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The Role of Student Voice in an Era of AI in Higher Education: Benefits, Risks, and Ethical Considerations

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Abstract: This literature review explores the impact of artificial intelligence (AI) on student voice in higher education. The authors examine the potential benefits of AI for personalized learning, assessment, and career development, but also highlight the risks of AI-driven depersonalization, over-standardization, and ethical concerns about data privacy and algorithmic bias. The authors address the importance of ensuring that AI is implemented in a manner that upholds the principles of equity, inclusivity, and student agency, and they advocate for a critical engagement with AI technologies that prioritizes academic integrity and responsible use. The paper also specifically addresses the unique challenges faced by Indigenous and international students, emphasizing the need for culturally responsive and linguistically diverse AI systems that address the historical marginalization of certain student groups. Implications are as AI becomes increasingly embedded in higher education, it is crucial to prioritize the needs and voices of all students. By embracing ethical AI development practices, fostering transparency, and empowering students to engage with AI critically, institutions can harness AI's potential while preserving the authenticity and diversity of student voices. The paper concludes by advocating for the responsible use of AI by students, emphasizing the importance of academic integrity, critical thinking, and ethical engagement.

Keywords: Artificial Intelligence (AI), Higher Education, Learning Methodologies, Assessment Processes, Student Voice, Personalized Learning, Student Agency, Regulatory Frameworks, Data Privacy, Algorithmic Bias, Indigenous Students, International Students.

Introduction

Student Authentic Voice

Student voice refers to the active involvement of students in shaping their educational experiences by expressing their preferences, perspectives, and ideas based on their own lived experiences (Bourne & Winston, 2021). It is closely linked to concepts of agency, engagement, and empowerment, allowing students to have an influence on both the learning environment and institutional decision-making (Inouye et al., 2023). Historically, student voice has been central to participatory and democratic approaches to education (Jääskelä et al., 2021). However, with the emergence of AI in higher education, there are increasing concerns about how these technologies may affect students' ability to express themselves and maintain their authenticity (Darvishi et al., 2024; Sotiriadou et al., 2020). While AI promises to personalize learning experiences (Kim et al., 2022), streamline assessments (Karademir & Alper., 2024), and provide actionable insights for self-improvements (D'Mello et al., 2024) on professional career development (myInterview, n.d.), it also introduces risks of depersonalization, over-standardization (Schaeffer et al., 2024), and data privacy (Ussaiyu et al., 2023), concerns that may marginalize authentic student voices (Hill et al., 2024).

This paper explores the intersection of AI technologies and student voice in higher education. Furthermore, it will analyze the impact of AI on personalized learning and assessments, scrutinize potential benefits and risks, and propose frameworks for safeguarding student agency in an AI-driven educational landscape. The role of regulatory frameworks such as the General Data Protection Regulation (GDPR) (Issaoui et al., 2023), California Consumer Privacy Act (CCPA) (Lee, 2024), and Personal Information Protection and Electronic Documents Act (PIPEDA) (Park & Feng, 2024) will be considered in protecting the ethical use of AI while supporting the amplification of student voice.

Perspectives on Student Authentic Voice and Teaching Adaptability

AI must be considered in relation to the valuation of a learner's authentic voice. There are existing calls for soliciting and including learners' participatory voices in the activities and practices that impact them (Conner, 2022; Sargeant & Gillett-Swan, 2019), which increasingly involves AI. Learners' agency must be considered (Darvishi et al., 2024) through the social justice lens of how to leverage technology such as AI tutoring systems or learning environments for the benefit of learners (Browne, 2020). A larger question, beyond the scope of this article, is why learners feel their unique, agentic voices are replaceable with the generic voice of AI.

A learner's authentic voice involves dialectical language in broad terms and lexical items specifically. Linguistic research could inform the

development of AI systems to better support culturally diverse voices (Sedlacek & Lomelí, 2024). There are rich opportunities to consider AI in terms of dialect and the kinds of language that are valued in higher education. AI can be a useful facilitative tool (Casal & Kessler, 2023) and AI-integrated language learning environments can serve as a means to promote intelligence amplification (Ji et al., 2023). AI has an impact on second language learners' learning outcomes and attitudes (Wang T., et al., 2024) and has potential for supporting the learning of reading, writing, speaking, and listening within language education (Huang et al., 2023). Yet there remain questions of AI reliability, negative perceptions, and potentially embedded social biases (Huang et al., 2023). The demographic whose language AI smart messages emulates will be replicated and therefore erode cultural linguistic variations, potentially reinforcing systemic inequities (Hohenstein et al., 2023). AI needs to be examined for bias and cultural sensitivity, ensuring that the technology respects and enhances, rather than flattens, diverse cultural expressions.

AI impacts authentic voices in communication, teaching, and the demonstration of learning. How AI can be leveraged to enrich communication and the learning experience and amplify a variety of voices, respecting and incorporating the diverse linguistic and cultural backgrounds of all learners, needs to be examined. Key considerations for designing AI curricula involve sensitivity to the needs of students and supporting them in critically engaging with AI.

Curriculum design and learning environments will continue to play determining roles in subject-matter knowledge building as the optimal learning goals for student-AI collaboration or SAC (Kim et al., 2022). There are underlying copyright issues with the input, the model, and outputs (Quintais, 2024) and the more learners are able to understand the complexities of AI, the better equipped they will be to engage critically with these complexities.

There is a need to consider the purpose of using or refusing AI in relation to one's own pedagogy and the goals of one's learners. Rendering pedagogical goals and learner goals explicit is an important first step. Learners need support when considering AI, and their own engagement with AI, through a critical lens. Scaffolding these processes can help learners move toward a more fulsome understanding of critical pedagogy and critical literacy. The impact of AI on learner voices and writing style as well as learners' willingness to replace their authentic voices with the generic voice of AI need explored through extended analyses.

Student authenticity is often associated with identity formation and self-expression. A student's authentic voice refers to the open expression of thoughts, experiences, and viewpoints, shaped by cultural and social backgrounds and supported by personal beliefs. This voice plays an integral role in fostering meaningful academic discourse, where individual perspectives contribute to a holistic learning experience and knowledge-building process. In academia, student authenticity involves intertwining

personal reflections with scholarly literature, resulting in deeper critical engagement with content, along with creativity and reflective thinking essential for academic success.

When educational institutions prioritize uniformity and conformity, it can hinder the development of authentic voices, limiting students' capacity to fully showcase their creativity and individuality. Empowerment is central to nurturing their authenticity. When students feel empowered to express their voices confidently, a learning environment emerges where personal contributions are valued, and students are encouraged to participate actively in academic discourse. Empowered students shift from being passive learners to becoming active contributors to the construction of knowledge. In my teaching practice, I aim to emphasize the importance of each student's perspectives and experiences. By creating a classroom culture that values these contributions, we, as educators, empower learners to engage more deeply with academic content and enhance their critical thinking and creativity.

Teaching Styles to Adapt to Preserve and Nurture Students' Authentic Voices

To nurture students' authentic voices, it is essential to establish learning environments that empower students to express themselves confidently. We must re-imagine traditional teaching methods to promote openness and flexibility. One effective approach has been the creation of a 'brave space' in the classroom—a space where learners are encouraged to be authentic and engage with challenging ideas without fear. “Instead of trying to simplify issues for students, presenting them in all their complexity allows students to feel more comfortable being ambivalent” (Marvasti, 2024, page 5). This promotes both academic engagement and personal growth, as students learn to navigate multiplex issues while maintaining their authentic voices.

Throughout my teaching career, I have worked to cultivate a supportive classroom atmosphere where students can openly share academic and personal challenges. I have observed that students tend to express themselves more when encouraged to draw from life experiences that shape their academic efforts. Students have often confided in me about personal issues affecting their academic performance. While I may not have been able to solve every problem, I made a point to listen carefully and direct them to appropriate resources, such as counseling or academic support services. This approach reinforces the value of their voices, not only in academic settings but also in navigating broader life challenges. Conner (2021) supports a significant connection between “open listening and students feeling heard as such empathic listening can give teachers an understanding of features of expression characteristic of students” (page 12).

Another key element of my teaching style is offering students flexibility in learning methods and assessments. This sense of

empowerment nurtures students' authentic voices. I learned from one of my university professors, co-author Crandall, that assessments can involve allowing students to choose how they demonstrate their knowledge. In our class, each form of assessment involved extensive research and reading, but the freedom of choice gave our class a sense of control. Garside et al. (2009) claim that “there is evidence that students exercise their preference when offered choice whether that be choice of institution, course or module” (page, 141). I have also adopted a similar approach in my teaching practice and observed how this empowerment motivates students to engage more deeply and meaningfully with the content.

Finally, seeking constructive feedback from students is critical in evaluating whether teaching methods are effective. Toward the end of each course module, I ask for anonymous feedback to improve my teaching and enrich their learning experience. This feedback helps ensure that students feel supported and provides an open platform for them to critique the system. This exercise is yet another way to preserve and nurture students' authentic voices.

Considering Crandall and Verma's perspectives as front runners on the discourse of AI, student authentic voice, and its use in higher education, let us explore the United Nation's stance on global education.

United Nations Goals for Education in the Context of AI Technologies

Reimers (2024) assert The United Nations (UN) has long been a champion of education as a fundamental human right and a cornerstone for global development. This commitment is clearly articulated in the Sustainable Development Goals (SDGs) (Borsatto et al., 2024), with SDG 4 focusing specifically on ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all (English & Carlsen, 2019). As artificial intelligence technologies increasingly permeate various sectors, including education, they present both opportunities and challenges in achieving these goals (Leal Filho et al., 2024). While AI holds potential to improve access, quality, and equity in education (Nixon et al., 2024), it also raises significant concerns regarding fairness, inclusivity, and the ethical implications (Adel et al., 2024), of its implementation.

The intersection of AI technologies with the UN's educational goals, seeks to bridge how AI can contribute to or hinder the achievement of SDG 4 (Leal Filho et al., 2024). There are potential possibilities where AI can be leveraged to advance educational goals, such as improving access to education, personalizing learning, and enhancing educational outcomes. This section also addresses the ethical concerns surrounding AI's use in education, including issues of equity, data privacy, and the risk of perpetuating existing inequalities.

AI and Access to Quality Education

One of the primary targets of SDG 4 is to ensure that all children and adults have access to free, equitable, and quality education (Rubeis et

al., 2022). In this context and with the aid of institutions and investments in infrastructure, AI technologies offer significant opportunities to expand access to education, particularly for underserved and marginalized communities (Nuary et al., 2022). AI-powered educational platforms can potentially deliver high-quality educational content to learners in remote or disadvantaged areas where access to traditional schooling may be limited. For example, AI-based mobile learning applications can provide educational materials in multiple languages (Karimi et al., 2024; Wang X., et al., 2024), and adapt to different literacy levels (Ferrer et al., 2024), enabling learners in rural areas of the world where access to contextualized education resources that might otherwise be unavailable.

Furthermore, AI can be used to scale educational resources by automating administrative tasks and enabling more efficient delivery of learning materials (Lang & Sharp, 2024). Virtual classrooms and AI-driven learning platforms can accommodate large numbers of students simultaneously, making education more accessible in countries where teacher shortages and limited infrastructure pose significant barriers to learning. These technologies can also facilitate lifelong learning by offering flexible and self-paced learning options for adult learners (Otto et al., 2023), allowing them to continue their education while balancing work and family responsibilities.

