and in what ways?

- How do psychological and metacognitive factors influence students' engagement with GenAI?

The study draws on two student surveys and complementary student interviews conducted in 2024, focusing on AI use in individual study and as a learning companion for team-based learning. A baseline survey (N=160) in spring captured early adoption patterns, while in Fall an AI assistant framework was implemented, integrating GenAI into five sequential tasks with varying assistant roles to support collaboration, problem-solving, and team dynamics. In this context, 66 multidisciplinary student teams (N=215, 3rd-year UAS students) worked on authentic work-life assignments using GenAI as a learning companion. Data were collected through self-assessments, including psychological measures of self-efficacy and study ability, and complemented with interviews of 8 students. Analysis employed mixed methods.

Most students used GenAI regularly, yet many remained uncertain about its permissible use across both semesters. Results showed that students with little or no prior AI experience reported benefiting the most, with over a third learning something new and more than half intending to use AI in future studies. Guided, collaborative tasks helped close gaps and promote educational equity, while outcomes were largely independent of self-efficacy or study ability. Students reported that AI was most useful in creating final presentations but

less helpful in preparing for evaluation discussions, underscoring that task design strongly shapes its perceived educational value.

Results highlight GenAI's role as a learning companion that fosters AI literacy, and the need for clear, equitable, and ethical guidelines to ensure safe use. A gap between formal guidance and students' actual practices points to the need for stronger pedagogical support. Future research should examine how strategies can best enable students to adopt GenAI as a genuine learning companion and critically evaluate whether frameworks and guidelines provide safety and alignment or risk oversimplifying the complexities of AI-supported learning.

5

University students' epistemic agency in AI-assisted knowledge creation

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Abstract

The use of artificial intelligence (AI) to support learning in higher education requires students to enact epistemic agency (EA). EA refers to students' active participation in knowledge-related processes, such as the acquisition, evaluation, and ethical reflection of information. While previous research has highlighted the importance of EA in collaborative learning, little is known about how it is exercised in AI-assisted learning, and no quantitative instruments are yet available to assess EA. This study addresses the aforementioned gap by developing a scale for assessing university students' EA in AI-supported learning, exploring the scale's initial factor structure, and examining differences in EA by students' characteristics.

This study is based on a master's thesis of the first author and constitutes the first phase of developing and validating a quantitative instrument for assessing EA in AI-assisted knowledge creation. Survey data were collected from students at one Finnish university (*N* = 212) using a web-based questionnaire. The 30 EA items were designed to reflect theoretically grounded dimensions of epistemic agency – the formation of knowledge and beliefs, critical thinking, and ethical awareness – adapted to the context of AI-assisted learning. The initial factor structure of epistemic agency was explored through exploratory factor analysis (EFA). Additionally, the associations between EA and AI literacy and group differences in EA across faculties, stages of study, gender, and age groups were examined. In phase 2, the questionnaire will be refined based on the results of EFA if needed, and additional data will be collected to validate the initial factor structure of EA, as a part of the DETECT-project funded by the Research Council of Finland.

The phase 1 findings suggested 7-dimensional factor structure for EA in AI-assisted knowledge creation: 1) information acquisition, 2) evaluation and interpretation, 3) self-directed regulation, 4) information verification, 5) critical reflection, 6) information organization, and 7) ideation and problem solving. Based on the aggregated variables on these factors, students showed strong engagement in evaluating and interpreting information and critically reflecting on their learning. Motivation to use AI and knowledge of AI principles, as components of AI literacy, were each positively associated with different dimensions of EA, except critical reflection. Pairwise comparisons showed that the students in the Faculty of Information Technology used AI for information acquisition more frequently than the students in the Faculty of Humanities and Social Sciences. Further, the students aged 30–40 evaluated and verified AI-generated information more actively than those under 30, while the students over 40 used AI more than other age groups to support their self-directed learning.

The results provided empirical support for the theoretical structure of EA.
The results also suggest that while AI literacy constitutes a resource for knowledge-related processes, students' reflective and critical engagement may depend on other factors. The findings on critical thinking as a part of EA are consistent with previous research evidence. For higher education, this study implies the need to strengthen AI literacy with pedagogical approaches that foster critical reflective thinking, promote active epistemic engagement, and take age-related differences into account.

6

Higher education students' perceptions and reflections on AI in learning and working life: A mixed-methods study

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Abstract

The rapid emergence of generative AI tools, such as ChatGPT, has raised questions about their role in higher education (HE), in supporting learning and shaping future working life. This study examines Finnish HE students in Education and their perceptions and reflections on AI. Altogether, 109 students completed the Global ChatGPT Student Survey, and 147 students provided individually written reflections during the course Knowledge Creation in Education (5ECTS) in spring 2025. One of the learning goals of the two-month course was to deepen students' understanding of AI and its role in studies, science, and working life.

The research is guided by the following questions:
RQ1: How do students perceive the capabilities of AI in supporting learning?
RQ2: How do students view the role of AI in reshaping their study practices and future working life? RQ3: How do students reflect on their attitudes toward AI and what they have learned about its use during the course?

The study employed a sequential independent mixed methods design (Schoonenboom & Johnson, 2017), in which quantitative and qualitative data were collected during the course and analyzed separately. Qualitative data was analyzed using inductive content analysis and quantitative data was analyzed by using statistical methods.

The findings reveal students' nuanced views of ChatGPT's capabilities. Students expressed the strongest confidence in its ability to summarize information (M = 3.83, 75.5% agree/strongly agree) and simplify complex content (M = 3.80, 72.2% agree/strongly agree), but the least trust in its reliability (M = 2.83, only 15.3% agreement) or role in traditional (M = 2.87) and blended learning (M = 3.20). This highlights that ChatGPT is primarily valued as an information-processing tool.

