

Mindful mnemonics: Revolutionizing learning with AI-generated mnemonics

Pickard-Jones, Beverley; Short, Fay

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Towards AI Literacy: 101+

Creative and Critical Practices, Perspectives and Purposes



Edited by

Sandra Abegglen, University of Calgary
Chrissi Nerantzi, University of Leeds
Antonio Martínez-Arboleda, University of Leeds
Marianna Karatsiori, University of Macedonia
Javiera Atenas, University of Suffolk
Chris Rowell, University of the Arts London

Graphic Design/Images Leonor Aguero Vivas

Grant Imagination Lab Foundation




Affiliations



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Introduction

Edited by

Sandra Abegglen, University of Calgary
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Chris Rowell, University of the Arts London

Artificial Intelligence (AI) has gathered significant attention since November 2022, when ChatGPT, a GAI tool, was released to the broader public, and many other tools and platforms followed. That led to the rapid expansion and explosion of interest and engagement with AI, and in particular Generative Artificial Intelligence (GenAI), including in educational settings.

Since then, discussions and debates around the potential use of AI in education have become widespread. Amongst these are the creators, innovators and experimenters who forge ahead without seeking approval, while others await guidance and reassurance, engage in staff development initiatives, or simply wish to sideline AI, boxing it away in hopes that it will dissipate.

There has been a plethora of dissemination activities, events, and conferences but also speculative papers and experiments, and more and more we also see evaluative research emerging. We live in fascinating times and have

been since the dawn of digital technology, the Internet, social and mobile media, and AI. The technological advancements we have seen, especially in the last couple of years, are mind blowing.

In more recent months we have, started experiencing a shift in the conversation around AI. Is change in the air? Are we accepting that AI is here to stay? Do we realize now more that instead of wishing AI to go away, we need to learn how to use it properly? Responsible? Ethically? Critically and creatively? This seems to have surfaced questions around AI literacy, something that educators and students alike will need to develop to navigate with confidence and competence in this new and alien landscape.

As we contemplate the possible revolution that AI/GenAI can bring to the education field, this collection provides multiple inspirations on how we might navigate this ever-changing terrain as confident and competent explorers.

The collection is the second crowdsourced curation of ideas and practices around AI by education practitioners, open researchers and students from different parts of the world generated by the international #creativeHE community. The collection is edited by an international team - Sandra Abegglen, Chrissi Nerantzi, Antonio Martínez-Arboleda, Marianna Karatsiori, Javiera Atenas, and Chris Rowell - generously supported by Playful Hybrid Higher Education and #creativeHE.

The appetite for sharing has further grown since the release of the first collection, so we have additional ideas on how to use AI in education as well as resources for education practitioners, inspirations on what students do with GenAI, and reflections and positions on AI literacy more generally. However, as the title suggests, this collection is not a repeat or more of what we published in the first collection. The focus is now on experimental practice, perspectives and purposes. While we still see this as an opportunity to celebrate everyday creativity and the newness of learning, teaching and assessing with GenAI, it is also about criticality and thoughts around AI literacy: what could teaching and learning with AI really mean for educators and students now - and in the future?

Included in the collection are:

- Reflections and perspectives towards GenAI literacy
- Practice examples by and for education professionals
- GenAI outputs by students for their learning

These contributions present a chance to engage with voices and concerns about the use of AI in education, and embrace ideas to develop our individual and collective understanding of what we mean by AI literacy. As such, the collection contributes to the wider discussions around AI while also fostering collaboration and partnership between educators and students in co-designing learning, teaching, and assessment that help us all grow as responsible citizens of this world, explore what the practical implications and opportunities are while also addressing any ethical concerns, and gain insights into what we mean by becoming AI literate. There is a need to do all this with transparency and openness, and that is why the open education community plays a key role in these important conversations - and in this collection.

Creative and critical experimentation is at the heart of education. The two are inseparable! One does not exist without the other. Thus, being open to diverse ideas, perspectives and practices will drive our appetite to open-up to new possibilities, to novel discoveries that can lead to new insights to make a positive contribution to our students, our graduates, all of those working in education but also society as a whole.

Sandra Abegglen, Chrissi Nerantzi, Antonio Martínez-Arboleda, Marianna Karatsiori, Javiera Atenas, and Chris Rowell

ACKNOWLEDGEMENTS

The collection has been generously supported by the Imagination Lab Foundation through the Playful Hybrid Higher Education project (<https://playhybrid.education/>) led by Sandra Abegglen and situated in the School of Architecture, Planning and Landscape at the University of Calgary.

Thanks go also to #creativeHE of which we, the editors, are all part of and that has acted as supporter of the creative AI collections from the very beginning. The #creativeHE community hosts all calls and dissemination activities for the AI collections on their website:

<https://creativehecommunity.wordpress.com/>

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PART 01

Dramatizing the future: Theater as a tool for enhancing AI Literacy and education in sustainable futures

ALBERT SABATER, ASSOCIATE PROFESSOR IN SOCIOLOGY AND DIRECTOR OF THE OBSERVATORY FOR AI ETHICS OF CATALONIA

ANAÏS VARO, ASSISTANT PROFESSOR IN POLITICAL SCIENCE

UNIVERSITY OF GIRONA

SPAIN

Incorporating plays or theater into education for AI literacy offers a unique and engaging approach to unpacking complex concepts and ethical considerations surrounding artificial intelligence. In our work, we highlight the use of this method for leveraging both the narrative and emotional power of drama and to foster a deeper understanding of AI, its implications, and its sustainable application in society.

The pedagogical foundation for integrating plays into AI education is rooted in constructivist learning theories, which posit that learners construct knowledge through experiences and reflections on those experiences. Within this context, theater is an experiential learning tool that provides a rich, immersive environment where abstract AI concepts can be contextualized, making them more accessible and relatable to learners. Furthermore, the collaborative nature of theater-making reflects the interdisciplinary teamwork essential in AI development,

fostering skills such as collaboration, creativity, and critical thinking. To effectively use theater in AI literacy, we propose that educators should begin by identifying key AI concepts and ethical dilemmas relevant to their curriculum. These might include machine learning, algorithmic bias, data privacy, and the societal impacts of AI.

Following this, educators can work with students to develop scripts or improvise scenes that explore these themes. This process not only aids in demystifying AI but also encourages students to engage with the material critically, examining potential consequences and ethical considerations from multiple perspectives.

Using these key elements for enhancing AI literacy in education, we have developed a methodology which revolves around playing a fictional AI system designed to optimize energy usage in a city, aiming to reduce carbon emissions and promote sustainability.

The narrative follows diverse characters affected by the AI system, including engineers who grapple with technical and ethical challenges, citizens who experience the benefits and drawbacks firsthand, and policymakers who must balance technological advancement with social equity.

Through the unfolding drama, students can explore topics such as the environmental impact of AI, the importance of inclusive and transparent AI development, and the potential for unintended consequences. This method also anticipates the inclusion of specific topics through specific scenes such as dramatizing a town hall meeting where community members debate the AI system's deployment, raising concerns about privacy, security, and the displacement of workers. General and specific scenes are important as they not only highlight the complexities of implementing sustainable AI solutions but also emphasize the relevance of public engagement and ethical decision-making in AI development.

In sum, using theater to teach AI literacy offers a dynamic and empathetic approach to education that can enhance students' understanding of AI and its broader societal implications. By engaging with AI concepts through narrative and character, students

can better grasp the technical, ethical, and social dimensions of AI. Of course, although the working example of a play centered on sustainable AI illustrates how theater can bring to life the challenges and opportunities of AI, it is not the only one where fostering a more nuanced and critical engagement with this pivotal technology can be applied.

Navigating the journey to GenAI literacy

BRIAN MCGOWAN, LECTURER IN HIGHER EDUCATION PRACTICE, CENTRE FOR PROFESSIONAL PRACTICE ENHANCEMENT

ULSTER UNIVERSITY

IRELAND, UK

How do you define GenAI literacy?