However, while AI has the potential to expand access to education, it is important to recognize that these technologies can also exacerbate existing disparities if not implemented thoughtfully. Veras et al. (2024) asserts the digital divide remains a significant barrier to equitable access to AI-powered educational tools. In many low-income countries, access to the internet and digital devices is limited, particularly in rural areas. Without addressing these infrastructure gaps, the benefits of AI in education will remain out of reach for many of the world's most vulnerable learners (Cho et al., 2024; Youssef et al., 2022). Therefore, achieving the UN's goal of equitable access to education through AI will require concerted efforts to ensure that all students have access to the necessary digital resources and infrastructure. Ensuring equitable access to digital resources lays a crucial foundation for AI's next transformative role in education: delivering personalized learning experiences that cater to individual student needs and learning styles.

Personalized Learning and Improving Educational Outcomes

One of the most promising applications of AI in education is its ability to provide personalized learning experiences that cater to the individual needs and learning styles of students (Babich et al., 2023). AI algorithms can analyze vast amounts of data on student performance, learning behaviors, and preferences to create customized learning pathways (Susilowati et al., 2021). This personalized approach can help students learn at their own pace, receive targeted support in areas where they are struggling, and engage with content that is most relevant to their interests

and goals (Kaouni et al., 2023). In this way, AI can enhance the quality of education by making learning more engaging, effective, and tailored to each student's unique needs and with real-time feedback (Sayed et al., 2023).

The ability of AI to provide real-time feedback is another significant benefit for improving educational outcomes (Zhou, 2024; Gohar et al., 2023). AI-powered assessment tools can instantly evaluate student performance and provide personalized feedback, allowing students to correct mistakes and improve their understanding of the material (Gohar et al., 2023). This continuous feedback loop can help students stay on track and achieve better learning outcomes, especially in large classrooms where individualized attention from teachers may be limited (Rodriguez & Potvin, 2021).

AI can also support teachers by automating administrative tasks such as grading, tracking student progress, and generating lesson plans (Maedche et al., 2019). This allows educators to focus more of their time and energy on teaching and interacting with students, which can ultimately lead to improved educational outcomes (Nazeen, 2022). Moreover, AI can help identify at-risk students who may need additional support, enabling educators to intervene early and provide targeted interventions to help these students succeed (Bilquise & Shaalan, 2022).

However, while AI's potential to personalize learning is significant, there are concerns about the ethical implications of data collection (Ortega-Bolaños et al., 2024), and the potential for algorithmic bias (Chen et al., 2023). Personalized learning relies heavily on data about students' performance, behaviors, and preferences, raising concerns about how this data is collected, stored, and used (Nishant et al., 2024). There is a risk that AI systems may reinforce existing biases or inequalities in the data they are trained on (Mittermaier et al., 2023), leading to unfair or discriminatory outcomes for certain groups of students (Peña et al., 2023; Hofeditz et al., 2022). For example, AI systems that are trained on data from privileged populations contribute to its 'whiteness' may not accurately reflect the learning needs and experiences of marginalized or underrepresented students (Cave & Dihal, 2020). To align with the UN's goals for equitable education, it is essential to ensure that AI systems are designed with fairness, and inclusivity in mind and that robust safeguards, are in place to protect student privacy and prevent algorithmic bias.

Equity and Inclusivity in AI-Powered Education

Equity and inclusivity are central principles of the UN's educational goals, and AI technologies have the potential to either support or undermine these principles, depending on how they are implemented. AI could potentially help to bridge gaps in access to education for marginalized groups, including students with disabilities, learners from low-income backgrounds, and those in remote areas (Ferrer et al., 2024; Adão et al., 2023). AI-driven assistive technologies, such as speech recognition software and screen readers, can provide students with disabilities greater

access to educational materials and enable them to participate more fully in the learning process (Kang et al., 2024).

Furthermore, AI can also be used to potentially identify and address systemic inequities in education. For example, AI systems can analyze data on student performance and demographics to identify patterns of inequality and provide insights into how to close achievement gaps (Nyariro et al., 2023). By highlighting disparities in educational outcomes, AI can support policymakers, and educators, in developing targeted interventions, to promote greater equity and inclusivity in education.

However, there is also a risk that AI could exacerbate existing inequalities, if it is not implemented in an inclusive and equitable manner. As mentioned earlier, the digital divide is a significant barrier to access, and without efforts to ensure that all students have access to AI-powered tools, these technologies could deepen existing disparities between rich and poor, urban and rural, and developed and developing countries (Karako et al., 2020). Moreover, there is a risk that AI systems could perpetuate biases if they are trained on data that reflects existing social inequalities. To ensure that AI contributes to the UN's goals for equitable education, it is crucial to address these risks and ensure that AI systems are designed and implemented underpinned by ethical frameworks, in a way that promotes inclusivity, fairness, and equity for all learners.

Ethical Considerations and Regulatory Frameworks

The use of AI in education raises important ethical considerations, particularly in relation to data privacy, algorithmic transparency, and accountability (Rueda et al., 2024; Tóth et al., 2022). To align with the UN's goals for global inclusive education, it is essential to develop regulatory frameworks that govern the ethical use of AI in education (Truby, 2020). These frameworks should ensure that AI systems are transparent, accountable, and designed with the best interests of students in mind.

Regulations such as the General Data Protection Regulation (GDPR) in the European Union and similar privacy laws in other regions provide important safeguards for protecting student data (Goyal et al., 2021). However, more work is needed to develop specific guidelines for the ethical use of AI in education, particularly in relation to the collection and use of student data (Liang et al., 2024). In addition to regulatory frameworks, there is a need for ongoing dialogue among educators, policymakers, AI developers, and students to ensure that AI technologies are implemented in a way that supports the UN's vision for inclusive and equitable education (Bjelobaba et al., 2023).

Therefore, AI technologies offer significant opportunities to advance the UN's goals for education, particularly in terms of expanding access to education, personalizing learning, and improving educational outcomes. However, the ethical implications of AI in education must be carefully considered to ensure that these technologies do not exacerbate existing inequalities or undermine the principles of equity and inclusivity.

By addressing the digital divide via sustainable strategies (Cho et al., 2024), ensuring fairness in AI systems (Celik, 2023), and developing robust regulatory frameworks, AI can be harnessed as a powerful tool for achieving SDG 4 and promoting lifelong learning opportunities for all. To fully leverage AI as a transformative force in education, it is essential to ensure that diverse student voices are actively considered in the design and implementation of these technologies.

Exploring Diverse Student Voices

Student Voice of Indigenous Learners

Student voice of Indigenous people in higher education is a vital yet often overlooked (Hill et al., 2024). Indigenous students bring with them unique cultural backgrounds, epistemologies, and worldviews that are deeply connected to their identities, communities, and histories (Keen & Eady, 2022). In the context of AI in education, there are both opportunities and challenges for amplifying the voices of Indigenous students. While AI technologies have the potential to create personalized learning experiences that resonate with individual needs, they also risk perpetuating the historical marginalization of Indigenous voices (Lambert et al., 2024), if not designed with cultural sensitivity and inclusivity in mind (Hu et al., 2023).

Furthermore, Hu et al. (2023) asserts Indigenous students often navigate educational systems that are rooted in Western epistemologies (Mohamed et al., 2020), which may not fully align with Indigenous ways of knowing and learning. AI-driven personalized learning systems, which are typically designed based on mainstream educational frameworks, may inadvertently exclude or misrepresent Indigenous perspectives (Drummond et al., 2021). For example, an AI system might prioritize individualistic learning goals, neglecting the communal and relational approaches to knowledge that are central to many Indigenous cultures (Han, 2022). If AI platforms are not programmed to recognize and incorporate Indigenous learning styles, they risk further marginalizing Indigenous voices by reinforcing Eurocentric educational models (Nagre, 2023).

Therefore, to ensure that the voices of Indigenous students are heard in an AI-driven educational landscape, it is essential to design AI systems that are culturally responsive and inclusive. This could involve incorporating Indigenous knowledge systems (Keane et al., 2023), into the algorithms that drive personalized learning, as well as ensuring that AI assessments recognize and value the ways in which Indigenous students demonstrate their understanding (Nyamekye, 2024). Moreover, Indigenous students should be actively involved in the development and implementation of AI technologies in education (Ryder et al., 2020), ensuring that their voices are integral to the decision-making process. This would not only help to amplify Indigenous voices, but also foster a more inclusive and equitable educational environment (Bradley et al., 2024).

Moreover, data privacy is another significant concern for Indigenous students, as AI systems often rely on the collection and analysis

of large amounts of personal data. Indigenous communities have historically been subjected to unethical data collection practices (O'Brien et al., 2024) and there is a deep mistrust of systems that may exploit or misuse their information (Ahmed, 2024). In the context of AI in education, it is crucial to establish data governance frameworks that respect the sovereignty of Indigenous students over their personal information. This could involve developing AI systems that allow Indigenous students to retain control over how their data is used, ensuring that it is not shared or exploited without their informed consent (Ahmed, 2024).

Ultimately, for AI technologies to serve Indigenous students effectively, they must be designed in a way that values Indigenous voices, respects cultural diversity, and promotes equity in educational outcomes. By centering the voices of Indigenous students in the design and implementation of AI in higher education, institutions can create more inclusive learning environments that honor Indigenous ways of knowing and learning. As we acknowledge the lack of data on Indigenous voices in AI-powered tools, we may extend similar concerns to cover the voices of international students.

The Voices of an International Students

The authentic voices of international students in higher education may be threaten in an AI learning technologies driven world. Let us take an example with India, a country renowned for its linguistic diversity, is home to over 150 native languages, with 22 officially recognized languages under the Indian Constitution (Majeed, 2022). This linguistic richness shapes the educational experiences of students across the country. As AI technologies rapidly integrate into higher education systems globally, they offer significant potential for transforming learning environments, particularly by providing personalized learning experiences, automated assessments, and data-driven insights (Akiba & Frabo). However, the benefits of AI in education are often limited by a lack of linguistic diversity in AI technologies (Jia, 2022), which predominantly support global languages like English, Mandarin, and Spanish, leaving many Indian and many other students at a disadvantage. This section explores AI's lack of language diversity through the lens of international students, particularly from India and Vietnam in higher education. It critically analyzes how this gap affects students' learning experiences, limits their access to educational resources, and marginalizes their linguistic identity (Zhang & Lütge, 2024), while offering recommendations for more inclusive AI systems that cater to multilingual societies like India.

Zhang and Lütge (2024) asserts language play a fundamental role in shaping an individual's identity, communication, and learning processes. In multilingual societies like India and South East Asia, where students often grow up speaking one or more native languages alongside regional or national languages, the educational system must accommodate this linguistic diversity to provide equitable learning opportunities. However, as

AI becomes increasingly integrated into higher education, the lack of support for multiple languages poses significant challenges for international students.

The Impact of AI's Language Gap Non-English Speaking Students: Limited Access to AI-Powered Learning Resources

One of the most immediate consequences of AI's lack of language diversity is the limited access to AI-powered educational tools for students whose native language is not supported. In India for example, many students in higher education come from rural areas where English proficiency may not be as widespread, and their primary mode of communication may be in regional languages such as Hindi, Tamil, Telugu, Bengali, or Marathi (Jagessar, 2024). Despite these languages being spoken by millions of people, AI systems are rarely developed with robust support for them. As a result, students who are more comfortable learning in their native language are often excluded from the benefits of AI-driven educational tools.