Regarding working life, the students showed the strongest agreement that ChatGPT will change the nature of jobs (M = 3.88, 79% agreement) and increase the need for AI knowledge and skills (M = 3.97–3.87, 69–77% agreement). By contrast, they were more cautious about positive outcomes such as improving innovation (M = 3.39, 54% agreement), productivity (M = 3.49, 56% agreement), and especially strengthening the higher education–labor market link (M = 3.04, only 19% agreement).

The qualitative analysis reveals that AI was increasingly recognized as a valuable tool for learning, particularly in supporting study practices such as summarizing texts, generating ideas, and assisting with thesis work. Moreover, students' awareness of the need for responsibility, critical thinking, and ethical considerations appears to have strengthened. They also reflected that their views had shifted during the course toward perceiving AI more as an opportunity than a threat and regarded it as a meaningful tool in their future professional lives. Overall, the course had a positive impact on students' perceptions and attitudes toward AI, underscoring the importance of critical aspects in developing AI literacy.

The findings align with previous research (Deng et al., 2025; Mohamed et al., 2024; Strzelecki, 2024) and contributes to debates on AI literacy in HE, emphasizing its role in enabling students to use AI responsibly and creatively in learning and future work.

7

Teachers at the Crossroads of AI and Language Pedagogy: A Cross-Cultural Study of Readiness and Perceptions in Finland, Hong Kong, Brazil, and South Korea

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Abstract

This paper presents a cross-cultural comparative study of 636 in-service and pre-service (with work experience) second language (L2) teachers' readiness and perceptions toward integrating Artificial Intelligence (AI) into language education. Drawing on quantitative survey data from Finland (*n* =174), Hong Kong (*n* =133), Brazil (*n*=133), and South Korea (*n* =196), the study explores how cultural, technological, and pedagogical contexts influence the adoption of AI tools in teaching and learning practices.

While AI offers opportunities for personalized and gamified language learning, such as real-time chatbot feedback, VR-based immersion, and AI-driven skill development, the study reveals significant national variation in teachers' confidence, usage, and beliefs. Using a cultural relativist framework and the Unified Theory of Acceptance and Use of Technology (UTAUT), the analysis highlights how sociocultural norms, power dynamics, and institutional support shape openness to AI. For example, South Korean teachers report higher readiness, supported by a strong national EdTech infrastructure, while teachers from Brazil, Hong Kong and Finland express more cautious optimism, emphasizing ethical concerns and pedagogical autonomy.

The findings underscore the need for context-sensitive professional development and inclusive policy frameworks that address not only technological access but also cultural attitudes toward AI. By foregrounding teachers' voices from diverse regions, this research contributes to global efforts to build equitable, informed, and pedagogically meaningful approaches to AI integration in language education.

Keywords:
AI in Education, L2 Teaching, Teacher Readiness, Cross-Cultural Comparison, Technology Acceptance, Educational Innovation, Digital Pedagogy

8

Online Degree Programme Design As A Strategic Choice: First Experiences Of Online Business Students From Åland Islands

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Abstract

The Åland islands create a unique setting for organizing higher education. Åland is located in the Baltic Sea between Finland and Sweden. Åland belongs to Finland but has autonomous status, is demilitarized, and the only official language is Swedish. Åland University of Applied Sciences (ÅUAS) is a small higher education institution (HEI) offering eight Bachelor's degree programs and one master's program. Recently, a strategic decision was made for the business administration program to become a pioneer in higher education in Åland by offering a fully online study track. The creation of the online degree programme is also intended to support the labour market and overall education level the entire Åland archipelago. The HEI did not have any previous experience of offering degree programmes fully online and therefore the holistic design approach was critical to understand the needs of the higher education organization, as well as its staff, teachers and students, in the construction and execution of the programme. The theoretical framework used in this study is the pedagogically informed framework for designing online degree programmes in higher education (Joshi, 2023). In this study, the experiences of the business students are examined in the first online degree programme implemented at Åland University of Applied Sciences. In addition, the study explores how the holistic design principles can be applied in the specific setting of Åland. The empirical data was collected during spring 2025 at ÅUAS using an electronic survey. The study makes suggestions for further development of online degree programme design in a specific legal, societal and cultural setting with a focus on student-centred development.

9

Finnish primary school students' conceptions of machine learning

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Abstract

Language is a powerful tool in shaping thought about abstract domains, including the realm of computing and digital technologies. Review of research on children's conceptions of machine learning (ML) suggests that participating children were often provided with conceptual clues about the principles of ML before being asked about their conceptions (i.e., asking them how one could teach a computer).

Since the term ML is not explicit about who is learning and from whom, this procedure has arguably steered their answers: with less nudging instruction, ML could also be understood as a process in which a human uses a machine, a computer, for instance, for learning purposes.

This study investigates what kind of conceptions primary school students have about ML and data if they are not conceptually "primed" with the idea that in ML, humans teach computers. Conceptions are understood as the ideas individuals employ to make sense of the world around them.

Qualitative survey responses from 197 Finnish primary schoolers were analyzed via an abductive method. As a result, we identified three partly overlapping ML conception categories, starting from the most accurate one: ML is about teaching machines (34%), ML is about coding (7.6%), and ML is about learning via or about machines (37.1%).

The findings suggest that without conceptual clues, children's conceptions of ML are varied and may include misconceptions such as ML is about learning via or about machines. The findings underline the importance of clear and systematic use of key concepts in teaching digital literacies and computer science. Besides researchers, this study offers insights for teachers, teacher educators, curriculum developers, and policymakers.