GenAI literacy is the capacity to engage effectively, reasonably and ethically, with generative artificial intelligence tools for use in learning and teaching activity.

Literacy, according to Winstone and Carless (2020, p. 23), consists chiefly of knowledge and competencies. Expanding on this foundation, the following definition of GenAI literacy comprises three domain specific components: AI knowledge, AI competence and AI self-efficacy. The model offered has transferability to and use in other domains such as feedback literacy, digital literacy, and stress literacy.

AI knowledge comprises what is known intellectually about AI; its origins, development, abilities, reasonable use and ethical implications. AI competence pertains to the individual's capacity to use, (and demonstrate the use of), AI tools effectively and reasonably. AI self-efficacy is an individual's self-assessment of their confidence and capacity to engage successfully with the factors comprising AI use in higher education. Success in this context pertains to effective, reasonable, and ethical use of AI to achieve a defined goal.

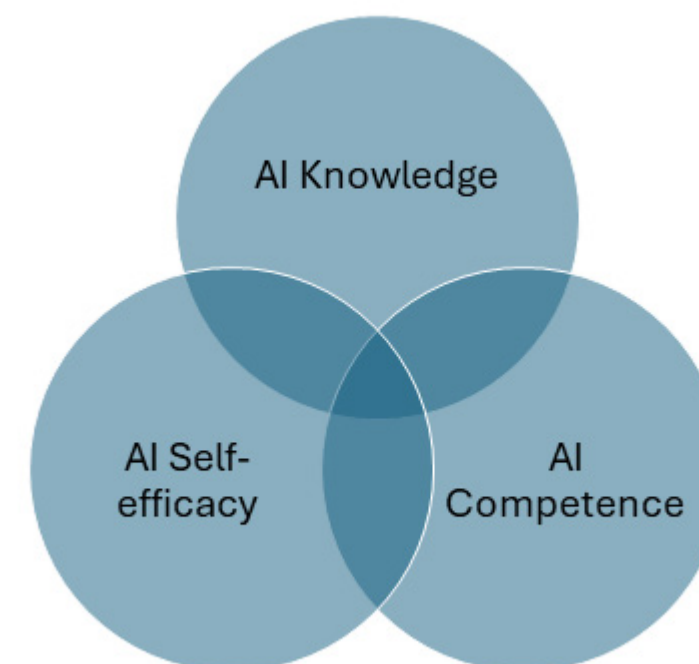
And, what can be done to foster the GenAI literacy of education professionals and/or students?

From the student perspective, GenAI literacy should be introduced early, for example, from induction (as part of a suite of literacies), and repeated at the beginning of each module of study. The general introduction should enable them to develop insight, (through exposure and practice), into the issues that will have an impact on their progress and outcomes at university.

Whilst the source material should reflect an organisational position with regard to values, principles and standards, individual subjects should be encouraged to translate this into their own field considering their context and focus on reasonable and ethical use in practice.

This approach is underpinned by Biggs Tang and Kennedy's (2022) premise that information is required to enable the construction of declarative knowledge, which acts as the foundation of the construction of functioning knowledge.

From a staff perspective, information and opportunities to make sense of that



information should be provided (Race, 2020). Following a similar model to the student body, generic information should be available from multiple sources, in multiple formats, to facilitate inclusive access, for example as a webpage with information and downloadable assets or as a bookable regular CPD event.

To complement the organisational approach, bespoke seminars should be available to help staff with the contextualisation process and to enhance their GenAI literacy.

Relevant literature resources

Biggs, J. Tang C., & Kennedy G. (2022). *Teaching for quality learning at university*. (5th ed.). Open University Press.

Race, P. (2020). *The lecturer's toolkit: A practical guide to assessment, learning and teaching* (5th ed.). Routledge.

Winstone, N., & Carless D. (2020). *Designing effective feedback processes in higher education: A learning focused approach*. Routledge.

GenAI literacy must be values-based

ALICJA SYSKA, LEARNING DEVELOPER & LECTURER IN EDUCATION AND HISTORY

UNIVERSITY OF PLYMOUTH

UK

Considering the emergent, evolving, and still unpredictable nature of AI systems and models, GenAI literacy must be a values-based literacy. To make the right decisions regarding how to use GenAI in education, we must identify, foster, and mobilise our and our students' values. The guiding question should be: how does using GenAI reflect our values and what we want out of learning?

The nature of reading, researching, and writing changes with the application of GenAI. Firstly then, what are we gaining from it? Speed for sure, many shortcuts to time-consuming tasks, and even (faux) confidence. The discomfort associated particularly with writing can be circumvented; AI strips it of emotion and reduces frustrations. It promises to make writing efficient and product-orientated rather than constrained by the writing process. Focused on crafting the most effective prompts and manipulating ideas to create a viable product, writing becomes transactional in nature, freeing the writer from making difficult decisions by offering a suggested way of doing something. While its shortcomings, including hallucinations and biases, have been extensively documented, GenAI is capable of effortlessly producing quality work. It has its place in learning and teaching, with its

impressive range of useful tools that help with different aspects of reading, researching, and writing. I occasionally use it myself.

And yet, I remain extraordinarily sceptical about its power to promote thinking, help us find our voice and grow our authorial identity. The critical question is, what aspects of our learning are we giving away when using it? The ability to tell the difference between using GenAI to create a product that satisfies a certain need and using it to ensure that learning takes place is key.

These issues are particularly salient when applying GenAI to writing. If writing is a way of connecting with the world of ideas and adding to the conversation, then GenAI challenges the idea of authorial voice. If one sees writing as a way of growing, developing thinking, and finding new forms of self-expression, then GenAI interferes with this process by allowing us to outsource thinking.

Writing often involves sitting uncomfortably with ideas that refuse to come and breaking through obstacles that stop us from starting; feeling the mixed emotions involved in producing something and rejoicing once we experience flow; moving slowly and deliberately from word to sentence, sentence

to paragraph, and paragraph to a rounded argument, so that we can join the scholarly conversation.

GenAI changes the rules of this conversation, and something seems lost in that connection between the author and the audience. What we may be giving away is our ability to find ourselves and each other through writing.

I don't have feelings about GenAI, but I do have feelings about writing. I believe that promoting GenAI values-based literacy will help us decide what learning and writing mean to us, so that we can activate our values and make the best decisions about both its role in this process and its impact on our identity as learners and writers.

A student perspective on AI literacy: Limitations, capabilities and student engagement

ANNA SIMPKINS, ACADEMIC AFFAIRS OFFICER

ABERYSTWYTH STUDENTS UNION

UK

Firstly, as I reflect on an all-too-common struggle amongst students – that is to effectively communicate ideas in the written form – GAI unveils itself as an effective tool in the editing process. Specifically employing AI through prompt engineering effectively allows idea communication with the level of clarity demanded in the assessment context. However, this isn't without a meticulous understanding of what I believe constitutes AI literacy, which, firstly, means grasping the fundamentals of how GAI acquires data, and acknowledging its vast capabilities, yet recognizing the potential for misinformation (known as 'hallucinations'). This is especially critical in academia where accuracy and integrity are paramount. Secondly, it is crucial to comprehend the limitations of GAI, including ethical considerations, and perhaps recognize when human cognitive abilities surpass the tool in terms of time-efficiency and creative-content production. Third, developing a thorough understanding of AI capabilities, which, as I will demonstrate, is done only through personal experience with GAI prompt

engineering and practicing output criticism.

However, knowing what constitutes AI literacy is easier to define than solving an issue visible in the Higher Education sector that impacts the all-important communication of AI literacy between educator and student.

The pressing need for timely responses amid institutional changes, coupled with a demand for quick and successful integration of AI into learning, teaching, and assessment proves a difficult balance, and it seems that universities are struggling to implement AI quickly enough for current students to benefit.