For instance, AI-powered learning platforms such as Coursera, edX, or Khan Academy, which offer personalized learning pathways and adaptive assessments, typically prioritize English as the primary language of instruction (Kaur et al., 2022). While these platforms have the potential to democratize education, students who are not proficient in English may struggle to fully engage with the content, thus widening the gap between English-speaking students and those who prefer learning in their native languages (Kannan & Munday, 2018). The lack of native language support in AI tools forces students to either learn in a language they are less comfortable with or be excluded from AI-enhanced learning altogether.

Marginalization of Native Languages in Higher Education

França de Sá and Vilarigues (2023) asserts the marginalization of native languages in AI-powered learning systems in higher education risks alienating students from their cultural heritage without reflexive thinking embedded. Language is not only a tool for communication but also a carrier of cultural knowledge, traditions, and worldviews (Magnani et al., 2022). For many Indian students, their native language is deeply intertwined with their cultural identity, and the lack of support for these languages in AI systems can create a disconnect between their academic experiences and their cultural roots (Cohen et al., 2024). In this way, AI's lack of language diversity not only affects educational access but also contributes to the erosion of linguistic and cultural diversity. Moreover, the limited language diversity in AI presents similar challenges for international students, who often face additional cognitive and emotional hurdles when required to learn in non-native languages like English.

Challenges to Learning in a Non-Native Language

For many international students, learning in a non-native language such as English presents additional cognitive and emotional challenges. Hill et al. (2024) assert students often learn best when they can engage with material in their native language, as it allows them to process information more deeply and express their thoughts more effectively. However, when AI tools are not available in a student's native language, they are forced to navigate complex academic content in a language that may not come as naturally to them.

This language barrier can lead to misunderstandings, misinterpretation of key concepts, and a lack of engagement with the material (Liu, 2023). For instance, a student studying advanced subjects such as engineering, medicine, law or economics in higher education may struggle to fully grasp technical terms and concepts when presented in English (Bravo & Cruz-Bohorquez, 2024), whereas they would have a clearer understanding if the material were available in their native language. AI systems that do not support these native languages contribute to these learning challenges, potentially lowering academic performance and self-esteem (Song et al., 2023).

Furthermore, this situation exacerbates educational inequities between students from different linguistic and socioeconomic backgrounds (Alshahrani et al., 2024). Students who are fluent in English are better positioned to benefit from AI-powered learning tools, while those who are more comfortable in their native languages may fall behind, not because of a lack of intelligence or potential, but because the tools available to them do not cater to their linguistic needs (Ramírez-Castañeda, 2020). This creates an uneven playing field in higher education, where students who speak dominant languages like English have an unfair advantage over their peers.

To address the lack of language diversity in AI systems, it is essential for developers, policymakers, and educational institutions to prioritize the development of inclusive AI technologies that cater to the linguistic diversity of countries like India or Vietnam. Several steps can be taken to ensure that AI-enhanced learning tools support a broader range of languages, thereby promoting equitable access to education.

Developing Multilingual AI Tools

One of the most important steps in addressing this issue is to develop AI tools that support multiple languages, particularly those spoken by large populations such as Hindi, Bengali, Tamil, and Marathi (Schneider, 2023). This requires investment in natural language processing (NLP) technologies that are capable of understanding and generating content in a wide range of languages. Companies developing AI-powered educational tools must prioritize language diversity in their product design, ensuring that students from different linguistic backgrounds have access to the same high-quality learning experiences.

Collaboration Between AI Developers and Linguistic Experts

To create AI systems that truly reflect linguistic diversity, collaboration between AI developers and linguistic experts is essential. Linguists can provide valuable insights into the unique grammatical structures, phonetics, and cultural nuances of different languages, ensuring that AI systems are designed to handle the complexities of each language (Binder et al., 2022). By working together, developers and linguists can create AI models that not only translate content into different languages but also respect the cultural context in which those languages are used. In addition to collaboration between developers and linguists, government and institutional support is essential to promote and sustain language diversity in AI (Binder et al., 2022).

Government and Institutional Support for Language Diversity in AI

Governments and educational institutions also have a role to play in promoting language diversity in AI with teacher support (Hoi & Mu, 2021). In India and Asian countries where students are multi-linguals, government policies that encourage the use of regional languages in education should extend to AI-powered learning tools. This could involve providing funding for the development of multilingual AI platforms, as well as setting regulations that require educational AI tools to support a minimum number of native languages. Higher education institutions can also play a role by adopting AI tools that prioritize language diversity and by offering courses and materials in multiple languages to accommodate the linguistic needs of their students. However, as AI holds potential capabilities to enhance personalized learning, it could raise concerns about diluting authentic voices.

AI and Personalized Learning: A Double-Edged Sword for Student Voice

The promise of AI lies in its capacity to personalize learning experiences, adapting content and pacing to suit individual student needs. AI-powered systems can act as personal tutors, identifying gaps in knowledge, tracking learning progress, and offering customized resources to bridge those gaps (Woodruff, 2024). This level of personalization has the potential to amplify student voice (Matthews & Dollinger, 2023) by allowing students to express their preferences for certain learning methods, select their own learning paths, and receive feedback that resonates with their unique learning styles (Ni & Cheung, 2023).

However, the risk of over-standardization and algorithmic determinism threatens to undermine these benefits (Nishant et al., 2024). AI-driven learning platforms are often built on data models that prioritize efficiency and scalability, which can result in a homogenization of educational experiences (Chan & Colloton, 2024). Although personalized learning is theoretically designed to cater to individual needs, the reliance on algorithmic patterns may narrow the scope of what is considered effective learning (Anderson & Gavan, 2016), thereby limiting students'

choices and voices. Moreover, as algorithms guide the learning experience, the role of student agency where students make conscious choices about their learning (O'Reilly & O'Grady, 2024; Berendt et al., 2020) journey—may be diminished.

To ensure that student voice remains authentic in the face of AI-driven personalization, it is crucial to design AI systems that allow for flexibility and student input. Students should have the ability to influence the parameters of their learning, not only passively responding to algorithmic suggestions but actively shaping their educational experience. This would require AI platforms to include built-in mechanisms for students to provide feedback, articulate their preferences, and engage in dialogue with educators about their learning paths. Empowering students to actively shape their educational experience through AI-driven platforms not only enhances engagement but also highlights the need for careful consideration of AI-driven assessments and the potential risks of depersonalization.

AI-Driven Assessments and the Risks of Depersonalization

One of the significant impacts of AI in higher education is its application in assessments (Cabero-Almenara et al., 2024). AI systems offer the potential to provide more nuanced and diverse forms of assessment, moving beyond traditional exams and written assignments to incorporate interactive and adaptive testing methods (Chan, 2023). These AI-driven assessments can be tailored to individual student progress, ensuring that students are evaluated on their growth and comprehension (Dabis & Csáki, 2024), rather than their ability to perform in high pressure testing environments.

While AI assessments present opportunities for more authentic expressions of student understanding, there are inherent risks related to depersonalization (Inouye & Oldac, 2023). Automated grading systems (Lee et al., 2022), while efficient, may lack the ability to recognize the nuances of individual student voices (Kang et al., 2024). AI tools that prioritize efficiency over depth of engagement might assess student responses in a way that is too mechanical, missing subtleties in reasoning, creativity, or context-specific expressions of knowledge (Gerbin & Drnovsek, 2020; D'Angelo et al., 2013). The danger of depersonalization is especially pronounced when AI assessments are overly standardized, potentially reducing complex student outputs, to easily quantifiable metrics (Archibald et al., 2023).

Considering these concerns, institutions must balance the advantages of AI-driven assessments with the need to maintain personalized, human-centered approaches to feedback and evaluation. This could involve hybrid assessment models where AI supports grading, but human educators remain central to interpreting and contextualizing student responses. By maintaining a role for human evaluators, higher education institutions can ensure that student voices are heard in their entirety and not reduced to algorithmic outputs. Preserving a role for human evaluators is

crucial not only for capturing the full depth of student voices but also for addressing the broader ethical concerns that AI introduces, particularly those impacting the authenticity and expression of student voice.

Ethical Concerns in AI's Impact on Student Voice

Bond et al. (2024) the introduction of AI into education raises several ethical concerns, many of which directly affect the expression and authenticity of student voice. Central to these concerns is the issue of student data privacy (Pantos, 2021). AI systems rely on vast amounts of data to function effectively, gathering information about students' learning habits, performance, and even behavioral patterns (Liang et al., 2024; Lee et al., 2022). While this data allows AI to offer tailored learning experiences, it also raises significant concerns about the use and ownership of student information. Institutions must sort through these privacy concerns carefully, particularly as AI platforms often integrate student data into their proprietary algorithms for continued development and improvement.

Moreover, issues of transparency and accountability (Kempeneer, 2021), are crucial when considering the impact of AI on student voice. As AI becomes more integrated into educational systems, there is a risk that students may not fully understand how their data is being used or how decisions about their learning are being made (Ni & Cheung, 2023). This lack of transparency can undermine trust (Hooshyar et al., 2024) and limit students' ability to challenge or negotiate their learning paths. To preserve student voice, institutions must ensure that AI systems operate with a high degree of transparency, allowing students to see how their data informs learning recommendations, and giving them the power to question or alter these processes.

Another ethical concern relates to the potential for AI to exacerbate existing inequalities within education (Wager et al., 2022). AI systems, if trained on biased datasets, can perpetuate discriminatory practices, disproportionately impacting marginalized students (Cave & Dihal, 2020). For example, AI tools used for admissions or learning assessments may reinforce societal biases related to race, gender, or socioeconomic status (Cave & Dihal, 2020), potentially leading to skewed educational outcomes. It is essential that institutions implementing AI in education address these biases proactively, ensuring that AI systems are developed and deployed with fairness and equity in mind. The ethical deployment of AI must prioritize the inclusion of diverse perspectives and student voices, particularly those from historically underrepresented groups.

Regulatory Frameworks: Safeguarding Student Voice in AI-Driven Education

Given the ethical concerns surrounding the use of AI in education, several regulatory frameworks have been established to safeguard data privacy and promote the ethical development of AI. Among the most

significant are the GDPR, CCPA, and PIPEDA, each of which sets out specific guidelines for the collection, use, and protection of personal data in different contexts (Towett et al., 2023).

The GDPR, implemented by the European Union, offers one of the most comprehensive frameworks for data protection, requiring institutions to obtain informed consent before collecting and using personal data (Issaoui et al., 2023). For higher education institutions, this regulation emphasizes the need for transparency in how AI tools use student data, ensuring that students are aware of how their information is being processed and stored (Urbano et al., 2024). The GDPR also grants students the right to access and rectify their data, empowering them to maintain control over their personal information (Issaoui et al., 2023).

In the United States, the CCPA enhances privacy protections for California residents, granting individuals the right to know what data is being collected about them, the purpose of the collection, and with whom it is shared (Lee, 2024). While the CCPA is primarily focused on consumer privacy, its principles are applicable to the education sector, particularly in ensuring that AI platforms used by educational institutions comply with these privacy protections.

In Canada, PIPEDA governs data privacy within the commercial sector, but it has implications for educational institutions that use AI technologies developed by private companies (Reynolds et al., 2018). PIPEDA requires institutions to safeguard personal information and ensures that students have the right to access and correct their data. These regulatory frameworks play a crucial role in protecting student privacy and ensuring that AI technologies are used responsibly within educational settings.