10

EUKids Online research 24-25 in Finland: Youth digital optimism vs. pessimism

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Abstract

Digital environment is changing rabidly, and children and young people encounter new phenomena, such as generative AI and its new evolutions. Thus, it is important to study what kind of attitudes children and youth have for digital futures. How are they digitally optimistic and pessimistic? Digital future can be understood as a part of temporal processes of digitalization and mediatization, which shape our social world and our way of life in dimensions of time, space, data, and identity (Couldry & Hepp, 2017), for example how we understand the world via news, fake or accurate; how we use our time with gadgets and the media; how digital providers use the data they gather from internet users; and how we perceive ourselves, our body and participation in society in digitalized world. Especially, artifical Intelligence (Gen AI) that has gained a lot of interest among internet users and researchers. At the same time optimism, that the internet would strengthen participation and democratic processes has turned to pessimism due increased dis- and misinformation online.

Following questions are posed: 1) What kinds of attitudes towards digital future can be described among youth in Finland? 2) What kind of digital optimism show out? 3) What kind of digital pessimism among the attitudes?

New round of the longitudinal European study EUKids Online was collected in Finland from November 24 until April 25 at schools from youth aged 9 – 16. For each NUTS3 region in Finland, a population-based weight was calculated, and based on this weight, the target number of respondents was determined. The schools included in the sample were selected randomly. From each school, one randomly chosen class from the suitable grade level specified in the sample participated in the survey. Consents were delivered and collected by class teachers. Total amount of respondents is 1082. In most parts of Europe, data is currently collected.

The EU Kids Online questionnaire 2025 included questions related to the youths' internet usage, digital skills, risks online (bullying, hate speech, sexual harassment etc.), parental mediation in online environments, personal traits and digital future including questions related to artificial intelligence. Some of the questions were only asked of the respondents aged 11 or older since sampling methods was not sensitive of the age but the grade. In this paper, the questions measuring the attitudes towards digital future were only asked respondents aged 11 or older.

Currently, we are analysing the data in Finland. Preliminary, youth positive attitudes are seen in the popularizing usage of Gen AI. In this study over 60 percent of all respondents reported that they have used Gen AI during the past month. Some even produce deep fakes. Digital pessimism is linked with, for example, youth experiences of risks online.

EUKIDS Online research in Finland (2024-2025) is funded by Media Industry Research Foundation of Finland.

11

Inclusive AI pedagogy in Media Education

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Abstract

Stemming from inclusive media education models, for example, Pienimäki & Kotilainen, (2021), this paper is discussing their updating to the age of generative AI. That is the objective of the EUCrea project *Tools & Awareness about Disinformation, Algorithm & Media* (https://tadam.education) TADAM as the context of our research. Tadam project is developing media education models for teachers, youth workers and journalists. That has been done already in experimental workshops and, in early September 25 in a hackathon titled as Media Edukhaton taking place in Athens, Greece with 70 media educators from 18 countries in Europe. Finally, these experiments and developments will be edited for a publication open access as Media Education Lab by the Belgian coordinator NGO Media Animation.

This paper is based on the case study in Media Edukhaton. Key question is: *How is AI pedagogy integrated with the aspects of inclusive media education*? We will focus on participants' learning experiences of Gen AI and, their understading of media education together with inclusiveness aspects.

Our approach to AI media education is mostly based on Renee Hobbs (f.ex. 2019) modellings of media literacy education with the aspects of inclusiveness, for example, accessibility and safe learning enviroments. In the analyses we will focus on a) ACCESS / Equal opportunity to participate; b) ANALYSIS / Strengthening critical thinking and, c) ACTION / Participation in practice. Based on Hobbs + inclusiveness the goal of the AI Media education to strengthen agency and participation through hands-on practice.

Data collection in this case study is mixed methods-based: interviews of selected participants in the event; notebook of our perceptions and final developments as pedagogical designs in the three-day hackathon 3.-5. September 25. Analyses of the data is thematic based and, it takes place soon after the event during this Autumn, for an article. In the conference, preliminary findings are presented together with examples from the data together with dicussion of AI media education.

12

Motivational Profiles of Pre-Service Teachers Studying Educational Technology: Insights Based on Expectancy-Value Theory

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Abstract

The integration of digital technology into teaching remains a highly relevant topic, especially with the rise of artificial intelligence and its role in future curricula. Teachers are expected to use technology in pedagogically sound ways, which places significant demands on teacher education as well. Teacher educators act as key "gatekeepers"; they need to serve as role models by providing pre-service teachers with opportunities to learn, collaborate, and reflect using technology. This helps equip new teachers with the skills needed to effectively use educational technology. Previous research has examined technology integration from various perspectives, including attitudes toward technology, perceived usefulness and ease of use. Teachers' knowledge of combining technology with pedagogy and content, as well as the influence of social factors, has also been studied. However, the role of motivation has received limited attention.

This study addresses that gap by focusing on pre-service teachers' motivation to study the use of educational technology during teacher training using the Expectancy-Value Theory (EVT). According to EVT, motivation depends on individuals' expectations of success and the value they assign to the task. Expectations relate to perceived competence and likelihood of success, while values comprise four elements: intrinsic value, attainment value, utility value, and cost. The first three reflect positive aspects such as enjoyment, interest, and usefulness. Cost, in contrast, refers to the effort required for the task and other activities one may need to give up in order to complete the task. While EVT aligns with themes in prior research on technology integration, it introduces new perspectives, particularly the concept of cost, which has been largely overlooked in educational technology studies.