To address the challenge of time constraints and the growing demand for AI literacy in employment, I advocate affording students' full access and agency to GAI once they've reached a level of AI literacy that proves an awareness of the Gen AI model, its limitations, and its capabilities. I firmly believe that genuine AI literacy evolves through hands-on experience and critical thought, which could allow the university to take their time in decision-making,

Delving into the intricate realm of GenAI literacy, my perspective weaves through the transition from a recent English literature graduate to the role of an Academic Affairs Officer for a Students Union. This unique perspective, spanning student-hood, and a quasi-university employee status, illuminates a dynamic that unveils an issue between slow-moving institutional decision-making and the very current and growing demands for GAI in real-world workplaces and academia.

trusting the students to build up their own AI in the meantime.

Further drawing from my personal experiences as an education officer, it's clear that recognizing the foundational technological proficiency of today's students adds intricacy to the realm of AI literacy. The already established digital competency should inspire educators to customise their approach, cultivating a collaborative atmosphere wherein students have autonomy within the digital domain, meaning the set boundaries imposed on students need to be mutually agreed upon and justified.

In essence, it should be noted that GenAI literacy transcends a mere checkbox exercise; it embodies a mindset – a dynamic engagement with technology rooted in responsible use. As we navigate this landscape, it becomes

evident that AI literacy goes beyond the 'hows', delving into the 'whys' and 'whats', nurturing a generation prepared to harness the full potential of GAI responsibly through personalized experience, critical reflection and complete trust in student agency.

A stable concept of GenAI literacy could be harmful

ANNE-MARIE SCOTT, INDEPENDENT EDUCATION CONSULTANT

CANADA

How do you define GenAI literacy?

A neat definition of GenAI literacy will continue to be a moving target. The concept of a stable or complete literacy is potentially a marker of an undesirable future in which it is used as a closure mechanism against sustained critical enquiry and alternative possible futures. Defining the boundaries of a space of rapidly evolving technology that is over-hyped (Nemorin et al., 2023), poorly understood, and increasingly politicised (Robins-Early, 2023) is hard, and we should not shy away from grappling with its complexity. Reducing the concept of GenAI literacy to something like a curriculum risks an alignment with positivist framings that begin with the belief that this technology should be used (Knox, 2023).

Whilst much of the technical sophistication of GenAI is the product of statistical calculations at scale, the hallucination of sentience remains compelling for many. However, issues of bias and various other harms are increasingly being recognised (Selwyn, 2024), and solutions remain nascent (Schwartz et al., 2022). The implications of GenAI are also highly contextual and the variety of potential interactions across our civic and professional lives, of which education systems are one part,

must mean that the business of GenAI literacy is a shared societal endeavour.

This does not mean that previous work on digital literacies is not relevant or helpful though. Work by doteveryone to define ‘digital understanding’ is an example of the kind of broad framing that could be useful when thinking about the scope of GenAI literacy.

Digital understanding is not about being able to code, it’s about being able to cope. It is about adapting to, questioning and shaping the way technologies are changing the world (Miller et al., 2018).

And, what can be done to foster the GenAI literacy of education professionals and students?

A vital aspect of the dotveryone definition is that it includes a call to action and a recognition of agency in ‘shaping the way technologies are changing the world’. Within engagement with the socio-technical nature and inherent complexity of GenAI is the possibility of exercising that agency, but it requires that critical enquiry and debate are not seen as anti-progress in the face of an inevitable future in which we risk some ill-specified loss in being ‘left behind’.

If the work of fostering GenAI literacy is one of exploring a space of complexity, then the academy is already well positioned to do this work (Knox, 2023). This work will best be achieved through research, discussion, pilots, collaborations, sharing findings, practices, and resources. We will evaluate and codify what we have learned from this work, just as we always have done. Universities are also collections of labour (Connell, 2022) and if the implications of GenAI are highly contextual then we need to consider the full breadth of institutional engagement beyond our learning, teaching and

research activities. For example, should our legal experts be helping to inform emergent regulatory regimes? Should our technology and procurement specialists be developing new decision-making frameworks that keep us aligned with existing pledges to accessibility, labour rights, and sustainability targets? What are the needs and opportunities of, our whole community?

Relevant literature resources

Connell, R. (2022). *The good university: What universities actually do and why it's time for radical change*. Bloomsbury Academic.

Knox, J. (2023). (Re)politicising data-driven education: From ethical principles to radical participation. *Learning, Media and Technology*, 48(2), 200-212. <https://doi.org/10.1080/17439884.2022.2158466>

Miller, C., Coldicutt, R., & Kitcher, H. (2018). *People, power and technology: The 2018 digital understanding report*. Doteveryone.

Nemorin, S., Vlachidis, A., Ayerakwa, H. M., & Andriotis, P. (2023). AI hyped? A horizon scan of discourse on artificial intelligence in education (AIED) and development. *Learning, Media and Technology*, 48(1), 38-51. <https://doi.org/10.1080/17439884.2022.2095568>

Robins-Early, N. (2023, August 21). ‘Very wonderful, very toxic’: How AI became the culture war’s new frontier. *The Guardian*. <https://www.theguardian.com/us-news/2023/aug/21/artificial-intelligence-culture-war-woke-far-right>

Schwartz, R., Vassilev, A., Greene, K., Perine, L., Burt, A., & Hall, P. (2022). Towards a standard for identifying and managing bias in artificial intelligence (NIST SP 1270; p. NIST SP 1270). National Institute of Standards and Technology (U.S.). <https://doi.org/10.6028/NIST.SP.1270>

Selwyn, N. (2024). On the limits of Artificial Intelligence (AI) in education. *Nordisk Tidsskrift for Pedagogikk Og Kritikk*, 10(1), Article 1. <https://doi.org/10.23865/ntpk.v10.6062>

A knowledge equity approach to GenAI in universities

ANTONIO MARTÍNEZ-ARBOLEDA, PROFESSOR IN OPEN AND DIGITAL EDUCATION

UNIVERSITY OF LEEDS

UK

GAI literacies encompass a wide range of competences that enable humans to engage in an informed, autonomous, critical, ethical, and effective way with tools and processes that are supported by Generative Artificial Intelligence in order to facilitate any human endeavour, including applied knowledge production. Our ability to thrive as citizens, professionals, learners, artists, and knowledge prosumers, individually and collectively, relies increasingly on our AI literacy, which cannot be easily separated from digital, multimodal, language, and professional literacies.

GenAI literacy is intricately tied to the peculiar political economy of AI. On the one hand, AI technology can be embedded in a multitude of digital services and is owned by private industries who have invested heavily in its development. On the other, universities provide foundational research and education to fuel the activities of an industry in need of a workforce and produce quality knowledge that is fed into machine learning. Regrettably, universities play a diminishing role in shaping AI knowledge and capabilities. The Higher Education sector is atomised and

lacks collaborative mechanisms to harness economies of scale in a landscape dominated by multi-billion dollar digital enterprises.

In this ecosystem, we can expect that GenAI will be driven by never-ending product differentiation and product bundling. Consequently, educators in universities will face the ongoing challenge of keeping pace as consumers of a diverse range of GenAI and GenAI-supported services. This dynamic inevitably shapes the framework of GenAI literacy programs, which will have to remain adaptable, subject to market forces and their invisible hand. What we teach our students and what we learn ourselves will depend very much on what services institutions and individuals can afford to subscribe to. The technology providers will deliver their own consumer training and support resources. Our role as educators may end up being that of a GenAI learning facilitator within a specific subject context who needs to undergo permanent re-training on the latest gadgets with little agency, despite being an expert in their subject.

Can there be true literacy without criticality and autonomy? Can all technologies empower learners?

Of course, there is a better alternative to this. GenAI can be driven by communities of educators, developers, and researchers who can collaborate to build subject-specific GenAI applications adapted to the needs of our learners and the needs of the communities and professions that will receive them after graduation.

The HE sector can pool their resources, take advantage of their unique position as knowledge producers, and engage, through extensive consortia, in the production of AI systems and applications, in collaboration with developers, public agencies, and businesses that share an equitable and educational ethos. In this more promising, slightly utopian but not unfeasible scenario, GenAI will be more accessible, inclusive, and transparent; the relationship between users and producers of GenAI will be less commercial and more educational; and the fostering of GenAI literacy will become inseparable from the very development of GenAI, as learning and producing, research and education, and universities and communities become intertwined in virtuous open rhizomes for social transformation.