However, while these regulations provide a foundation for ethical AI use, they must be complemented by institutional policies that prioritize student voice. Higher education institutions should go beyond compliance by adopting ethical guidelines that center student agency and transparency. This might involve creating AI ethics committees that include student representatives, ensuring that student voices are integral to discussions about AI implementation. Establishing ethical guidelines and inclusive AI committees that prioritize student agency is a vital step in ensuring that, as AI continues to evolve in education, student voices remain central to its development and application.

The Future of Student Voice in an AI-Driven Educational Landscape

As AI continues to shape the future of education (Selwyn, 2022), it is essential that student voice remains a central consideration in the development and deployment of these technologies. While AI has the potential to enhance personalized learning and provide more diverse assessment methods, it also poses risks of depersonalization, over-standardization, and data misuse that must be carefully managed. The ethical concerns surrounding AI's impact on student voice require proactive

measures from institutions, educators, and policymakers to ensure that student agency, autonomy, and participation are not diminished.

In the future, AI systems should be designed with student voice in mind, offering students more opportunities to express their preferences, challenge algorithmic recommendations, and co- create their learning experiences. Educational institutions should prioritize the development of transparent and equitable AI tools that respect student privacy, promote inclusivity, and foster authentic expressions of student perspectives.

The role of regulatory frameworks, such as the GDPR, CCPA, and PIPEDA, will be critical in safeguarding student rights, but these regulations must be supplemented by institutional policies that prioritize ethical AI use and the amplification of student voice. By doing so, higher education institutions can harness the potential of AI while preserving the authenticity and agency of their students, ensuring that AI serves as a tool for empowerment rather than a mechanism for control. In addition to supporting authentic student agency in academics (Bilquise & Shaalan, 2022), AI can further empower students by aiding in their professional career development (Goel et al., 2024), offering valuable tools for resume building and interview coaching.

AI Assisting Students with Professional Career Development: Resume and Interview Coaching

AI is reshaping many facets of human activity, including education and professional development as discussed. For students preparing to enter the job market, AI has emerged as a powerful tool for building professional career development profiles, including presentation skills, resume writing and interview coaching (Chen J., et al., 2023). With the growing complexity of hiring processes, students now require more sophisticated guidance to stand out in a competitive job market. AI-powered tools provide personalized assistance that not only improves students' resumes but also enhances their interview skills, giving them a critical edge in their career pursuits (Mononen et al., 2023).

This section explores how AI assists students with career development by focusing on two key areas: resume building and interview coaching. It will discuss the specific benefits AI provides in these areas, how it personalizes the experience for individual students, and the ethical considerations surrounding the use of AI in this context.

AI and Resume Building: Streamlining Resume Creation

Creating a compelling resume is often one of the first challenges students face when preparing for the professional world. For many, writing a resume is an unfamiliar process that requires a balance between professionalism, conciseness, and the ability to present one's strengths (Adamovic, 2020). AI resume-building tools have transformed this

experience, providing step by-step guidance and improving the overall quality of student resumes.

AI-driven platforms analyze job descriptions and student profiles to generate optimized resumes tailored to specific industries and roles. These tools use natural language processing (NLP) to analyze millions of resumes, job postings, and employer requirements, identifying keywords, formats, and skills that are most likely to catch the attention of hiring managers and applicant tracking systems (ATS) (Nikolaou, 2021). For example, tools like Zety and Resume.io provide templates and suggestions on how to phrase achievements, job responsibilities, and skills in ways that are most likely to appeal to potential employers (Zety, 2024; Resume.io, 2019). Additionally, these platforms can rank the strength of different sections of a student's resume, helping them focus on areas that need improvement (Mononen et al., 2023).

For students entering industries with specific expectations—such as finance, healthcare, or technology—AI tools can generate resumes tailored to these fields by suggesting industry-specific keywords, certifications, and experiences that align with employer needs (Tzimas et al., 20224). By helping students create polished and effective resumes, AI tools not only increase their chances of being noticed but also reduce the anxiety that comes with creating a resume from scratch. However, to use AI holistically and effectively, students must learn appropriate prompt engineering techniques to help AI provide a baseline content structure that is most suitable to the student's context (Bozkurt, 2024).

Personalized Feedback and Optimization

Due to role-plays, AI tools are also capable of providing personalized feedback on resumes, helping students to continuously improve their documents. These tools often analyze resumes in real-time, offering suggestions on word choice, grammar, and formatting based on individual profiles (Zinkevich & Ledeneva, 2021). Moreover, they provide feedback on aspects such as how well a resume is likely to perform against ATS or whether it effectively highlights the student's most relevant experiences.

Many AI platforms also offer benchmarking features that allow students to compare their resumes against those of other candidates with similar qualifications. This comparative analysis helps students identify gaps in their resume content or presentation, giving them actionable insights to strengthen their application (Chen et al., 2023). For instance, AI tools might highlight that a student lacks a particular certification that many successful candidates in their field possess, prompting them to consider pursuing additional training or qualifications. Professional networking websites such as LinkedIn (Pardim et al., 2022) has already use similar features for their user profiles.

Building a Data-Driven Professional Profile

A significant advantage of using AI-driven resume tools is the ability to build a data-driven professional profile over time. As students engage with these platforms, the AI system gathers information about their experiences, skills, and career preferences, allowing for more refined suggestions. This process transforms static resumes into dynamic profiles that can evolve based on new accomplishments, skill development, and changes in the job market (López-Carril et al., 2020).

By analyzing large datasets from job markets, AI can also inform students of emerging trends in their industry and suggest skills or experiences they should pursue to remain competitive thereby, AI could act as the student's personal career coach. For instance, a student in the tech industry might be advised to learn a new programming language based on current demand trends. This data-driven approach ensures that students' resumes are always aligned with industry needs, keeping them well-positioned for success.

AI and Interview Coaching: Simulated Interviews and Real-Time Feedback

Once students have crafted an effective resume, the next challenge is preparing for interviews. For many students, interviews are intimidating, requiring strong communication skills, confidence, and the ability to respond to unpredictable questions (Mononen et al., 2023). AI driven interview coaching tools, such as HireVue and MyInterview, have revolutionized this process by offering personalized and scalable interview practice (HirVue, n.d.; MyInterview, n.d.).

AI-powered platforms simulate real interview environments, allowing students to practice answering questions relevant to their desired roles. These simulations often mimic the types of interviews students are likely to encounter, such as behavioral interviews, technical interviews, or case studies (Wamba-Taguimdje et al., 2022). During these mock interviews, AI systems analyze multiple aspects of student performance, including verbal responses (Jelodari et al., 2023), tone of voice, body language (Baath & Takhar, 2024), and facial expressions (Anggoro, 2020).

Using machine learning algorithms, these tools can provide immediate, data-driven feedback on various dimensions of student performance (Liang et al., 2024; Lee et al., 2022). For example, an AI interview coach might highlight areas where a student's responses lacked detail, suggest improvements in body language (e.g., maintaining eye contact), or recommend varying vocal pitch to convey more enthusiasm (Kang et al., 2024). By continuously refining their interview skills through AI feedback, students can gain the confidence and competence needed to succeed in real-world interviews. Building on this foundation of confidence, AI interview coaching tools can further support students by providing tailored question banks and response suggestions aligned with their specific target roles or industries.

AI Provides Tailored Question Banks and Response Suggestions

AI interview coaching tools also offer tailored question banks that are specific to the student's target role or industry. By analyzing common interview questions in a given field and comparing them to the student's profile, these tools generate relevant practice questions. For example, a student applying for a software engineering role might be given technical coding questions, while a business major might be coached through case-based questions (Bangerter et al., 2023).

In addition to posing questions, AI tools often suggest optimal responses based on employer expectations and past successful interviews. For instance, AI might suggest structuring answers using the STAR (Situation, Task, Action, Result) method for behavioral questions, a method commonly used by many large multinational companies (Chan et al., 2021), ensuring that students provide concise and well-rounded responses. The ability to practice answering targeted questions and receive tailored suggestions helps students prepare more effectively for interviews, reducing the anxiety and uncertainty that often accompany the process (Zhang I.Y., et al., 2022).

Improving Communication Skills and Confidence

Effective communication is critical in job interviews, and AI tools play a pivotal role in enhancing students' communication skills (Chen et al., 2023). AI interview platforms assess not only what students say but also how they say it, offering feedback on speech clarity, pacing, and overall coherence. For example, students might receive feedback on whether they speak too quickly, use too many filler words, or fail to project confidence in their tone.

By addressing these communication issues through repeated practice, students can improve their verbal fluency, polish their presentation, and gain confidence in their ability to articulate their ideas clearly and persuasively. This continuous, data-driven feedback helps students refine their interpersonal skills, which are essential not only for interviews but also for succeeding in the workplace.

Ethical Considerations in AI-Powered Career Development Tools

AI is transforming the way students approach career development, offering powerful tools for resume building and interview coaching. By providing personalized, data-driven insights, AI helps students craft professional profiles that are tailored to industry needs and develop the communication skills required to succeed in interviews. However, while AI offers significant benefits, it is important for students to nurture, develop and sustain their authentic voices as employers value authenticity (Reis et al., 2017).

As AI continues to evolve, its role in career development will likely expand, offering even more sophisticated tools for students to navigate the complexities of the modern job market. By harnessing AI's potential while

addressing its challenges, educational institutions and developers can help students achieve their professional goals more effectively and confidently; however, students must use AI with critical guidance and judgment.

The Critical Use of AI by Students in Higher Education: Ensuring Responsible Engagement

As AI technologies become more accessible, students must develop a critical understanding of how to use AI responsibly (Chen X., et al., 2023). This entails recognizing the potential risks associated with AI, such as over-reliance on automated tools, compromising academic integrity, and violating privacy. To sort through these challenges, higher education institutions must foster an environment where students are encouraged to engage critically with AI technologies (Aler Tubella et al., 2024), ensuring that they are used as tools for learning and innovation rather than as substitutes for intellectual effort. This section will examine the responsible use of AI by students in higher education, with a particular focus on maintaining academic integrity, promoting critical thinking (Isolda et al., 2024), and addressing ethical concerns related to AI usage.

Promoting Academic Integrity in the Use of AI

One of the most pressing concerns related to the use of AI in higher education is the potential for academic dishonesty. AI tools, such as automated essay generators, content summarizers, and plagiarism checkers, can be incredibly useful when used ethically. However, these tools also present opportunities for students to bypass the intellectual rigor required in academic work. For instance, AI-powered writing assistants like Microsoft Co-pilot models can generate coherent essays or answers to academic prompts, which students might be tempted to submit as their own work (Kanont et al., 2024). Without organic practice of academic rigour, students may miss out on opportunities to exercise critical judgment of AI generated content.

Academic integrity is a core value of higher education, and it is crucial for students to understand that while AI can assist in the writing process, the intellectual responsibility of crafting and presenting original ideas rests with the student. Using AI-generated content without proper attribution or understanding undermines the educational process and devalues the skills that students are meant to develop in higher education, such as critical thinking, analytical writing, and problem-solving.