This study examined pre-service teachers' motivation to learn about educational technology during teacher training. The aim was to create motivational profiles based on six EVT-related factors. Data were collected from 346 predominantly second-year pre-service teachers across four Finnish universities. Participants were fully informed about the study's purpose, ethics, and data analysis procedures. Latent Profile Analysis (LPA) was used, with model fit evaluated using AIC, BIC, aBIC, AWE, VLMRp, LMRp, and Entropy.

Results revealed five distinct motivational profiles. Pre-service teachers in one profile showed high motivation, viewing educational technology as interesting and important, with strong expectations of success and minimal perceived cost. Profile at the other end exhibited the opposite pattern. The profiles were not uniform, revealing unexpected variations. Notably, perceived value of studying educational technology was relatively high across all profiles, suggesting that pre-service teachers generally consider the topic important, even when their interest and confidence differ significantly.

13

Food Blogs as a Nonformal Learning Environment

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Abstract

Most scholars agree that an effective learning environment not only facilitates learning but also fosters student well-being. Such an environment is characterized as safe, supportive, and motivating—one in which students feel free to experiment, explore, and engage with new ideas.

This study investigates how Finnish food blogs can serve as a nonformal learning environment, especially for adult learners, that supports developing a positive relationship with food.

So far, social media texts have been used in teaching primarily to practice critical media literacy, support personal creation and expression, facilitate language learning, and promote communal learning and reflection. However, they have not been used so much with the specific aim of enhancing well-being.

In their blogs, food bloggers share recipes and positive food-related experiences and knowledge with their readers. Food blogs as social media platforms enable participants to build communities of practice, develop culinary skills, and reflect on cultural and personal relationships with food.

Drawing from my doctoral dissertation based on Finnish food blog posts and survey responses—analyzed through netnography, qualitative content analysis, and discourse analysis—Finnish food bloggers demonstrate a generally positive relationship with food. This is expressed with well-being-related discourses and descriptions of food-related agency. Food bloggers can be characterized as inquisitive and self-directed learners who engage in both formal and non-formal learning. They share their learning outcomes through writing and visual content on social media platforms.

This presentation suggests that the function of food blogs could be recognized as digital nonformal learning environments where informal learning takes place through storytelling, visual communication, and social interaction.

It highlights the potential of food blogs to serve as reflective spaces where individuals can critically engage with their food relationships, participate in a broader societal discourse around food in dialogue with bloggers, and explore the complex and interconnected factors that shape their attitudes and behaviors related to food. Such learning can occur either autonomously or within guided educational settings.

This presentation argues that social media platforms—particularly food blogs—can function as meaningful environments for individuals to negotiate their food-related identities and foster more positive attitudes toward food and eating within the context of contemporary food culture. Food blogs have the potential to enhance not only their writers' but also their readers' well-being and strengthen their food-related agency. This process may involve reflecting on the foundations of bloggers' positive relationships with food, which research suggests are shaped by food-related values, creativity and experimentation, multisensory experiences and memories, and the social dimensions. By engaging with bloggers' examples,

readers may better understand the factors influencing their food relationships and be empowered to reshape them in a more positive direction.

The presentation underscores the educational capacity of digital environments beyond formal settings, providing valuable insights for educators, researchers, and practitioners engaged in lifelong learning and media education focusing on well-being.

14

From Voice to Code: Women's Leadership and Agency in the Generative AI Era

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Abstract

The rise of generative artificial intelligence (Gen AI onwords) has significantly reshaped women's social impact, shifting influence from traditional voice-based participation to algorithmically mediated visibility. While Gen AI systems often replicate societal inequalities embedded in training data, many organizations continue to adopt outdated leadership paradigms that place the burden of adaptation on women rather than critically examining systemic biases. Thus, there is a need for new conceptualizations of female leadership together educational models in Gen AI era.

This paper argues that traditional leadership models designed for hierarchical, human-centric organizations are insufficient for navigating the distributed and opaque nature of algorithmic power. In the main title voice symbolizes traditional leadership and participation, whereas code refers to generative artificial intelligence and digital systems, where influence is exercised through technology, data, and algorithms.

Building on a decade-long Sino-Finnish collaborative research initiative, this study investigates how female leaders in education, administration, and corporate sectors engage with artificial intelligence-based technologies. Through a longitudinal methodology involving interviews conducted in 2016 and replicated in 2025, we explore the evolving cognition, attitudes, and adoption of Gen AI among female leaders. In 2016 study the focus was in defining female leadership from the perspective of media usage in the same three fields as this study is approaching. Previous study was reported only in Chinese as a book, published by the Communication University of China. The current project will be published in English.

The research aims to move beyond descriptive accounts by developing a conceptual framework grounded in critical media education such as combining critical thinking and constructive solution-seeking with a participatory approach engaging the users in the design process of solutions following the transformative framework. This framework conceptualizes female leadership as active agency in reshaping socio-technical norms and defines AI literacy as a critical competency that enables women to deconstruct, critique, and creatively intervene in AI systems.

The preliminary research questions are as such: How female leaders apply agency in Gen AI era? What kinds of solutions can be developed in media education for female leaders?

Ultimately, the study seeks to propose a new educational model for female leadership in the Gen AI era, one that integrates technological critique with leadership practice to foster equitable digital futures. Digital futures is understood here based on currently fast developments of digitalization and mediatization, which shape our social world, and imagined by interviewees in the project. We are conducting interviews (N= 8-10) among female leaders during the autumn 2025 in in Finland and increase the number internationally, and ready to present some examples of them in the conference with conceptual discussion.