Artificial Intelligence in higher education: A perfect storm

BAIBEL (BUILDING AI-BASED EDUCATION LANGUAGES)

MANOJ RAVI, BAIBEL PROJECT LEAD & LECTURER IN CHEMICAL ENGINEERING

KASHMIR KAUR, BAIBEL PROJECT CO-LEAD & ASSOCIATE PROFESSOR OF ENGLISH FOR ACADEMIC PURPOSES

MATT BAWN, LECTURER IN BACTERIAL GENOMICS

LUISA CUTILLO, ASSOCIATE PROFESSOR IN THE DEPARTMENT OF STATISTICS

CLARE WRIGHT, ASSOCIATE PROFESSOR IN LINGUISTICS & LANGUAGE

UNIVERSITY OF LEEDS

UK

There is no doubt that the arrival of ChatGPT significantly impacted many aspects of higher education. Initially, most attention was focussed on concerns related to academic misconduct and the integrity of assessment. Conversations regarding GAI (GenAI) abounded in universities and society and for several months it felt as if everything was about to change. While many are rightly moving on to conversations about how we as educators can best use GenAI to enhance student education and prepare students for an AI driven world, we should also consider the context of these technologies in the current landscape of higher education.

Commercialisation: Financial considerations are at the heart of all academic practice. Increasing student tuition fees have caused many learners to question the value of

higher education. In an effort to make degree programmes more attractive to learners many universities have redesigned their curricula to make their courses more attractive – often by surfacing transferable skills and programmes that link to employability and enhanced student outcomes.

Industrialisation: At the same time, universities are increasingly streamlining their programmes to consolidate teaching and optimise resources to develop sustainable educational practices. Cohort sizes are increasing, impacting contact time between academic staff and students. Many of our innovative and transformative pedagogies designed to enhance student engagement are not achieving this and serve to polarise significant subsets of students into becoming more disengaged.

Democratisation: The changing job market, continuing professional development and the increasing costs of in person taught education have fuelled the demand for short courses and online learning. Learners are now able to take more control of their learning. In response to this many HE institutions are also partnering with online learning platforms, offering vignettes of their programmes to attract these professional learners.

Normalisation: These processes combine and interact to create an environment where continual learning for professional development is essential. We need to be able to train students to be lifelong learners to ensure continued professional success. For this to be sustainable, students need ready access to high quality and affordable content that fits in with the demands of their working lives.

Higher Education is changing; the precarious funding landscape, streamlining and revision of curricula, online learning, and changing student attitudes are all contributing to a moment when the value of undergraduate and postgraduate taught education is in the balance. We need to recognise this and develop our programmes, curricula, and pedagogies appropriately. If we fail to do so we run the risk of students opting to disengage with HE in the traditional sense altogether in favour of cheaper and quicker alternatives. The advent of GenAI specifically has provided these alternatives and there is no doubt that students will use these widely available tools to aid their learning. If we as educators fail to take this into account appropriately and don't support learners to use them ethically and effectively, we run the risk of making HE seem costly and irrelevant.

Artificial Intelligence in higher education: A perfect storm

BAIBEL (BUILDING AI-BASED EDUCATION LANGUAGES)

MANOJ RAVI, BAIBEL PROJECT LEAD & LECTURER IN CHEMICAL ENGINEERING

KASHMIR KAUR, BAIBEL PROJECT CO-LEAD & ASSOCIATE PROFESSOR OF ENGLISH FOR ACADEMIC PURPOSES

MATT BAWN, LECTURER IN BACTERIAL GENOMICS

LUISA CUTILLO, ASSOCIATE PROFESSOR IN THE DEPARTMENT OF STATISTICS

CLARE WRIGHT, ASSOCIATE PROFESSOR IN LINGUISTICS & LANGUAGE

UNIVERSITY OF LEEDS

UK

POSITION STATEMENT ON GENAI LITERACY

Against the backdrop of the ongoing evolution of Artificial Intelligence (AI) tools and the varying degrees to which people use these in their professional and personal lives, the term ‘GAI (GenAI) literacy’ can encompass different expectations for different people. In the pursuit of formulating a unifying basis for what ‘GenAI literacy’ means, a robust approach would be to work upwards from the definition of ‘literacy’. As defined by UNESCO, ‘literacy is a means of identification, understanding, interpretation, creation, and communication’. Deriving from this, ‘digital literacy’ is defined as ‘the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies’. By extension, ‘GenAI

literacy’ entails the same action verbs applied to GenAI tools. The advantage of leveraging the definition of ‘digital literacy’ here is that it adds two key words to the broader definition of literacy – ‘information’ and ‘safely’ – both of which are important in the context of GenAI.

Being able to comprehend and critically evaluate content or ‘information’ output from GenAI tools is a core requirement. This means not just focusing on the output but understanding how the content generated is a function of the input. Thereby, the user is aware of the capability of a tool and its limitations. The second core requirement of GenAI literacy centres on ethical use. Along with principles of data privacy as defined for

‘digital safety’, an awareness of misuse and the biases of GenAI technology is essential.

Equitable access to AI is a crucial aspect that must be integrated into the broader framework of GenAI literacy by incorporating the principle of equitable access into the discourse of GenAI literacy. It is essential that individuals across diverse demographics and socio-economic backgrounds have equal opportunities to acquire GenAI literacy to avoid the risk of exacerbating the technological divide that further marginalises certain sections of society. This approach aligns with the broader goals of promoting social justice and fostering a more inclusive and sustainable future in the era of AI.

Fostering GenAI literacy among education professionals and students needs to be a holistic process, addressing both the cognitive and affective domains of learning. There is a pressing need to capture, understand and address the expectations and apprehensions regarding the use of GenAI. This will require engaging closely with the different stakeholders in higher education to elicit their opinions and lived experiences, enabling us to demystify GenAI in a compassionate

and inclusive manner for professionals and students alike in higher education. This is the approach being pursued at the University of Leeds by the interdisciplinary ‘Building AI-Based Education Languages’ (BAIBEL) project team.

In order to address the cognitive aspects of GenAI literacy, it is important to consider both formal and informal pathways. Although the conventional approach of delivering training programmes for education professionals would be beneficial, these often have long lead times from design to delivery, which could be a challenge for such programmes to keep pace with the fast-evolving landscape of GenAI. Informal staff networks or forums, where staff share their ideas and discuss outputs from GenAI tools, benefit from a low barrier to participation and draw on peer support. The specifics of GenAI that students would need to be trained on would primarily be informed by how such tools are being used in research and industry in their respective disciplines. In addition, providing multiple low-stakes opportunities – for example, through formative assessments – for students to engage with GenAI tools can improve their ability to critically evaluate the content being generated.

Relevant literature resources

<https://www.unesco.org/en/literacy/need-know>

<https://unevoc.unesco.org/home/TVETipedia+Glossary/show=term/term=Digital+literacy>

Fostering GenAI literacy in educational settings through play and partnership

BARBARA BROWN, ASSOCIATE PROFESSOR, LEARNING SCIENCES & ASSOCIATE DEAN
TEACHING AND LEARNING, WERKLUND SCHOOL OF EDUCATION

UNIVERSITY OF CALGARY

CANADA

Generative Artificial Intelligence (GenAI) is broadly known as advanced technological systems that synthesize new content through the analysis of extensive datasets via complex algorithms. In an era where GenAI permeates various facets of life, the imperative for GenAI literacy among educators and students has never been more pronounced. I define GenAI literacy as a competency in understanding and utilizing GenAI tools. This literacy is not merely a functional proficiency but encompasses a critical understanding of the workings of these tools, their potential applications, and their implications.