To promote responsible use, higher education institutions must provide clear guidelines on how AI tools can be used ethically. For example, while students might use AI to help them brainstorm ideas or improve the clarity of their writing, they should be discouraged from relying on AI generated text as a substitute for their own intellectual labor. Educators can foster academic integrity by incorporating discussions on AI ethics into the curriculum and teaching students how to use AI tools as aids rather than

crutches. In doing so, students will learn how to leverage AI responsibly while upholding the standards of academic honesty.

Fostering Critical Thinking in AI-Enhanced Learning

While AI has the potential to enhance learning by providing personalized feedback and adapting to individual student needs, it is essential that students maintain an active role in their learning processes. One of the risks associated with AI tools is that they may encourage passive consumption of information (Okulich-Kazarin et al., 2024), leading students to accept AI generated outputs without critically engaging with them.

Critical thinking is one of the key skills that higher education seeks to develop in students, and the responsible use of AI should support, not diminish, this goal. For example, AI tools that offer automated feedback on assignments or suggest improvements to essays should be seen as starting points for reflection, rather than definitive answers. Students should be encouraged to question AI-generated suggestions, consider multiple perspectives, and refine their ideas through independent thought. By actively engaging with the feedback provided by AI tools, students can enhance their learning outcomes while cultivating a deeper understanding of the material.

Moreover, AI tools are only as good as the data they are trained on, and they may not always provide accurate or unbiased outputs. Students need to be aware of the limitations of AI, particularly when it comes to complex tasks like analyzing literature, interpreting historical events, or solving ethical dilemmas. AI can assist in these areas by offering preliminary insights or organizing data, but it is the student's responsibility to critically assess the validity and reliability of AI-generated content. Developing this discernment is essential for ensuring that students do not over-rely on AI and continue to engage in meaningful intellectual work.

Conclusion

In conclusion, the integration of AI into higher education presents both opportunities and challenges for the preservation of student voice. While AI has the potential to personalize learning and enhance assessment, it also carries risks of depersonalization, over-standardization, and ethical concerns related to data privacy and transparency. To ensure that student voice remains central in AI-driven education, institutions must adopt ethical frameworks and regulatory measures that promote student agency, inclusivity, and transparency. By prioritizing student voice in the design and implementation of AI technologies, higher education can leverage AI's potential while fostering a more equitable and empowering learning environment.

Implications

This paper emphasizes the need for a balanced approach to AI in higher education which requires additional empirical research. While acknowledging the potential benefits of AI for personalized learning, assessment, and career development, challenges with risks to student voice, equity, and inclusivity must be addressed. A critical focus on ethical and responsible use, transparency, and the development of AI systems that prioritize student agency is essential to ensure that AI serves as a tool for empowerment rather than control.

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References

- Adamovic, M. (2020). Analyzing discrimination in recruitment: A guide and best practices for resume studies. *International Journal of Selection and Assessment*, 28(4), 445–464. <https://doi.org/10.1111/ijsa.12298>
- Adão, T., Oliveira, J., Shahrabadi, S., Jesus, H., Fernandes, M. P. S., Costa, A., Gonçalves, M.F., Lopez, M. A. G., Peres, E., & Magalhães, L. G. (2023). Empowering deaf-hearing communication: exploring synergies between predictive and generative ai-based strategies towards (portuguese) sign language interpretation. *Journal of Imaging*, 9(11), 235. <https://doi.org/10.3390/jimaging9110235>
- Adel, A., Ahsan, A., & Davison, C. (2024). ChatGPT Promises and Challenges in Education: Computational and Ethical Perspectives. *Education Sciences*, 14(8), 814. <https://doi.org/10.3390/educsci14080814>
- Ahmed, B. (2024). Decolonizing Policy Research as Restorative Research Justice: Applying an Indigenous Policy Research Framework (IPRF). *Critical Policy Studies*, 18(2), 271–298. <https://doi.org/10.1080/19460171.2022.2158481>
- Akiba, D., & Fraboni, M. C. (2023). AI-Supported Academic Advising: Exploring ChatGPT's Current State and Future Potential toward Student Empowerment. *Education Sciences*, 13(9), 885. <https://doi.org/10.3390/educsci13090885>
- Aler Tubella, A., Mora-Cantalops, M., & Nieves, J. C. (2024). How to teach responsible AI in Higher Education: challenges and opportunities. *Ethics and Information Technology*, 26(1). <https://doi.org/10.1007/s10676-023-09733-7>
- Alshahrani, B. T., Pileggi, S. F., & Karimi, F. (2024). A Social Perspective on AI in the Higher Education System: A Semisystematic Literature Review. *Electronics (Basel)*, 13(8), 1572. <https://doi.org/10.3390/electronics13081572>
- Anderson, M., & Gavan, C. (Eds.). (2016). Developing effective educational experiences through learning analytics. Information Science Reference. <https://doi.org/10.4018/978-1-4666-9983-0>
- Anggoro, P. D. W. (2020). Design of Web Virtual Reality for Job Interview Preparation Simulation. *Lontar Komputer*, 11(3), 132–143. <https://doi.org/10.24843/LKJITI.2020.v11.i03.p02>
- Anido, L. E., Fernández, M. J., Caeiro, M., Santos, J. M., Rodríguez, J. S., & Llamas, M. (2002). Educational metadata and brokerage for learning resources. *Computers and Education*, 38(4), 351–374. [https://doi.org/10.1016/S0360-1315\(02\)00018-0](https://doi.org/10.1016/S0360-1315(02)00018-0)
- Archibald, A., Hudson, C., Heap, T., Thompson, R. “Rudi,” Lin, L., DeMeritt, J., & Lucke, H. (2023). A Validation of AI-Enabled Discussion Platform Metrics and Relationships to Student Efforts. *TechTrends*, 67(2), 285–293. <https://doi.org/10.1007/s11528-022-00825-7>
- Attractive Looking Applicant Has More Chance of Getting the Job, Based on a Surve Conducted by Resume.io. (2019). In PR Newswire. PR Newswire Association LLC.
- Baath, K. K., & Takhar, O. K. (2024). Language, politics, and identity: Challenges to the Panjabi language in India. *Sikh Formations*, 1–2 <https://doi.org/10.1080/17448727.2024.2408871>
- Babich, C., Smith, C., & Lubrick, M. (2023). An open education journey: connecting student affordability with pedagogical enhancement. *Collected Essays on Learning and Teaching*.
- Bangerter, A., Mayor, E., Muralidhar, S., Kleinlogel, E. P., Gatica-Perez, D., & Schmid Mast, M.

- (2023). Automatic identification of storytelling responses to past-behavior interview questions via machine learning. *International Journal of Selection and Assessment*, 31(3), 376–387. <https://doi.org/10.1111/ijsa.12428>
- Berendt, B., Littlejohn, A., & Blakemore, M. (2020). AI in education: learner choice and fundamental rights. *Learning, Media and Technology*, 45(3), 312–324. <https://doi.org/10.1080/17439884.2020.1786399>
- Bilquise, G., & Shaalan, K. (2022). AI-based Academic Advising Framework: A Knowledge Management Perspective. *International Journal of Advanced Computer Science & Applications*, 13(8). <https://doi.org/10.14569/IJACSA.2022.0130823>
- Binder, M., Heinrich, B., Hopf, M., & Schiller, A. (2022). Global reconstruction of language models with linguistic rules – Explainable AI for online consumer reviews. *Electronic Markets*, 32(4), 2123–2138. <https://doi.org/10.1007/s12525-022-00612-5>
- Bjelobaba, G., Savić, A., Tošić, T., Stefanović, I., & Kocić, B. (2023). Collaborative Learning Supported by Blockchain Technology as a Model for Improving the Educational Process. *Sustainability*, 15(6), 4780-. <https://doi.org/10.3390/su15064780>
- Bond, M., Khosravi, H., De Laat, M., Bergdahl, N., Negrea, V., Oxley, E., ... & Siemens, G. (2024). A meta systematic review of artificial intelligence in higher education: a call for increased ethics, collaboration, and rigour. *International Journal of Educational Technology in Higher Education*, 21(1), 4.
- Borsatto, J. M. L. S., Marcolin, C. B., Abdalla, E. C., & Amaral, F. D. (2024). Aligning community outreach initiatives with SDGs in a higher education institution with artificial intelligence. *Cleaner and Responsible Consumption*, 12, 100160-. <https://doi.org/10.1016/j.clrc.2023.100160>
- Bourne, J., & Winstone, N. (2021). Empowering students’ voices: the use of activity-oriented focus groups in higher education research. *International Journal of Research & Method in Education*, 44(4), 352–365. <https://doi.org/10.1080/1743727X.2020.1777964>
- Bozkurt, A. (2024). Tell me your prompts and I will make them true: The alchemy of prompt engineering and generative AI. *Open Praxis*, 16(2), 111–118. <https://doi.org/10.55982/openpraxis.16.2.661>
- Bradley, L., Perry, M., Fassetta, G., Ryan, S. D., & Nelson, E. L. (2024). Denaturalizing “Intelligence” in Higher Education: AI as a Rupture to Imagining and Manifesting Sustainable and Anti-colonial Literacies. *Reading Research Quarterly*, 59(4), 579–589. <https://doi.org/10.1002/rrq.540>
- Bravo, F. A., & Cruz-Bohorquez, J. M. (2024). Engineering Education in the Age of AI: Analysis of the Impact of Chatbots on Learning in Engineering. *Education Sciences*, 14(5), 484. <https://doi.org/10.3390/educsci14050484>
- Browne, L. (2020). Leveraging technology. In *Effective school leadership in challenging times: A practice-first, theory-informed approach*. Routledge.
- Cabero-Almenara, J., Palacios-Rodríguez, A., Loaiza-Aguirre, M. I., & Andrade-Abarca, P. S. (2024). The impact of pedagogical beliefs on the adoption of generative AI in higher education: predictive model from UTAUT2. *Frontiers in Artificial Intelligence*, 7. <https://doi.org/10.3389/frai.2024.1497705>
- Casal, J. E., & Kessler, M. (2023). Can linguists distinguish between ChatGPT/AI and human writing? A study of research ethics and academic publishing. *Research Methods in Applied Linguistics*, 2(3), 100068.
- Cave, S., & Dihal, K. (2020). The Whiteness of AI. *Philosophy & Technology*, 33(4), 685–703.