15

Expressive and Critical Empowerment in Computation - Participatory Design Workshops with Youngsters in Tarinatalo Game

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Abstract

Expressive and critical empowerment in computation - Participatory design workshops with youngsters in Tarinatalo game

Digitalization is transforming our society rapidly, making children's digital literacy skills crucial for their future. A deep understanding of digital technology is essential in the 21st century. However, while computational thinking is prioritized to provide foundational skills as regards algorithms, decomposition, and pattern recognition, there is a need to question whether this focus supports holistic development. Computational thinking often lacks a critical and reflective approach to digital society and does not equip children to make informed choices or participate creatively in technology development in age-appropriate ways.

Methods supporting children's expression, critical thinking and creativity play a key role in building skills that technology alone cannot teach. It is important that education and training balance logical problem-solving, critical thinking and creative expression, so that children have conditions to grow into well-rounded adults with the necessary skills for their digital future. Too limited focus on CT leads to neglecting critical and reflective dimensions that are needed to navigate a digitalized society. In response, the concept of computational empowerment (CE) has emerged, broadening the focus from technical skills to self-expression, critical reflection and design agency.

This article presents the overview of a series of participatory design workshops in the Tarinatalo design process. The workshops were held with young people aged 13–16 in six different schools. The workshops focused on designing educational technologies to support reading and writing, providing opportunities for students to express themselves through character creation, storytelling and user interface ideas. Alongside these creative activities, the students tested and critically evaluated technology – its limitations, possibilities and impacts.

Based on CE frameworks such as (Iversen et al., 2018), we analyze the workshops through three interrelated dimensions:

1) How students used technology for creative self-expression and identity construction;
2) How they reflected on the role of technology in their lives and society; and
3) How they participated in design and implementation of actual technology.

The CE framework analysis of the workshops revealed that young people experienced participation as expressively empowering in various ways. They used technology design for creative self-expression - such as developing game elements, characters, environments, and narratives, and provided critical feedback on their own learning environments through testing and evaluation. This process reinforced their sense of agency and their belief that

they can influence both their immediate learning context and the broader digital future as active citizens.

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Where Stories Live: Narrative Design and Worldbuilding in the Symbolic Game World of Tarinatalo

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Abstract

This paper presents a design case study of Tarinatalo, a narrative-focused serious game developed to support the development of reading and writing skills among Finnish middle school students. The game centers on a symbolic story house, where each floor represents a stage in the creative process.

Pedagogical goals provided the foundation for the design process, shaping the structure of the game world and the types of story-focused tasks embedded within it. Each space supports diAerent writing activities, such as gathering ideas, organizing narrative elements, and composing short stories. These tasks are closely tied to the atmosphere and symbolism of each space, and learning is reinforced through the integration of meaningful tools, characters, and environments.

Narrative structure is addressed in the game through interactive tasks that guide players to recognize and apply key elements of storytelling. Players construct narrative sequences, reflect on story parts, and experience a progression that mirrors the arc and rhythm of storytelling. The evolving Taikakynä tool, the antagonist Varjis, and other characters were co-designed with students during creative workshops that also shaped the tone, structure, and direction of key environments and interactions. In total, 10 co-design workshops were conducted between December 2023 and May 2024 across three Finnish schools with students from grades 7 to 9, focusing on character design, worldbuilding, environmental elements, and narrative structuring through storytelling, paper prototyping, and ideation tasks.

The study uses a retrospective design case methodology, drawing on a wide range of development artifacts including early and revised versions of the game design document, meeting notes, visual mockups, storyboards, and notes from co-design workshops. The

overall design and development process spanned approximately ten months, beginning in August 2023 with internal concept development and pedagogical planning. Initial ideas for the worldbuilding and narrative framing were developed early in the project and

subsequently refined and expanded through collaborative design team meetings and expert workshops with pedagogical partners. Student workshops continued throughout the development period and directly informed specific elements of the game world and

mechanics. The analysis is based on reflective inquiry and artifact analysis, conducted by the lead designer. It traces how pedagogical intentions were interpreted and implemented through narrative mechanics, symbolic environments, and spatial design. While the full analysis is ongoing, preliminary reflections highlight how collaborative and authored design approaches shaped the integration of pedagogical goals into the game's symbolic world, narrative structure, and interactive elements.

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Digitalization for a sustainable future? Insights from Finnish education policy framework

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Abstract

Over the past decades, digitalization has been a central priority in Finnish education policy (Kaarakainen & Kaarakainen, 2018; Saari & Jäntti, 2018), resulting in a broad national framework of strategies and policy documents (i.e. Finnish Government, 2022; 2021; Ministry of Education and Culture, Finland, 2025; 2023a; 2023b; 2022). However, as interest and research evidence on the environmental burden of technology grows stronger (e.g., Shengjergji, et al. 2024), a key question arises: to what extent, and in what ways, can digitalization genuinely support reaching the sustainability of education within planetary boundaries?

The ecological footprint of educational technology emerges mainly in three phases: (1) device production, which consumes natural resources and generates embodied emissions accounting for up to 80% of the technology's life-cycle impact, (2) the use of devices and software, requiring continuous energy and significant data center resources, and (3) recycling and e-waste processing, which themselves demand energy and produce further emissions (Technology Carbon Standard. n.d.; Selwyn, 2025). Educational policies are essential for sustainability in all these stages, as they create structures and guide the activities of education providers in relation to the introduction, use, and discontinuation of technology. However, there is a lack of understanding about the ways in which education policies can take sustainability into account.

This presentation is based on a study analyzing Finland's national level policy framework for the digitalization of education through qualitative document analysis (Bowen, 2009). It examines how ecological sustainability is currently consider and what measures the policy framework proposes to address environmental challenges.