The ubiquity of GenAI tools in creating text, images, video, audio, and other types of content and media necessitates that education professionals and students become adept at leveraging these tools in meaningful ways, responsibly and innovatively. To achieve this, GenAI literacy needs to be integrated into educational curricula, and educators need to foster learning environments that are conducive to exploratory learning and encourage collaborative engagement with these technologies and with each other.

One approach to cultivating GenAI literacy is through play. I'm suggesting that learning through play in this context involves a dual-focused educational framework that combines foundational knowledge about GenAI mechanisms with hands-on learning. Arguably, through interactive play with GenAI tools, learners can demystify the technology's intricacies and foster a deeper understanding of its capabilities and limitations.

When educational professionals and students adopt a 'students as partners' way of thinking, this can further enrich learning through play. By engaging students as co-creators in the educational journey, we not only empower them but also facilitate a community of learners who collectively navigate the complexities of using GenAI. This partnership can be particularly effective in discovering innovative applications of GenAI that enhance pedagogy and learning outcomes. Educators can harness GenAI to design dynamic teaching materials and assessments tailored to diverse learning needs. Simultaneously, students can employ GenAI to generate ideas and create sophisticated academic content,

thereby augmenting their learning experience. Together, educators and students can co-create.

For instance, Casecraft (Sabbaghan & Brown, 2023) – <https://casecraft.dev/> – is a GenAI application that was developed for educational professionals and students who wish to learn through play and co-create case scenarios for learning. Case-based learning is considered a signature pedagogy in education and Casecraft was developed to provide an opportunity for instructors and students to generate custom cases for teaching and learning purposes. Such applications serve to prepare students for a future where AI is a ubiquitous part of the workforce.

As GenAI technology continues to evolve, the importance of GenAI literacy will escalate; it is a critical competency that enables educators and students to navigate the digital landscape with agility and foresight. By embedding GenAI literacy in education, we can equip current and future generations with the knowledge and skills necessary to thrive in a digital age.

Position statement

BEVERLEY PICKARD-JONES, LECTURER IN PSYCHOLOGY

FAY SHORT, PROFESSOR

BANGOR UNIVERSITY

UK

GenAI (GenAI) represents the latest technological revolution among a series of previous revolutions. Like the advances in personal computing in the 1970s and 1980s, the internet revolution of the 1990s, and the mobile and social innovations of the 2000s and beyond, the knee-jerk reaction to new technology has been to express concerns about the potential adverse effects of this technology on developing minds and the economic prospects of our workforce. This is not a new concern; with each technological wave we fall into the same 2500-year-old trap as Socrates, who, horrified by the educational advancement known as writing, fretted that: If men learn this, it will implant forgetfulness in their souls; they will cease to exercise memory because they rely on that which is written, calling things to remembrance no longer from within themselves, but by means of external marks. Like the ability to write, GenAI skills aren't just 'nice to have'; they are vital to ensure students are ready to excel in a world increasingly driven by AI. As industries and jobs evolve, those who do not have these skills will be disadvantaged.

Yet leaning too heavily on GenAI does trigger a valid debate about its influence on students'

education and cognitive development. Relying too much on AI for problem-solving and creative tasks might stunt the development of critical thinking and analytical skills – the cornerstone of higher education. Without experiencing the challenge of critically analysing complex information or creatively solving problems, it is possible that GenAI might lead to a reduction in deep, active learning. Active learning has been shown to improve formal reasoning skills and enhance the ability to generalise knowledge in new situations. Therefore, a reduction in active learning might foster a passive learning style, turning students into consumers rather than creators of knowledge. The core of university education – prompting students to question ideas, think critically, and dive deep into subjects – may be watered down if AI turns into the main way students interact with academic content, and thus the very tools meant to enrich learning could unintentionally stifle the intellectual and creative processes that traditional educational methods aim to nurture.

Nevertheless, GenAI cannot and should not be ignored. Our primary foci must now be to identify where AI has the potential to genuinely enhance learning and to determine

which tasks we should still prioritize for learning – or learning using traditional methods. For instance, is it imperative to learn to code if a machine can perform such functions on our behalf? Is it still important to maintain the ability to spell and write with grammatical precision, or to scour literature to formulate an argument? Our secondary focus must be to integrate this knowledge into our curricula to ensure students get the best possible educational experience and are prepared for the rapidly-changing technological landscape into which they will graduate.

GenAI errors are different from human errors

NAIR CAROLINA MAZZEO

LUCIANA BENOTTI

VÍA LIBRE FOUNDATION

ARGENTINA

GenAI is increasingly used in professional and personal contexts, and it continues to revolutionize various sectors with its different types of uses. GenAI literacy needs to include awareness of the errors that these technologies have; everybody needs to understand the kind of errors that GenAI suffers. In particular, it is essential to know what social biases are embedded in these models, as these social biases replicate stereotypes that can further stigmatize the most vulnerable sectors.

A person can lie intentionally, whereas AI has no intention of lying when it generates false information. These models learn, among other things, by recognizing which words or pixels appear in similar contexts, repetitively, and may consider them synonyms. A language model, which is a type of AI, can generate false information when it uses synonym words that are not synonyms. For example, it may consider that 'John' and 'Peter' are synonyms, because it does not have the tools to interpret that they refer to different people. Raising awareness of the reasons behind mistakes and biases and the ethical implications associated with the generation of content is the beginning of true literacy.

From the ethics team of the Vía Libre Foundation, we have been immersed in the investigation of these failures, as well as in education and communication about these problems in GAI models. We are currently planning professional development courses for high school teachers, who can then transfer the content to their classrooms. Our course is aimed especially at teachers with training in Comprehensive Sexual Education, a method implemented and legislated in the Argentine educational system. Their training provides knowledge about various social biases, and phenomena such as bullying, trolling, cyberbullying and cancel culture.

They are teachers who come with an awareness of these problems and their impact both in the classroom and on social networks. From the team, to complement these processes, we have developed a tool called 'E.D.I.A' (Stereotypes and Discrimination in Artificial Intelligence). EDIA allows, for example, for interactively evaluating the biases in different language models previously loaded on the platform.

Most AI models are aligned with native English speakers from the Northern Hemisphere.

E.D.I.A was created and designed from a Latin

American perspective and was designed and implemented in Spanish. Although there are similar tools in English, Spanish has its structural linguistic differences, for example, in gender. Therefore, this specific approach seeks to avoid the perpetuation of linguistic and cultural biases that are also rooted in their place of origin and language.

Relevant literature resources

An introductory video of the EDIA tool: https://www.youtube.com/watch?v=CJowS8Y5NWI&ab_channel=Fundaci%C3%B3nV%C3%ADaLibre

EDIA Tool: <https://huggingface.co/spaces/vialibre/edia>

Repercussions of the use of EDIA by adolescents in a workshop held in Khipu: <https://www.vialibre.org.ar/menstruacion-salud-y-sexualidad-representaciones-desde-la-inteligencia-artificial/>

The 12 Days of AI

CHRIS ROWELL, DIGITAL LEARNING PRODUCER

UNIVERSITY OF THE ARTS LONDON

UK

What can be done to foster the GenAI literacy of education professionals and/or students?

When ChatGPT 3 was released in November 2022 it immediately sent ripples of interest and unease across education and the HE sector. Whilst many were intrigued by its potential use, the most common response was to focus on its ability to write students' assignments. There were constant reports on how ChatGPT could be used to pass university level assignments and what the response should be to this potential threat to academic integrity. My own institution's first response was to add an extra sentence to the academic misconduct policy explicitly stating that AI tools like ChatGPT should not be used and any student caught using it would be breaking this policy guidance.

This was a very common response and was repeated at many other universities. However, the HE sector quickly moved on and both staff and students wanted to develop their AI literacy skills so that they could understand the implications of using AI in a teaching and learning context. This is why we set up and produced the 12 Days of AI (12DoAI), enabling teaching staff to develop their confidence in dealing with this new challenge and become more AI literate.