- <https://doi.org/10.1007/s13347-020-00415-6>
- Celik, I. (2023). Exploring the Determinants of Artificial Intelligence (AI) Literacy: Digital Divide, Computational Thinking, Cognitive Absorption. *Telematics and Informatics*, 83, 102026. <https://doi.org/10.1016/j.tele.2023.102026>
- Chan, C. K. Y. (2023). A comprehensive AI policy education framework for university teaching and learning. *International Journal of Educational Technology in Higher Education*, 20(1), 38-25. <https://doi.org/10.1186/s41239-023-00408-3>
- Chan, C. K. Y., & Colloton, T. (2024). Strengths and Weaknesses in Embracing ChatGPT in Curriculum Design. In *Generative AI in Higher Education* (1st ed., Vol. 1, pp. 44–86). Routledge. <https://doi.org/10.4324/9781003459026-3>
- Chen, J., Lai, P., Chan, A., Man, V., & Chan, C. H. (2023). AI-Assisted Enhancement of Student Presentation Skills: Challenges and Opportunities. *Sustainability*, 15(1), 196-. <https://doi.org/10.3390/su15010196>
- Chen, R. J., Wang, J. J., Williamson, D. F. K., Chen, T. Y., Lipkova, J., Lu, M. Y., Sahai, S., & Mahmood, F. (2023). Algorithmic fairness in artificial intelligence for medicine and healthcare. *Nature Biomedical Engineering*, 7(6), 719–742. <https://doi.org/10.1038/s41551-023-01056-8>
- Chen, X., Wang, X., & Qu, Y. (2023). Constructing Ethical AI Based on the “Human-in-the Loop” System. *Systems (Basel)*, 11(11), 548-. <https://doi.org/10.3390/systems11110548>
- Cho, A., Seo, J., Kim, S., Cho, J., & Kim, Y. (2024). Assessing the Effectiveness of Sustainable Strategies to Bridge the Digital Divide in the Mobility Sector: A Pilot Test in Seoul. *Sustainability*, 16(10), 4078-. <https://doi.org/10.3390/su16104078>
- Cohen, C., Demazel, R., & Witko, A. (2024). Exploring the Interplay of Language Exposure, Language Skills and Language and Cultural Identity Construction in French-English Bilingual Adolescents: A Longitudinal Case Study. *Languages (Basel)*, 9(7), 253-. <https://doi.org/10.3390/languages9070253>
- Conner, J. O. (2021). Educators’ experiences with student voice: how teachers understand, solicit, and use student voice in their classrooms. *Teachers and Teaching*, 28(1), 12–25. <https://doi.org/10.1080/13540602.2021.2016689>
- D’Angelo, M. C., Milliken, B., Jiménez, L., & Lupiáñez, J. (2013). Implementing flexibility in automaticity: Evidence from context-specific implicit sequence learning. *Consciousness and Cognition*, 22(1), 64–81. <https://doi.org/10.1016/j.concog.2012.11.002>
- D’Mello, S. K., Biddy, Q., Breideband, T., Bush, J., Chang, M., Cortez, A., Flanigan, J., Foltz, P. W., Gorman, J. C., Hirshfield, L., Monica Ko, M., Krishnaswamy, N., Lieber, R., Martin, J., Palmer, M., Penuel, W. R., Philip, T., Puntambekar, S., Pustejovsky, J., ... Whitehill, J. (2024). From learning optimization to learner flourishing: Reimagining AI in Education at the Institute for Student-AI Teaming (iSAT). *The AI Magazine*, 45(1), 61–68. <https://doi.org/10.1002/aaai.12158>
- Dabis, A., & Csáki, C. (2024). AI and ethics: Investigating the first policy responses of higher education institutions to the challenge of generative AI. *Humanities & Social Sciences Communications*, 11(1), 1006–1013. <https://doi.org/10.1057/s41599-024-03526-z>
- Darvishi, A., Khosravi, H., Sadiq, S., Gašević, D., & Siemens, G. (2024). Impact of AI assistance on student agency. *Computers & Education*, 210, 104967.
- Drummond, A., Cox, L., & Brough, M. (2021). Indigenous academics teaching Indigenous health: “it’s part of who we are, our spirit, our soul, our knowledge... that goes into our teaching.” *Australian Journal of Clinical Education (Online)*, 8(1), 1–17.

- <https://doi.org/10.53300/001c.30070>
- English, L. M., & Carlsen, A. (2019). Lifelong learning and the Sustainable Development Goals (SDGs): Probing the implications and the effects. *International Review of Education*, 65, 205–211. <https://link.springer.com/article/10.1007/s11159-019-09773-6>
- Ferrer, R., Ali, K., & Hughes, C. (2024). Using AI-Based Virtual Companions to Assist Adolescents with Autism in Recognizing and Addressing Cyberbullying. *Sensors* (Basel, Switzerland), 24(12), 3875-. <https://doi.org/10.3390/s24123875>
- França de Sá, S., & Vilarigues, M. (2023). Integrating expertise for teaching conservation science to cultural heritage conservation students – A closer look at radiation, colour and museum lighting topics. *Chemistry Teacher International: Best Practices in Chemistry Education*, 5(1), 39–46. <https://doi.org/10.1515/cti-2023-0001>
- Garside, J., Nhemachena, J. Z. Z., Williams, J., & Topping, A. (2009). Repositioning assessment: Giving students the ‘choice’ of assessment methods. *Nurse Education in Practice*, 9(2), 141–148. <https://doi.org/10.1016/j.nepr.2008.09.003>
- Gerbin, A., & Drnovsek, M. (2020). Knowledge-sharing restrictions in the life sciences: personal and context-specific factors in academia–industry knowledge transfer. *Journal of Knowledge Management*, 24(7), 1533–1557. <https://doi.org/10.1108/JKM-11-2019-0651>
- Goel, A., Dede, C., Garn, M., & Ou, C. (2024). AI-ALOE: AI for reskilling, upskilling, and workforce development. *The AI Magazine*, 45(1), 77–82. <https://doi.org/10.1002/aaai.12157>
- Gohar, E., Herling, A., Mazuz, M., Tsaban, G., Gat, T., Kobal, S., & Fuchs, L. (2023). Artificial Intelligence (AI) versus POCUS Expert: A Validation Study of Three Automatic AI-Based, Real-Time, Hemodynamic Echocardiographic Assessment Tools. *Journal of Clinical Medicine*, 12(4), 1352-. <https://doi.org/10.3390/jcm12041352>
- Goyal, N., Howlett, M., & Taeihagh, A. (2021). Why and how does the regulation of emerging technologies occur? Explaining the adoption of the EU General Data Protection Regulation using the multiple streams framework. *Regulation & Governance*, 15(4), 1020–1034. <https://doi.org/10.1111/rego.12387>
- Han, F. (2022). Sustainable Teaching Strategies to Teach Indigenous Students: Their Relations to Students’ Engaged Learning and Teachers’ Self-Concept. *Sustainability*, 14(17), 10973. <https://doi.org/10.3390/su141710973>
- Hill, G., Woodroffe, T., & Golebiowska, K. (2024). Indigenous and International Student Experiences of Navigating Higher Education in Post-Covid and Post-AI Universities. *Journal of International Students*, 14(4), 801–820. <https://doi.org/10.32674/jis.v14i4.6419>
- HireVue. (n.d.). Our science. Retrieved from <https://www.hirevue.com/our-science>
- Hofeditz, L., Clausen, S., Rieß, A., Mirbabaie, M., & Stieglitz, S. (2022). Applying XAI to an AI-based system for candidate management to mitigate bias and discrimination in hiring. *Electronic Markets*, 32(4), 2207–2233. <https://doi.org/10.1007/s12525-022-00600-9>
- Hohenstein, J., Kizilcec, R. F., DiFranzo, D., Aghajari, Z., Mieczkowski, H., Levy, K., ... & Jung, M. F. (2023). Artificial intelligence in communication impacts language and social relationships. *Scientific Reports*, 13(1), 5487.
- Hoi, V. N., & Mu, G. M. (2021). Perceived teacher support and students’ acceptance of mobile-assisted language learning: Evidence from Vietnamese higher education context. *British Journal of Educational Technology*, 52(2), 879–898. <https://doi.org/10.1111/bjet.13044>
- Hooshyar, D., Azevedo, R., & Yang, Y. (2024). Augmenting Deep Neural Networks with

- Symbolic Educational Knowledge: Towards Trustworthy and Interpretable AI for Education. *Machine Learning and Knowledge Extraction*, 6(1), 593–618.
<https://doi.org/10.3390/make6010028>
- Hu, M., Suh, J., & Pedro, C. (2023). An Integrated Framework for Preservation of Hawaii Indigenous Culture: Learning from Vernacular Knowledge. *Buildings* (Basel), 13(5), 1190. <https://doi.org/10.3390/buildings13051190>
- Huang, X., Zou, D., Cheng, G., Chen, X., & Xie, H. (2023). Trends, research issues and applications of artificial intelligence in language education. *Educational Technology & Society*, 26(1), 112–131.
- Inouye, K., Lee, S., & Oldac, Y. I. (2023). A systematic review of student agency in international higher education. *Higher Education*, 86(4), 891–911. <https://doi.org/10.1007/s10734-022-00952-3>
- Isolda Margarita Castillo-Martínez, Daniel Flores-Bueno, Sonia M. Gómez-Puente, & Victor O. Vite-León. (2024). AI in higher education: a systematic literature review. *Frontiers in Education* (Lausanne), 9. <https://doi.org/10.3389/feduc.2024.1391485>
- Issaoui, A., Örtensjö, J., & Islam, M. S. (2023). Exploring the General Data Protection Regulation (GDPR) compliance in cloud services: insights from Swedish public organizations on privacy compliance. *Future Business Journal*, 9(1), 107–113.
<https://doi.org/10.1186/s43093-023-00285-2>
- Jääskelä, P., Heilala, V., Kärkkäinen, T., & Häkkinen, P. (2021). Student agency analytics: learning analytics as a tool for analysing student agency in higher education. *Behaviour & Information Technology*, 40(8), 790–808.
<https://doi.org/10.1080/0144929X.2020.1725130>
- Jagessar, P. (2024). Correspondence, scale and the Linguistic Survey of India's colonial geographies of language, 1896–1928. *Journal of Historical Geography*, 84, 1–13.
<https://doi.org/10.1016/j.jhg.2024.02.004>
- Jelodari, M., Amirhosseini, M. H., & Giraldez-Hayes, A. (2023). An AI powered system to enhance self-reflection practice in coaching. *Cognitive Computation and Systems*, 5(4), 243–254. <https://doi.org/10.1049/ccs2.12087>
- Ji, H., Han, I., & Ko, Y. (2023). A systematic review of conversational AI in language education: Focusing on the collaboration with human teachers. *Journal of Research on Technology in Education*, 55(1), 48–63.
- Jia, F., Sun, D., Ma, Q., & Looi, C. K. (2022). Developing an AI-Based Learning System for L2 Learners' Authentic and Ubiquitous Learning in English Language. *Sustainability*, 14(23), 15527-. <https://doi.org/10.3390/su142315527>
- Jia, F., Sun, D., Ma, Q., & Looi, C. K. (2022). Developing an AI-Based Learning System for L2 Learners' Authentic and Ubiquitous Learning in English Language. *Sustainability*, 14(23), 15527-. <https://doi.org/10.3390/su142315527>
- Kang, B. O., Jeon, H., & Lee, Y. K. (2024). AI-based language tutoring systems with end-to-end automatic speech recognition and proficiency evaluation. *ETRI Journal*, 46(1), 48–58.
<https://doi.org/10.4218/etrij.2023-0322>
- Kannan, J., & Munday, P. (2018). New trends in second language learning and teaching through the lens of ICT, networked learning, and artificial intelligence. *Círculo de Lingüística Aplicada a La Comunicación*, 76(76), 13–30. <https://doi.org/10.5209/CLAC.62495>
- Kanont, K., Pingmuang, P., Simasathien, T., Wisnuwong, S., Wiwatsiripong, B., Poonpirome,