The aim is to bring ecological sustainability considerations into the discussion on educational digitalization and to provide tools for researchers, education experts, and practitioners to find solutions for sustainable future.

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Digitally-mediated learning about self in nonformal environments: The case of data-informed talent identification in junior sports

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Abstract

Much of the research on children's learning in digital environments has focused on formal and informal contexts, namely schooling and the use of (social) media and AI during leisure time. This means that one important life domain has remained underexplored: nonformal learning environments such as hobbies.

Hobbies form a crucial part of contemporary children's lives. In Finland, 92.5% of children aged 7–14 have hobbies (Tarvainen et al., 2023), with junior sports being the most popular type (Blomqvist et al., 2023). Junior sports are also becoming highly digitalized and datafied learning environments for children and youth, as the use of data-generating technologies for performance tracking and talent identification is becoming commonplace at the junior level.

Take football, the most popular sport in the world, for example. Junior teams' games and practices are regularly filmed with cameras that generate cumulative data and provide automated analyses such as shot maps, pass strings, player positioning, and ball possession, to name just a few. Junior players may also use wearable technologies that monitor speed, heart rate, ball touches, and even foot rotation. These data and analyses are then used to classify junior athletes into categories such as "talented" and "not talented," thereby shaping their self-image and identity.

In this presentation, we introduce the Academy of Finland–funded project *Resolving the Ethical Paradoxes of Data-Informed Talent Identification in Junior Sports through Data Literacy* (PARADOX: http://bit.ly/3JADRaX). The overarching aim of the project is to develop research-based principles and guidelines for how data literacy can be applied to ensure that data-informed practices in junior sports are ethical, empowering, and socially sustainable. In doing so, the project bridges two traditionally distinct scholarly domains: digital/media literacy research and sport sciences.

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The Tarinatalo Goes to Sápmi project (Máinnasviessu sámás / Mainâsviste sáámást / Maainâspõrtt säämas)

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Abstract

The Tarinatalo Goes to Sápmi project (*Máinnasviessu sámás / Mainâsviste sáámást / Maainâspõrtt säämas*) addresses the urgent need for digital, linguistically inclusive learning resources in Sámi education. Its core aim is to translate and adapt the game-based Tarinatalo learning environment into Sámi languages, supporting children and young people in developing multiliteracy skills while strengthening the digital accessibility and vitality of Sámi languages across Finland, Norway, and Sweden.

The need for new pedagogical approaches is underscored by recent concerns over declining literacy skills both nationally and internationally (Karvi, 2023; OECD, 2023). In Finland, national evaluations highlight decreased writing proficiency, especially at the end of basic education. International assessments, such as PISA, show similar trends. Simultaneously, students often describe school writing as mechanical, irrelevant, and disconnected from their everyday lives, which diminishes motivation and engagement (Freda et al., 2022).

Research suggests that game-based and playful learning environments can provide solutions by enhancing writing motivation, creativity, and text quality (Gee, 2008; Whitton, 2018). They also foster collaborative, multimodal, and participatory literacy practices aligned with multiliteracy pedagogy (New London Group, 1996; Cope & Kalantzis, 2009). In the Sámi context, where culturally responsive digital resources remain scarce, such innovations are especially critical (Kallionpää, 2017; Keskitalo & Olsen, 2024).

The project integrates three research perspectives: (1) writing motivation theory, emphasizing agency, self-efficacy, and meaningful engagement (Bruning & Horn, 2000; Graham et al., 2020); (2) multiliteracy pedagogy, highlighting multimodality, cultural sensitivity, and participatory practices (Cope & Kalantzis, 2009; Lankshear & Knobel, 2011); and (3) playful learning, which incorporates curiosity, exploration, and creativity into structured learning processes (Zosh et al., 2018; Kangas, 2010). Together, these strands create a framework for rethinking writing pedagogy in Sámi-language education.

Methodologically, the project involves translating and adapting Tarinatalo into multiple Sámi languages, followed by school-based pilots across Sámi regions. These pilots are paired with research on how playful and game-based pedagogies support Sámi students' literacy development, motivation, and writer identity. The project also investigates how culturally grounded digital environments can enhance the vitality of endangered languages and strengthen students' sense of belonging.

The expected contributions are threefold. First, the project develops innovative Sámi-language digital learning resources to address a persistent gap in education. Second, it advances literacy research by combining writing motivation theory with playful multiliteracy pedagogy in a minority language context. Third, it provides practical, scalable models that can support language revitalization through playful and digital pedagogies.

In sum, *Tarinatalo Goes to Sápmi* responds to both local and global challenges by creating equitable opportunities for Sámi children and youth. It demonstrates how playful multiliteracy learning can bridge the gap between school writing and everyday media practices while contributing to the vitality and future of Sámi languages and cultures.

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Scaffolding Pre-Service Teachers' Learning with AI: Insights from a Quantitative Methods Course

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Abstract

Large Language Model (LLM)–based tools are increasingly integrated into teacher education, yet little is known about how pre-service teachers experience AI as a scaffold for learning. This study investigates the multifaceted roles of AI as an external, just-in-time support mechanism in a compulsory four-week quantitative research methods course for pre-service teachers. AI tools such as Copilot were encouraged but not mandated, and their use was embedded in practice sessions involving the Jamovi statistical software. Students documented their progress in learning portfolios, which included brief reflections on AI use (N = 148), supplemented by responses to an end-of-course questionnaire (n = 65).