The 12DoAI is an online programme, which in 20 minutes a day over 12 days, gets participants using a variety of different AI tools. It was aimed at teaching and learning staff who hadn't used AI before or those that had experimented a little with some AI tools. These are the course objectives:

- How to set up and use 12 AI tools
- How these tools could be used in a teaching and learning context
- Discussions about the potential and limitations of using these AI tools

The 12DoAI course was set up on a WordPress blog and on each day during the 12-day program, a blog post gave details about, a 20 minute task that had to be done using an AI tool, such as writing a prompt, summarising text or creating a video. Each blog post guided the learner through a different AI tool, offering custom tips and suggestions on how it could be applied effectively in an educational context. Once the task was complete participants were invited to answer a series of questions about the activity. The questions were aimed to get some reflection on the task and to critically look at some of the issues related to their use in a classroom setting.

Whilst the course was run as a 'live' event the blog is still available for others to complete asynchronously or adapt for their own institution. The 12DoAI site has now been given a Creative Commons licence so that other institutions can now take the model and adapt it their own institution's needs. This is a free resource that is available to any institution that can be used and adapted for non-commercial purposes, as long as it acknowledges the source and shares the version under the same licence.

Relevant literature resources

12DoAI course: <https://12daysofai.myblog.arts.ac.uk/>

Creative Commons Licence: <https://12daysofai.myblog.arts.ac.uk/creative-commons/>

Critical stance on AI in education

CHRIS ROWELL, DIGITAL LEARNING PRODUCER

UNIVERSITY OF THE ARTS LONDON

UK

The context: One part of the University of the Arts London's (UAL) response to the recent interest in the use of Artificial Intelligence (AI) in education was to set up a series of webinars called 'AI Conversations'. During the series speakers who had a particular interest or specialism in the use of AI in higher education, such as AI and Assessment, How AI is being used by University Students, or AI and the Art School were invited to take part in the series. The webinars took the form of a 20-30 interview followed by 10-15 minutes of questions and comments from the audience. The target audience were staff at UAL but they were open to everyone else who wanted to join. The series was well attended, with over 300 people registering for the weekly webinars and approximately 80-90 attending the live sessions.

Why did I do it?

It is always useful to have recordings of our staff development sessions as they can be shared as links with participants at UAL (and beyond) at a later date. However, these recordings can often be difficult to find as time passes, so I have been searching for a new ways to collate them into one theme or topic. One way of curating these resources has been to create a digital book where all the information can be contained within one easily accessible place.

Two previous examples I have produced have been on 'Presence and Belonging in Digital Education' and 'Experiences Using Educational Video and Audio'. The aim was to do a similar thing and collate the AI Conversations series into a similar digital book. It soon became apparent that such a book could be developed and enhanced using a variety of AI tools.

How I did it: The webinar series was recorded in MS Teams and a full transcript was automatically generated by AI of the interview and the subsequent discussion that followed by the participants in the session. The transcript was then downloaded from Teams and



Claude was used to make a 800 word summary of the whole session (interview and discussion). Claude's summary was then used by ChatGPT to create a 500-blog post, which was initially posted on the blog called 'TotallyRewired' soon after the session. Both DALL-E and Adobe Firefly were used to create accompanying images. Finally, the links to the live recording, AI generated summaries and associated images were assembled as book chapters in the digital book called 'AI Conversations: Critical Conversations about Ai, Art and Education', using the platform called Book Creator.

Conclusion: Using AI tools to generate the text for a book does have its pros and cons. The AI generated summaries did not fully capture the nuanced discussion that took place, but they did provide a good indication of the main points in the sessions. Having one resource, the digital book, where all the resources are collated together (in different formats) has been a useful way of disseminating the information to a much larger audience than those who came to the live sessions.

Relevant literature resources

Rowell, C. (Ed.) (2022). Presence and belonging in digital education. <https://read.bookcreator.com/1XnAu70GzoR2F2qa5J402V54G4Q2/1nZ6n1pWRkqUg0GbfxEeRg>

Rowell, C. (Ed.) (2023). Experiences using educational video and audio. <https://read.bookcreator.com/1XnAu70GzoR2F2qa5J402V54G4Q2/u5Pfba9HQ9yoX-LjNEetGQ/d9WIL4otT1qj3YGeoEgRTg>

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AI reflection

CRISTINA COSTA, ASSOCIATE PROFESSOR

DURHAM UNIVERSITY

UK

How do you define GenAI literacy?

I am going to go with a critical definition. To be GenAI literate is to be able to understand what GenAI is able to produce. Whereas at first sight it produces information, a closer look will unveil a propensity to foster ‘thinking sedentarism’. It is a bit like sweets/candy – they taste good, but when taken in high quantities their side effects are far from beneficial.

And, what can be done to foster the GenAI literacy of education professionals and students?

This is a question that hinges on a moral dilemma regarding how to approach this ‘information machinery’ for the benefit of society and not the self. I am not sure that society is ready to take on a moral stance when it comes to the convenience of information selection that can be passed off as one’s own (original) knowledge. The trick then might be to move away from what Lingard calls pedagogies of indifference. This requires as much a policy effort as it does a curricular/pedagogical one; one that will encourage what hooks describes as engaged practice. The practice of learning then needs to count for/ matter more than an essay or exam. Education needs a full overhaul to tackle this, but I am not sure we are ready.

Both students and staff will need to want to be challenged and will want intellectual growth. Right now, neither has time to do so because we are so engrained in a mentality of time efficiency and productivity that does not fit with the art of thinking. The art of thinking – which is essentially what GenAI is undercutting – demands time, as well as effort and genuine involvement.

In fostering GenAI literacy we need to appeal to people’s moral codes and interest them in the benefits of developing their intellectual capacity for themselves.

Mindful AIwareness

ARAS BOZKURT, RESEARCH AND FACULTY MEMBER, DEPARTMENT OF DISTANCE EDUCATION

ANADOLU UNIVERSITY

TURKEY

How do you define GenAI literacy?

By acknowledging that GenAI is a means rather than an end, GenAI literacy refers to a range of skills and competencies that are crucial for using GenAI ethically and responsibly. This includes a deep understanding of both the strengths and limitations of these tools, ensuring their use aligns with ethical standards and responsible practices.

And, what can be done to foster the GenAI literacy of education professionals and students?

By demonstrating, modeling, and increasing awareness of the ethical and responsible

benefits of GenAI, all stakeholders in education, including learners, instructors, and administrators, can be motivated to integrate GenAI across various areas. It’s crucial to cultivate mindful awareness to empower users, transforming them into active users of GenAI services rather than passive recipients who feed GenAI models with their behavioral, cognitive, and social inputs.

Relevant literature resources

Bozkurt, A. (2023). Generative artificial intelligence (AI) powered conversational educational agents: The inevitable paradigm shift. *Asian Journal of Distance Education*, 18(1), 198-204. <https://doi.org/10.5281/zenodo.7716416>

Bozkurt, A., Xiao, J., Lambert, S., Pazurek, A., Crompton, H., Koseoglu, S., Farrow, R., Bond, M., Nerantzi, C., Honeychurch, S., Bali, M., Dron, J., Mir, K., Stewart, B., Costello, E., Mason, J., Stracke, C. M., Romero-Hall, E., Koutropoulos, A., Toquero, C. M., Singh, L Tlili, A., Lee, K., Nichols, M., Ossiannilsson, E., Brown, M., Irvine, V., Raffaghelli, J. E., Santos-Hermosa, G Farrell, O., Adam, T., Thong, Y. L., Sani-Bozkurt, S., Sharma, R. C., Hrastinski, S., & Jandrić, P. (2023). Speculative futures on ChatGPT and generative artificial intelligence (AI): A collective reflection from the educational landscape. *Asian Journal of Distance Education*, 18(1), 53-130. <https://doi.org/10.5281/zenodo.7636568>

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We don't learn to use GenAI, by reflecting on GenAI

CHRISSI NERANTZI, PROFESSOR IN CREATIVE AND OPEN EDUCATION

UNIVERSITY OF LEEDS

UK

How do you define GenAI literacy?