- K., Songkram, N., & Khlaisang, J. (2024). Generative-AI, a Learning Assistant? Factors Influencing Higher-Ed Students' Technology Acceptance. *Electronic Journal of E-Learning*, 22(6), 18–33. <https://doi.org/10.34190/ejel.22.6.3196>
- Kaouni, M., Lakrami, F., & Labouidya, O. (2023). The Design of An Adaptive E-learning Model Based on Artificial Intelligence for Enhancing Online Teaching. *International Journal of Emerging Technologies in Learning*, 18(6), 202–219. <https://doi.org/10.3991/ijet.v18i06.35839>
- Karademir coskun, T., & Alper, A. (2024). Evaluating the evaluators: a comparative study of AI and Teacher Assessments in Higher Education. *Digital Education Review*, 45, 124–140. <https://doi.org/10.1344/der.2024.45.124-140>
- Karako, K., Song, P., Chen, Y., & Tang, W. (2020). Realizing 5G- and AI-based doctor-to-doctor remote diagnosis: opportunities, challenges, and prospects. *BioScience Trends*, 14(5), 314–317. <https://doi.org/10.5582/bst.2020.03364>
- Karimi, E., Smith, J., Billard, R., & Veitch, B. (2024). AI-based adaptive instructional systems for maritime safety training: a systematic literature review. *Discover Artificial Intelligence*, 4(1), 51–21. <https://doi.org/10.1007/s44163-024-00153-0>
- Kaur, R., Gupta, D., Madhukar, M., Singh, A., Abdelhaq, M., Alsaqour, R., Breñosa, J., & Goyal, N. (2022). E-Learning Environment Based Intelligent Profiling System for Enhancing User Adaptation. *Electronics (Basel)*, 11(20), 3354. <https://doi.org/10.3390/electronics11203354>
- Keane, M., Raciti, M., van der Westhuizen, G., Motala, S., Stanton, S., Gilbey, K., Manathunga, C., Qi, J., & Msimango, S. (2023). Indigenous Knowledge Systems in South Africa and Australia: transforming doctoral education. *Curriculum Perspectives*, 43(Suppl 1), 83–93. <https://doi.org/10.1007/s41297-023-00183-1>
- Keen, J., & Eady, M. J. (2022). Amplifying Indigenous student voice in work-integrated learning. *International Journal of Work-Integrated Learning*, 23(2), 219–235.
- Kempeneer, S. (2021). A big data state of mind: Epistemological challenges to accountability and transparency in data-driven regulation. *Government Information Quarterly*, 38(3), 101578. <https://doi.org/10.1016/j.giq.2021.101578>
- Kim, J., Lee, H., & Cho, Y. H. (2022). Learning design to support student-AI collaboration: perspectives of leading teachers for AI in education. *Education and Information Technologies*, 27(5), 6069–6104. <https://doi.org/10.1007/s10639-021-10831-6>
- Kurtz, G., Amzalag, M., Shaked, N., Zaguri, Y., Kohen-Vacs, D., Gal, E., Zailer, G., & Barak-Medina, E. (2024). Strategies for Integrating Generative AI into Higher Education: Navigating Challenges and Leveraging Opportunities. *Education Sciences*, 14(5), 503-. <https://doi.org/10.3390/educsci14050503>
- Lambert, C., Fong-Emmerson, M., Coetzee, S., & D'Alessandro, S. (2024). Enhancing Marketing Students' Indigenous Cultural Competencies Through a Decolonisation and Authentic Assessment Approach. *Australasian Marketing Journal*, 32(3), 203–211. <https://doi.org/10.1177/14413582241244568>
- Lau, P. L., Nandy, M., & Chakraborty, S. (2023). Accelerating UN Sustainable Development Goals with AI-Driven Technologies: A Systematic Literature Review of Women's Healthcare. *Healthcare (Basel)*, 11(3), 401-. <https://doi.org/10.3390/healthcare11030401>
- Leal Filho, W., Ribeiro, P. C. C., Mazutti, J., Lange Salvia, A., Bonato Marcolin, C., Lima Silva

- Borsatto, J. M., ... & Viera Trevisan, L. (2024). Using artificial intelligence to implement the UN sustainable development goals at higher education institutions. *International Journal of Sustainable Development & World Ecology*, 1-20.
<https://www.tandfonline.com/doi/abs/10.1080/13504509.2024.2327584>
- Lee, J. (2024). CCPA/CPRA: Consumers Bear the Burden as Companies Bear the Crown. *UC Law SF International Law Review*, 47(2), 129.
https://repository.uclawsf.edu/hastings_international_comparative_law_review/vol47/iss2/5/
- Lee, Y.-F., Hwang, G.-J., & Chen, P.-Y. (2022). Impacts of an AI-based chatbot on college students' after-class review, academic performance, self-efficacy, learning attitude, and motivation. *Educational Technology Research and Development*, 70(5), 1843–1865.
<https://doi.org/10.1007/s11423-022-10142-8>
- Liang, H., Hwang, G., Hsu, T., & Yeh, J. (2024). Effect of an AI-based chatbot on students' learning performance in alternate reality game-based museum learning. *British Journal of Educational Technology*, 55(5), 2315–2338. <https://doi.org/10.1111/bjet.13448>
- Liu, T. (2023). English classroom immersion learning on language barriers in autistic students. *CNS Spectrums*, 28(S2), S110–S110. <https://doi.org/10.1017/S109285292300528X>
- López-Carril, S., Anagnostopoulos, C., & Parganas, P. (2020). Social media in sport management education: Introducing LinkedIn. *The Journal of Hospitality, Leisure, Sport & Tourism Education*, 27, 100262–100262. <https://doi.org/10.1016/j.jhlste.2020.100262>
- Maedche, A., Legner, C., Benlian, A., Berger, B., Gimpel, H., Hess, T., Hinz, O., Morana, S., & Söllner, M. (2019). AI-Based Digital Assistants: Opportunities, Threats, and Research Perspectives. *Business & Information Systems Engineering*, 61(4), 535–544.
<https://doi.org/10.1007/s12599-019-00600-8>
- Magnani, L., Pinillos, A. S., & Arfini, S. (2022). Language: The “Ultimate Artifact” to Build, Develop, and Update Worldviews. *Topoi*, 41(3), 461–470.
<https://doi.org/10.1007/s11245-021-09742-5>
- Mahapatra, S. K., & Anderson, J. (2023). Languages for learning: a framework for implementing India's multilingual language-in-education policy. *Current Issues in Language Planning*, 24(1), 102–122. <https://doi.org/10.1080/14664208.2022.2037292>
- Majeed, J. (2022). Religious difference, colonial politics, and Grierson's Linguistic Survey of India. *Language & History*, 65(3), 184–200.
<https://doi.org/10.1080/17597536.2022.2117506>
- Marvasti, K. M. (2024). “Out of the Comfort Zone”: Creating a Safely Brave Space for Dialogues about Race. *Teaching Sociology*, 0(0).
<https://doi.org/10.1177/0092055X241262780>
- Matthews, K. E., & Dollinger, M. (2023). Student voice in higher education: the importance of distinguishing student representation and student partnership. *Higher Education*, 85(3), 555–570. <https://doi.org/10.1007/s10734-022-00851-7>
- Mittermaier, M., Raza, M. M., & Kvedar, J. C. (2023). Bias in AI-based models for medical applications: challenges and mitigation strategies. *NPJ Digital Medicine*, 6(1), 113–113.
<https://doi.org/10.1038/s41746-023-00858-z>
- Mohamed, S., Png, M.-T., & Isaac, W. (2020). Decolonial AI: Decolonial Theory as Sociotechnical Foresight in Artificial Intelligence. *Philosophy & Technology*, 33(4), 659–684. <https://doi.org/10.1007/s13347-020-00405-8>
- Mononen, A., Alamäki, A., Kauttonen, J., Klemetti, A., Passi-Rauste, A., & Ketamo, H. (2023). Forecasted Self: AI-Based Careerbot-Service Helping Students with Job Market Dynamics.

- Engineering Proceedings, 39(1), 99-. <https://doi.org/10.3390/engproc2023039099>
- myInterview. (n.d.). Product intelligence. Retrieved from <https://www.myinterview.com/product-intelligence>
- Nagre, K. (2023). (Mis)educating England: eurocentric narratives in secondary school history textbooks. *Race, Ethnicity and Education*, ahead-of-print(ahead-of-print), 1–20. <https://doi.org/10.1080/13613324.2023.2192945>
- Nguyen, L. (2016). Entrepreneurial culture: Some initial assessments in Vietnam. *Ekonomski Horizonti*, 18(3), 233–246. <https://doi.org/10.5937/ekonhor1603233N>
- Ni, A., & Cheung, A. (2023). Understanding secondary students' continuance intention to adopt AI-powered intelligent tutoring system for English learning. *Education and Information Technologies*, 28(3), 3191–3216. <https://doi.org/10.1007/s10639-022-11305-z>
- Nikolaou, I. (2021). What is the Role of Technology in Recruitment and Selection? *The Spanish Journal of Psychology*, 24, e2–e2. <https://doi.org/10.1017/SJP.2021.6>
- Nishant, R., Schneckenberg, D., & Ravishankar, M. (2024). The formal rationality of artificial intelligence-based algorithms and the problem of bias. *Journal of Information Technology*, 39(1), 19–40. <https://doi.org/10.1177/02683962231176842>
- Nixon, N., Lin, Y., & Snow, L. (2024). Catalyzing Equity in STEM Teams: Harnessing Generative AI for Inclusion and Diversity. *Policy Insights from the Behavioral and Brain Sciences*, 11(1), 85–92. <https://doi.org/10.1177/23727322231220356>
- Nuary, M. G., Judijanto, L., Nurliyah, E. S., Muriyanto, M., & El-Farra, S. A. (2022). Impact of AI in Education and Social Development through Individual Empowerment. *Journal of Artificial Intelligence and Development*, 1(2), 89-97. <https://edujavare.com/index.php/JAI/article/view/301/254>
- Nyamekye, E. (2024). Indigenous language learning in higher education in Ghana: Exploring students' behavioral intentions using an extended theory of planned behavior. *PloS One*, 19(6), e0304390-. <https://doi.org/10.1371/journal.pone.0304390>
- Nyariro, M., Emami, E., Caidor, P., & Abbasgholizadeh Rahimi, S. (2023). Integrating equity, diversity and inclusion throughout the lifecycle of AI within healthcare: A scoping review protocol. *BMJ Open*, 13(9), e072069–e072069. <https://doi.org/10.1136/bmjopen-2023-072069>
- O'Brien, J. M., Blais, N., Butler, C., White, N., Bustead, A., Figler, C., Wells, M., Anderson, G., Yuhas, A., & Ernakovich, J. G. (2024). Ten “simple” rules for non-Indigenous researchers engaging Indigenous communities in Arctic research. *PLoS Computational Biology*, 20(6), e1012093-. <https://doi.org/10.1371/journal.pcbi.1012093>
- O'Reilly, J., & O'Grady, E. (2024). “Our opinions really matter”: conceptualising and operationalising authentic student voice through negotiated integrated curriculum. *Education 3-13*, 52(6), 811–829. <https://doi.org/10.1080/03004279.2024.2331954>
- Okulich-Kazarin, V., Artyukhov, A., Skowron, Ł., Artyukhova, N., & Wołowiec, T. (2024). Will AI Become a Threat to Higher Education Sustainability? A Study of Students' Views. *Sustainability*, 16(11), 4596-. <https://doi.org/10.3390/su16114596>
- Ortega-Bolaños, R., Bernal-Salcedo, J., Germán Ortiz, M., Galeano Sarmiento, J., Ruz, G. A., & Tabares-Soto, R. (2024). Applying the ethics of AI: a systematic review of tools for developing and assessing AI-based systems. *The Artificial Intelligence Review*, 57(5), 110. <https://doi.org/10.1007/s10462-024-10740-3>
- Otto, F., Kling, N., Schumann, C.-A., & Tittmann, C. (2023). Conceptual Approach to an AI Based Adaptive Study Support System for Individualized Higher Education. *International*