Using Kim and Hannafin's scaffolding framework, a deductive qualitative content analysis explored how AI functioned across four scaffolding categories: procedural, conceptual, metacognitive, and strategic. Conceptual scaffolding was most prominent, supporting students in unpacking statistical concepts, interpreting outputs, and recalling procedures. Procedural use included clarifying task requirements and translating instructions into actionable steps. Metacognitively, AI helped verify interpretations and build holistic understanding. Strategically, students used AI to simplify explanations and explore alternative approaches, which encouraged persistence and created a safe space for asking simple or basic questions.

Despite these benefits, barriers to effective AI use were evident. Some students reported low AI literacy and found prompting unnatural or inefficient compared to traditional search methods. Ethical concerns were common, with initial perceptions of AI as a form of cheating. Many preferred familiar strategies such as independent study or peer support. However, course exposure often shifted these views, redefining AI as a valid cognitive aid, comparable to a calculator.

To fully realize AI's potential in teacher education, the study recommends embedding AI literacy and ethical reflection into coursework, modeling responsible use by educators, and designing tasks that promote AI-supported thinking rather than cognitive outsourcing. These steps can help prepare pre-service teachers to integrate AI in pedagogically sound and ethically responsible ways.

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Forest Utopias: Cultivating Students' Utopian Imagination and Planetary Citizenship with AI Tools

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Abstract

The abstract is about my PhD research plan, which is this: A utopian pedagogy design is used in this PhD research to teach upper secondary students planetary citizenship. **How GEN AI technologies influence students' utopian ideas and forest futures will also be studied. (**This is the relevance to this category.)

As recent surveys show that Finns are becoming more environmentally conscious, this dissertation study is driven by the need for an ethical, holistic, and planetary shift in attitude toward nature (Ministry of Environment, Government of Finland, 2022). The study is set in the unsustainable human-nature connection, which exploits forests as commercial and industrial resources rather than systems with intrinsic worth (Yadav & Singh, 2024). Scientific research and critical discourse are challenging this paradigm by emphasizing the need to re-establish a meaningful, non-exploitative connection with nature (IPCC 2019; Malm 2016). Current attitudes typically show alienation and damaging dichotomies, even though Finnish woods are vital to human health (Sormo, 2017; Lehtonen et al., 2018). We face a polycrisis (Tooze, 2023), an interrelated, systemic breakdown we must endure to hope in a brighter future. However, the Finnish school system seems unable to educate pupils' values and abilities for global citizenship and sustainable futures (Mykrä, 2021; Finnish Upper Secondary Curriculum, 2021). Multicrises of numerous tipping points (Hemraj et al., 2025) owing to man-made climate and natural changes are deepening globally, therefore students should be better prepared.

The dissertation uses Design-Based Research and conjecture mapping (Barab & Squire, 2004; Sandoval, 2014). Video-recorded classroom interactions, student focus group interviews, and student-generated texts will be collected from upper secondary students in two iterations of design-based research to test and refine pedagogical design hypotheses.

22

Rethinking Spaces in the age 0–6: What Can Adults Learn? The experience of LABZEROSEI

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Abstract

In recent years, growing attention has been paid to the role of digital technologies in early childhood education, sparking both interest and concern. While some scholars highlight the potential of digital media to support learning exploration, and expression from the earliest years, others warn against passive consumption and inappropriate uses (Christakis & Hale, 2025, Carenzio, 2024, Ferrari & Pelizzari, 2023, Livingstone & Blum-Ross, 2020). Within this complex debate, there is a precise need to design environments that promote active, creative, and relational approaches to digital technologies in the 0–6 age group. challenging conventional rhetoric which depicts children as helpless in front of the screen.

This paper investigates how an educational space designed for young children - characterized by an integrated use of digital tools and diverse materials - can also become a reflective environment for adults, presenting the experience of LABZEROSEI, a pioneering educational hub. Co-designed by the City of Milan with local cultural, educational, and university partners (MUBA, COMIN, Università degli Studi di Milano Bicocca, and CREMIT), it opened in September 2023 with support from municipality and EU funding (REACT-EU, PN Metro Plus). Spanning approximately 320 m², the space includes immersive, multifunctional labs for coding and robotics, traditional atelier spaces, and areas that blend digital tools with varied physical materials and loose parts.

The contribution explores how such an environment not only fosters children's exploration, but also invites parents, teachers, atelierists and educators to rethink their stance toward digital media. The research trajectories adopt both quantitative and qualitative methods, including questionnaires, observations, thematic focus groups, video-recording analyses, and product analysis.

In particular, we will focus on the observations during play sessions, to reflect on how adults (both caregivers and professionals) interact with the setting, with digital devices and children, including their perceptions. Methodologically, observation is a key tool in order to collect data on behaviors, interactions, and contexts as they naturally occur. The grid - designed by CREMIT - is structured around three coding schemes, used for the analyses: (1) children's relationship with technology and adults' intervention (substitutive, supportive, generative, or consolatory); (2) the interactions among children and between children and adults, paying attention to the stance performed by adults (distant, observant, participatory, substitutive, interfering); (3) the relationship between analog and digital materials/devices as integrative or alternative layers. The analysis refers to 4 sessions with children and their families during the weekends (18 children aged 4 to 5 years; 14 parents) and 7 sessions during school time with children and their teachers (44 children aged 2 to 4 years; 12 teachers), covering three different activities chosen among the general education line-up. The observations have been conducted by researchers from CREMIT, trained in the field of early childhood and media education. We chose the combination of direct, structured and non-participant observation according to the aims of the research, supporting a systematic

analysis of patterns, balancing the limit of such method with open field notes and photos to catch the richness of contextual information and unexpected events.