In the context of education, GenAI literacy for me translates into responsible, critical, and creative use of GenAI that harnesses the opportunities it presents and helps us gain new insights, and expand learning, development and application. It has a positive impact on human activity, our planet and knowledge creation, dissemination, and translation so that we can all benefit. GenAI incorporates critical and creative understanding as well as being a competent and confident user and implementer. It also entails being alert and mindful of the shortcomings, pitfalls, equity issues, dangers, and risks of GenAI and mitigating against these individually and collectively through ongoing exploration and willingness to learn to further deepen and widen our understanding in this area. It is an ongoing process and part of digital literacy.

And, what can be done to foster the GenAI literacy of education professionals and students?

Some educators are fearful about GenAI. Some (many?) students are too. This is mainly because they feel that they may be (wrongly)

accused of using GenAI (Gorichanaz, 2023). This doesn't stop many. They are experimenting. And they may be more active using GenAI than educators are. But there are also educators that experiment with GenAI – the curious pedagogic explorers, the rebels, those that are driven by curiosity and wonder. Experimentation makes it sound like it should be normal in Higher Education, doesn't it?

The reality is that we all need to learn how to use GenAI and become literate in using these tools. Avoiding it for as long as possible may not do us any favours. Becoming GenAI literate is not a spectator sport. It does not happen by just reading about GenAI and hearing how others are using it. While dreaming and speculating about it can be enlightening (Bozkurt et al., 2023) it is not enough. Professional development can help especially when it is practice-based. Some years ago, a research participant in a phenomenographic study said characteristically, we don't learn to play the piano, by reflecting on the piano (Nerantzi, 2017). The same could be said about GenAI.

We don't learn to use GenAI, by reflecting on GenAI.

It is the doing! The experimenting! The experiencing it. Also playing with it. Through that play and experimentation and/or playful experimentation, we will see with our own eyes how it works. We will feel it. We will experience it. Recent research suggests that educators who have started using GenAI appear more positive about GenAI than those who don't use it (McGehee, 2023). Is this finding a surprise when we all know the power of experiential learning? Refusing to engage with something, resisting it and shying away from it because it may be alien or very different from what we know may not be a wise strategy going forward (Nerantzi, 2023).

A tool is often designed with a specific purpose in mind but there is the Swiss army knife of course that has multiple uses designed into it. Human intuition and resourcefulness are magical and lead us to the appropriation of

a tool for purposes the tool wasn't designed for. Our curiosity to explore drives us. Think about the toothbrush and for how many different jobs we can and do use it beyond brushing our teeth - a tool for scattering paint over an artwork, a tool to comb our eyebrows (I have not done this yet!), a tool to clean grout between tiles and so on. Do we experience something similar happening with GenAI applications?

At the heart of education is learning. As educators, modelling learning and actively engaging in learning and experimentation with our students is vital. Let's free ourselves! Let's be open and willing to dare to explore new ways of learning, teaching, and assessment. Let's be open about GenAI. Let's be transparent! Let's focus on creating learning partnerships with our students and work with them to become GenAI literate.

Relevant literature resources

Bozkurt, A., Xiao, J., Lambert, S., Pazurek, A., Crompton, H., Koseoglu, S., Farrow, R., Bond, M., Nerantzi, C., Honeychurch, S., Bali, M., Dron, J., Mir, K., Stewart, B., Costello, E., Mason, J., Stracke, C. M., Romero-Hall, E., Koutropoulos, A., Toquero, C. M., Singh, L. Tlili, A., Lee, K., Nichols, M., Ossiannilsson, E., Brown, M., Irvine, V., Raffaghelli, J. E., Santos-Hermosa, G. Farrell, O., Adam, T., Thong, Y. L., Sani-Bozkurt, S., Sharma, R. C., Hrastinski, S., & Jandrić, P. (2023). Speculative futures on ChatGPT and Generative Artificial Intelligence (AI): A collective reflection from the educational landscape. *Asian Journal of Distance Education*, 18(1), 53-130. <http://www.asianjde.com/ojs/index.php/AsianJDE/article/view/709>

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Metaphorizing concepts in a healthcare course using ChatGPT

HIEU KIEU, STUDY SKILLS LECTURER, THE GLOBAL BANKING SCHOOL

LEEDS CAMPUS

UK

My short position statement on GenAI literacy

My definition of GenAI literacy in the higher education context is the ability to engage in GenAI tools to (1) access and navigate information (from basic to complex information) successfully and (2) analyse, evaluate, and interpret information critically and meaningfully.

I advocate the presence and development of GenAI and its application in higher education. It renews and brings joy our experience in learning, teaching, research and leading individually and collectively. Think about Ron Barnett's question (in his 1998 book), What is higher about higher education? One of his answers is the open-ended relationship between students and knowledge. GenAI helps realise the open-endedness and highness in higher learning with various tools to facilitate our practice especially in our relationship with knowledge.

What can be done to foster the GenAI literacy of education professionals and/or students?

I think there should be a universal and unified policy in GenAI literacy and its presence in classroom and learning institutions. Another point I want to emphasise is that using GenAI should be seen as a right – a right to use it, rather than a permission – to be allowed to use it.

Co-creating in GenAI literacy with education stakeholders

CAMILA GOTTLIEB, ASSISTANT PROFESSOR, EDUCATION CONSULTANT

URUGUAYAN CATHOLIC UNIVERSITY

URUGUAY

GenAI literacy should include competencies of knowledge, production, and critical thinking. It should not be restricted only to tech competencies, trying to turn teachers into engineers, but to try to understand from a holistic perspective the entire GenAI phenomenon: its possibilities and its boundaries.

There should be teachers involved to think critically about GenAI as they use it in their teaching (planning, grading, etc.). It should be an invitation to them to be involved in these discussions – and take part from the inside and from where decisions are being taken.

Even teachers who could be primarily ‘against’ this technology should be part of proposing critical uses so we could create a more GenAI-literacy centered education from within, rather than using what other professionals from outside education (generally techy professionals) propose to us.

Schools and educational systems should co-create their own strategies on GenAI, how they will prepare their teachers and students, the policies embedded into them, and how families handle this topic. It should take all the stakeholders’ perspectives, as it should not be some

prefabricated path that every school should follow.

As with educational technology approaches, there should not be a ‘one-size-fits-all’ strategy for GenAI. Every educational system and school is positioned in different debates and implementations of EdTech. I am not talking about ‘development’ or ‘position’ as if there is a ranking regarding schools or systems that are doing it better than the rest. My thinking about EdTech is that every system should follow what has worked in other contexts and reflect and decide on its own context and possibilities, what it needs, and what should work better for it. In that sense, GenAI literacy should work similarly; schools and the system should be recognised what are the current debates regarding GenAI, asking the students, teachers, but also other stakeholders, such as families, to know what the urgent needs are to design a curriculum that could embrace these needs. The media literacy approaches should be deepened to incorporate new branches: interacting with AI chatbots, ethics, bias, etc. School communities should be refreshed/reminded that these tools should be used to enhance and broaden knowledge, not to restrain it. So, it is

necessary to maintain critical positions while teachers and students are empowered by digital competencies that allow better/informed uses.

Digital well-being should also be incorporated into GenAI literacy, as this is an important aspect to consider, especially for students.

AI literacy

COLIN DE LA HIGUERA, PROFESSOR, HOLDER OF THE UNESCO CHAIR RELIA ON OER AND AI

UNESCO, NANTES UNIVERSITY, RELIA

FRANCE

In the current world in which Artificial Intelligence (AI) is playing an increasingly important role, it is essential to make AI accountable and therefore, through an ethics by design approach, satisfy the needs and hope of the citizens. But even when this is the case, it is justifiable that the same citizens prepare themselves to face AI, to work with AI, to use AI in an efficient and safe way.

This preparation comes through acquiring AI literacy. This literacy is not about learning to use particular tools, which may well be outdated by next year. Nor is it just about ‘knowing about AI’. It is about acquiring a state of mind, understanding some general principles, and being able to use them safely.