- Journal of Advanced Corporate Learning, 16(2), 69–80.
<https://doi.org/10.3991/ijac.v16i2.35699>
- Pantos, A. J. (2021). How the World's Largest Economies Regulate Data Privacy: Drawbacks, Benefits, & Proposed Solutions. *Indiana Journal of Global Legal Studies*, 28(2), 267–292.
<https://doi.org/10.2979/INDJGLOLEGSTU.28.2.0267>
- Pardim, V. I., Pinochet, L. H. C., Souza, C. A., & Viana, A. B. N. (2022). The behavior of young people at the beginning of their career through LinkedIn. *Revista de Administração Mackenzie*, 23(3), 1–28. <https://doi.org/10.1590/1678-6971/eRAMG220064.en>
- Park, J. K., & Feng, N. C. (2024). Personal Information of Medical Learners in Canada: A Review of Policies and Expectations. *Proceedings of the Association for Information Science and Technology*, 61(1), 290–299.
<https://asistdl.onlinelibrary.wiley.com/doi/full/10.1002/pra2.1028>
- Peña, A., Serna, I., Morales, A., Fierrez, J., Ortega, A., Herrarte, A., Alcantara, M., & Ortega-Garcia, J. (2023). Human-Centric Multimodal Machine Learning: Recent Advances and Testbed on AI-Based Recruitment. *SN Computer Science*, 4(5), 434–.
<https://doi.org/10.1007/s42979-023-01733-0>
- Quintais, J. P. (2024). Generative AI, copyright and the AI Act. SSRN.
 Ramírez-Castañeda, V. (2020). Disadvantages in preparing and publishing scientific papers caused by the dominance of the English language in science: The case of Colombian researchers in biological sciences. *PloS One*, 15(9), e0238372–e0238372.
<https://doi.org/10.1371/journal.pone.0238372>
- Reimers, F. M. (2024). The sustainable development goals and education, achievements and opportunities. *International Journal of Educational Development*, 104, 102965.
<https://www.sciencedirect.com/science/article/abs/pii/S0738059323002419>
- Reis, G. G., Braga, B. M., & Trullen, J. (2017). Workplace authenticity as an attribute of employer attractiveness. *Personnel Review*, 46(8), 1962–1976.
<https://doi.org/10.1108/PR-07-2016-0156>
- Reynolds, M., Laskin, A., & Eftekharpour, A. (2018). The Difficult Position: PIPEDA, PC(ML)TFA, and the Challenges of Dual Compliance. *Banking & Finance Law Review*, 33(2), 213–225.
- Rodriguez, M., & Potvin, G. (2021). Frequent small group interactions improve student learning gains in physics: Results from a nationally representative pre-post study of four-year colleges. *Physical Review. Physics Education Research*, 17(2), 020131–.
<https://doi.org/10.1103/PhysRevPhysEducRes.17.020131>
- Rubeis, G., Fang, M. L., & Sixsmith, A. (2022). Equity in AgeTech for Ageing Well in Technology-Driven Places: The Role of Social Determinants in Designing AI-based Assistive Technologies. *Science and Engineering Ethics*, 28(6), 49–49.
<https://doi.org/10.1007/s11948-022-00397-y>
- Rueda, J., Rodríguez, J. D., Jounou, I. P., Hortal-Carmona, J., Ausín, T., & Rodríguez-Arias, D. (2024). “Just” accuracy? Procedural fairness demands explainability in AI-based medical resource allocations. *AI & Society*, 39(3), 1411–1422. <https://doi.org/10.1007/s00146-022-01614-9>
- Ryder, C., Mackean, T., Coombs, J., Williams, H., Hunter, K., Holland, A. J. A., & Ivers, R. Q. (2020). Indigenous research methodology - weaving a research interface. *International Journal of Social Research Methodology*, 23(3), 255–267.
<https://doi.org/10.1080/13645579.2019.1669923>

- Sargeant, J., & Gillett-Swan, J. K. (2019). Voice-inclusive practice (VIP): A charter for authentic student engagement. *The International Journal of Children's Rights*, 27(1), 122-139.
- Sayed, W. S., Noeman, A. M., Abdellatif, A., Abdelrazek, M., Badawy, M. G., Hamed, A., & El-Tantawy, S. (2023). AI-based adaptive personalized content presentation and exercises navigation for an effective and engaging E-learning platform. *Multimedia Tools and Applications*, 82(3), 3303–3333. <https://doi.org/10.1007/s11042-022-13076-8>
- Schaeffer, D., Coombs, L., Luckett, J., Marin, M., & Olson, P. (2024). Risks of AI Applications Used in Higher Education. *Electronic Journal of E-Learning*, 22(6), 60–65. <https://doi.org/10.34190/ejel.22.6.3457>
- Schneider, J., Richner, R., & Riser, M. (2023). Towards Trustworthy AutoGrading of Short, Multi-lingual, Multi-type Answers. *International Journal of Artificial Intelligence in Education*, 33(1), 88–118. <https://doi.org/10.1007/s40593-022-00289-z>
- Sedlacek, Q. C., & Lomelí, K. (2024). Towards authentic purposes for student science writing using culturally relevant pedagogy. *Cultural Studies of Science Education*, 19(1), 141–162. <https://doi.org/10.1007/s11422-023-10203-1>
- Selwyn, N. (2022). The future of AI and education: Some cautionary notes. *European Journal of Education*, 57(4), 620–631. <https://doi.org/10.1111/ejed.12532>
- Song, Y., Sznajder, K., Bai, Q., Xu, Y., Dong, Y., & Yang, X. (2023). English as a foreign language writing anxiety and its relationship with self-esteem and mobile phone addiction among Chinese medical students—A structural equation model analysis. *PloS One*, 18(4), e0284335–e0284335. <https://doi.org/10.1371/journal.pone.0284335>
- Sotiriadou, P., Logan, D., Daly, A., & Guest, R. (2020). The role of authentic assessment to preserve academic integrity and promote skill development and employability. *Studies in Higher Education (Dorchester-on-Thames)*, 45(11), 2132–2148. <https://doi.org/10.1080/03075079.2019.1582015>
- Susilowati, Noor, A., Rustono, Samsudi, Sudana, I. M., Rifai, M. D. K., & STr, M. M. (2021). The College Students' Satisfaction for Using Edmodo - the Learning Technology Application as E-Learning Media and Learning Effectiveness Improvement in Economic Higher Institution Mahardika Surabaya. *Turkish Journal of Computer and Mathematics Education*, 12(6), 2749–2756. <https://doi.org/10.17762/turcomat.v12i6.5781>
- Tóth, Z., Caruana, R., Gruber, T., & Loebbecke, C. (2022). The Dawn of the AI Robots: Towards a New Framework of AI Robot Accountability. *Journal of Business Ethics*, 178(4), 895–916. <https://doi.org/10.1007/s10551-022-05050-z>
- Towett, G., Snead, R. S., Grigoryan, K., & Marczika, J. (2023). Geographical and practical challenges in the implementation of digital health passports for cross-border COVID-19 pandemic management: a narrative review and framework for solutions. *Globalization and Health*, 19(1), 98–98. <https://doi.org/10.1186/s12992-023-00998-7>
- Truby, J. (2020). Governing Artificial Intelligence to benefit the UN Sustainable Development Goals. *Sustainable Development (Bradford, West Yorkshire, England)*, 28(4), 946–959. <https://doi.org/10.1002/sd.2048>
- Tzimas, G., Zotos, N., Mourelatos, E., Giotopoulos, K. C., & Zervas, P. (2024). From Data to Insight: Transforming Online Job Postings into Labor-Market Intelligence. *Information (Basel)*, 15(8), 496-. <https://doi.org/10.3390/info15080496>
- Urbano, V. M., Bartolomucci, F., & Azzone, G. (2024). Determinants for university students' location data sharing with public institutions during COVID-19: The Italian case. *Data & Policy*, 6. <https://doi.org/10.1017/dap.2023.42>

- Veras, M., Dyer, J.-O., & Kairy, D. (2024). Artificial Intelligence and Digital Divide in Physiotherapy Education. *Curēus* (Palo Alto, CA), 16(1), e52617–e52617. <https://doi.org/10.7759/cureus.52617>
- Wager, A. C., Ansloos, J. P., & Thorburn, R. (2022). Addressing structural violence and systemic inequities in education: A qualitative study on Indigenous youth schooling experiences in Canada. *Power and Education*, 14(3), 228–246. <https://doi.org/10.1177/17577438221108258>
- Wamba-Taguimdje, S.-L., Fosso Wamba, S., Kala Kamdjoug, J. R., & Tchatchouang Wanko, C. E. (2020). Influence of artificial intelligence (AI) on firm performance: the business value of AI-based transformation projects. *Business Process Management Journal*, 26(7), 1893–1924. <https://doi.org/10.1108/BPMJ-10-2019-0411>
- Wang, T., Lund, B. D., Marengo, A., Pagano, A., Mannuru, N. R., Teel, Z. A., & Pange, J. (2023). Exploring the Potential Impact of Artificial Intelligence (AI) on International Students in Higher Education: Generative AI, Chatbots, Analytics, and International Student Success. *Applied Sciences*, 13(11), 6716-. <https://doi.org/10.3390/app13116716>
- Wang, X., Pang, H., Wallace, M. P., Wang, Q., & Chen, W. (2024). Learners' perceived AI presences in AI-supported language learning: A study of AI as a humanized agent from community of inquiry. *Computer Assisted Language Learning*, 37(4), 814-840.
- Woodruff, E. (2024). AI Detection of Human Understanding in a Gen-AI Tutor. *AI (Basel)*, 5(2), 898–921. <https://doi.org/10.3390/ai5020045>
- Youssef, A. B., Dahmani, M., & Ragni, L. (2022). ICT Use, Digital Skills and Students' Academic Performance: Exploring the Digital Divide. *Information (Basel)*, 13(3), 129-. <https://doi.org/10.3390/info13030129>
- Zety study reveals 71% of workers use AI at work. (2024). In CE Noticias Financieras (English ed.). ContentEngine LLC, a Florida limited liability company.
- Zhang, I. Y., Powell, D. M., & Bonaccio, S. (2022). The role of fear of negative evaluation in interview anxiety and social-evaluative workplace anxiety. *International Journal of Selection and Assessment*, 30(2), 302–310. <https://doi.org/10.1111/ijsa.12365>
- Zhang, X., & Lütge, C. (2024). A narrative inquiry of a Chinese international student's language experiences and identities in a multilingual university in Germany. *Journal of Multilingual and Multicultural Development*, 1–14. <https://doi.org/10.1080/01434632.2024.2339518>
- Zhou, P. (2024). Real time feedback and E-learning intelligent entertainment experience in computer English communication based on deep learning. *Entertainment Computing*, 51. <https://doi.org/10.1016/j.entcom.2024.100752>
- Zinkevich, N. A., & Ledeneva, T. V. (2021). Using Grammarly to Enhance Students' Academic Writing Skills. *Diskurs Professional'noj Kommunikacii*, 3(4), 51–63. <https://doi.org/10.24833/2687-0126-2021-3-4-51-63>