Findings suggest that intentionally designed environments can support the development of more conscious, situated, and dialogic styles of digital engagement, opening up new pathways for adult reflection and professional development in early childhood contexts. Such spaces can serve as arenas of shared exploration, as "third-spaces", catalyzing shifts in adult educational postures and professional development. Digital devices can be an ally in stimulating young children to express their views on the world, through the gentle guidance of adult figures by their side. It is crucial not to regard mediality in general — and digital media in particular — as isolated domains detached from everyday experience. Rather, it is necessary to contextualize digital practices within a system of meaningful relationships, both among peers and in relation to adults.

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23

From Algorithms to Beauty Filters: AI, Body Image and Youth Well-Being

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Abstract

In recent years, the role of artificial intelligence (AI) has become increasingly central, directly shaping everyday practices and drawing growing attention within the educational field. Among its various domains of influence, the integration of AI into social media has had a significant impact on body image, identity (Huang & Fabi, 2024; Bhandari & Bimo, 2022), and well-being—particularly among adolescents. TikTok, with its powerful recommendation system, AI-generated narratives, and aesthetic filters, exemplifies how AI integration shapes young people's perceptions of themselves and their bodies. This issue has been extensively studied over the last five years, with a marked acceleration since 2021, when the pandemic exacerbated overt disorders and distress among teenagers. We argue that an educational approach integrating multiple perspectives can foster preventive well-being processes by addressing body image, self-perception, and identity.

Building on a reinterpretation of the existing literature, an analysis of past studies, and emerging phenomena discussed in public debates, this paper introduces a framework for understanding the role of AI in social media. The framework is structured around three scenarios:

1. **AI as recommendation algorithm.** Personalized content suggestions expose users to filter bubbles and echo chambers, leading to overexposure to topics related to body image and nutrition.
2. **AI as narrative format.** AI-driven narratives transmit values, norms, and peer pressure regarding body ideals, reinforcing stereotypes and biases while obstructing inclusive storytelling.
3. **AI as beauty filters.** Aesthetic filters affect self-expression and perceptions of authenticity in digital environments by promoting standardized ideals of beauty and amplifying feelings of inadequacy.

To respond to the educational challenges posed by these scenarios, we refer to the digital competences outlined in *DigComp 2.2* (Vuorikari et al., 2022), as reinterpreted by CREMIT (Catholic University) in the context of media education (forthcoming, 2026). Each competence corresponds to one of the three scenarios:

1. **Critical competence**—necessary for understanding how algorithms function and how they shape user experiences, fostering critical thinking and awareness of AI.

2. **Ethical competence**—supporting responsibility and conscious media production in the spirit of digital citizenship. Media outputs are always the result of individual and collective choices, which must be exercised when constructing and sharing meaning on platforms.
3. **Aesthetic competence**—cultivating the ability to reflect on media representations of the body, challenge unattainable and standardized models, and engage in collective practices that deconstruct and reconstruct new frameworks for body-related narratives.

The three scenarios and their corresponding competences will be illustrated through a TikTok case study. However, this emerging model is transferable to other AI-driven platforms. It offers an educational perspective aimed at fostering healthier relationships between young people, AI, and body image in contemporary digital cultures, while also promoting well-being on social media.

Finally, the proposed framework is tested through the *Peer & Media Education* method (Carenzio et al., 2015). This participatory approach translates the theoretical framework into concrete educational strategies, encouraging collaborative learning, reflexivity, and agency. In doing so, it contributes to promoting well-being in everyday digital life.

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Finnish elementary teachers' conceptions and experiences on AI technologies' effects on education

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Abstract

The past few years have seen a remarkable uptake on research of AI tools in education. While public discourse of AI in education is oriented towards concerns of its misuse, recent research has also found positive use cases, new pedagogical opportunities and functional approaches to support teacher education. Institutional interest has in turn used this research to produce guidelines for best practices regarding the use of AI tools and generative AI in education.

The use of generative AI in higher education is widespread and well documented in current literature. Its introduction into elementary school is less clear, and how well it is suited for the learning process at that level is still an open question. Since culture, schools and curricula vary greatly across the world, there is a clear, continuous need for local studies of technologies in practical use.

To build a picture of the emerging effects of AI technologies on primary education, this study trusts the teacher's viewpoint, as they are in control of the classroom. In the Finnish education system elementary school classroom teachers have a master's degree on education and considerable freedom in implementing the national curriculum for their needs. As such, every teacher can approach the material differently, according to available resources and their students' particular needs. Given these heterogeneities, this study will develop a survey to gather data and analyze it using appropriate quantitative and qualitative methods.

The goal of this study is to gather and analyze classroom teachers' conceptions and experiences of using AI tools and generative AI in their work. Through carefully crafted closed and open-ended questions the study aims to map teachers' conceptions and experiences on how the use of AI affects the learning process in their classrooms, and how their use resonates with the everyday routines and pedagogical goals of elementary schools. Special interest is in what possible emergent or secondary effects their use has and how interaction patterns might be affected, as these might have been overlooked in previous research. These topics have been explored previously in the context of teacher education and digital competencies, but routine use of AI in classrooms remains understudied.

The research questions of the study are: What experiences and conceptions do Finnish elementary teachers have of AI tools in their classrooms? What experiences and conceptions do the teachers have of AI tool's effect on their students' learning and their own teaching? A further question is whether any backlash against the use of AI or generative AI content can be found in the results, which is currently an emerging topic in public discussion, possibly related to historically observed resistance against technological change.

The results of this study will further understanding of how elementary education is evolving alongside teaching and learning technologies and highlight the teachers' view of the topic.