AI is backed by a huge industry and is present through tools which are seamless and appear to be based on natural physical paradigms. These can be misleading; it is important to understand what is happening when we are using AI. In many ways, AI literacy is what allows us to separate (AI) science from magic.

AI makes a large use of randomness. This is a key component, but one with which we are often at unease: having different answers when we repeat the experiment? Not being able to trace back a deductive reasoning? Understand-

ing the non-deterministic and stochastic nature of AI is important.

We all agree that critical thinking is an important competence when dealing with AI (which from now onwards could mean ‘most of the time’), but there are not that many solutions to train the future generations to acquiring this capacity. Through observation alone there may be much to see, but observation is rarely enough to understand the full nature of AI, to anticipate the future technologies and usages. Yet one advantage of these technologies is that coding allows to test these issues from both sides: by building fakes and trying to uncover them, by simulating the effects of disinformation as much as.

Interacting with GAI can be rewarding or deceiving. The question of what qualities, competences are needed to profit from this interaction is to be explored, but it would seem that a specific type of empathy – which may be better called ‘theory of mind’ is required. Possibly, this is just part of computational thinking, which has been advocated as an essential skill of the 21st century for some time.

Moreover, AI questions our own connexions not just with technology but with what matters. Why do we learn? What is private? When

can we say a creation is our own? These questions are mostly ethical. These questions – but not necessarily the answers – also belong to AI literacy.

GenAI: Literate educational environments

ELVIA DANIELA CRUZ CORONA, LABORATORIO DE CIBERPSICOLOGÍA, FACULTAD DE PSICOLOGÍA,
UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO, UNAM

PALOMA SUÁREZ BRITO, INSTITUTO PARA EL FUTURO DE LA EDUCACIÓN (IFE),
TECNOLÓGICO DE MONTERREY
MEXICO

How do you define GenAI literacy? And, what can be done to foster the GenAI literacy of education professionals and/or students?

GenAI literacy is the key strategy to access the knowledge of humanity at the service of all people, either from a click or by swiping your fingers on a smartphone. It is giving every individual the opportunity to create, to build and to preserve the human footprint as the essence of innovation. It represents the opportunity to know, do and learn through technology education. GenAI literacy allows for demystifying those aspects that thought to be negatively associated with its use, since a guide on its qualities allows for channeling its purposes as a complement to learning within the teaching processes. GenAI Literacy is also linked to the Sustainable Development Goal 4 Quality Education belonging to the 2030 Agenda proposed in 2015 by the United Nations, since it promotes the achievement of its goals by increasing the coverage of digital literacy worldwide, covering the needs demanded by the new forms of education since the accelerated technological development. This implies breaking with the differential gaps

between different sectors of the population and transcending the frontiers of access to information. It is a way of being at the forefront from any place, at any time and at any moment.

The way to promote GenAI literacy among education professionals is by creating didactic tools that emphasize the relevance of Generative Artificial Intelligence at the middle and higher education levels. A strategic way to provide literacy on the subject in question is to develop Open Educational Resources or audiovisual educational material (videos, infographics, books, manuals, etc.) with open licenses for use on GenAI, its characteristics, ethical guidelines, advantages, disadvantages, uses and more, since from this approach knowledge becomes universally available to teachers and students, ceasing to be only declarative, becoming instrumental to learning and motivating the different academic generations to venture into research at the higher education level. Other ways to make GenAI literate is to disseminate the latest technological advances through open science, together with the institutions providing students with the necessary infrastructure

to apply the knowledge learned, acquire licenses for the latest generation of software and include the basic fundamentals of ethics regarding the use of Artificial Intelligence in the curricula with the joint purpose of avoiding malpractice: plagiarism, copyright infringement or the uncontrolled dissemination of works with authorship. All of the above,

through collaborative and interdisciplinary work teams, where the teacher and the student become guides, will feed back in a cyclical way, but impact all sectors of the population, generating learning that lasts a lifetime, which is meaningful and directed to the resolution of social problems.

Relevant literature resources

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GenAI: Literate educational environments

ELVIA DANIELA CRUZ CORONA, LABORATORIO DE CIBERPSICOLOGÍA, FACULTAD DE PSICOLOGÍA,
UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO, UNAM

PALOMA SUÁREZ BRITO, INSTITUTO PARA EL FUTURO DE LA EDUCACIÓN (IFE),
TECNOLÓGICO DE MONTERREY

MEXICO

¿Cómo define la alfabetización GenAI?

¿qué se puede hacer para fomentar la alfabetización GenAI de los profesionales de la educación y/o de los estudiantes?

La alfabetización GenAI es la estrategia clave para acceder al conocimiento de la humanidad al servicio de todas las personas, ya sea desde un clic o deslizando los dedos en un smartphone. Es brindarle a cada individuo la oportunidad de crear, de construir y de preservar la huella humana como esencia de la innovación. Representa la oportunidad de conocer, hacer y aprender a través de la educación en tecnología. La alfabetización GenAI permite desmitificar aquellos aspectos pensados como negativos asociados a su uso, puesto que una guía sobre sus cualidades permite encauzar sus fines como complemento para el aprendizaje dentro de los procesos de enseñanza. La Alfabetización GenAI se vincula además con el Objetivo de Desarrollo Sostenible 4 Educación de Calidad perteneciente a la Agenda 2030 propuesta en 2015 por las Naciones Unidas, ya que promueve el alcance de sus metas al aumentar la cobertura de la alfabetización digital a

nivel mundial, cubriendo las necesidades que demandan las nuevas formas de educación tras el acelerado desarrollo tecnológico. Lo anterior implica romper con las brechas diferenciales entre los diferentes sectores poblacionales y trascender las fronteras del acceso a la información. Es una forma de estar a la vanguardia desde cualquier sitio, a cualquier hora y en cualquier momento.

Con el fin de poder fomentar la alfabetización GenAI en los profesionales de la educación, hay que crear herramientas didácticas que enfatizan la relevancia de la Inteligencia Artificial Generativa en los niveles de educación medio superior y superior. Una forma estratégica de alfabetizar sobre el tema en cuestión es desarrollar Recursos Educativos Abiertos, o material educativo audiovisual (videos,, infografías, libros, manuales,, etcétera), con, licencias de uso abiertas sobre GenAI, sus características, lineamientos éticos, ventajas, desventajas, usos y más, ya que desde ese enfoque el conocimiento queda al alcance universal de docentes y estudiantes, dejando de ser sólo declarativo, volviéndose aprendizaje instrumental y motivando a

las diferentes generaciones académicas a incursionar en la investigación a nivel superior. Otras formas de alfabetización sobre la GenAI implican difundir los últimos avances tecnológicos a través de ciencia abierta, aunado a que las instituciones proporcionen a los estudiantes la infraestructura necesaria para aplicar los conocimientos aprendidos, adquieran licencias en softwares de última generación e incluyan los fundamentos básicos de la ética sobre el uso de Inteligencia Artificial en los planes de estudio con la

finalidad conjunta de evitar la mala praxis: el plagio, la violación a los derechos de autor o la difusión descontrolada de obras con autoría. Todo lo anterior, mediante equipos de trabajo colaborativos e interdisciplinarios, donde el docente y el estudiante se vuelvan guías retroalimentándose de manera cíclica, pero impactando en todos los sectores de la población, generando aprendizaje que dure para toda la vida, significativo y dirigido a la resolución de problemas sociales.

Relevant literature resources

Baena-Rojas, J. J., Castillo-Martínez, I. M., Méndez-Garduño, J. I., Suárez-Brito, P., & López-Caudana, O. E. (2023). Information communication technologies, Artificial Intelligence, and social robotics: A complex-thinking vector in higher education? *Journal of Social Studies Education Research*, 14(2), 21-50. https://www.researchgate.net/publication/371686749_Information_Communication_Technologies_Artificial_Intelligence_and_Social_Robotics_a_Complex-Thinking_Vector_in_Higher_Education

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All together now

ESPERANZA ROMÁN MENDOZA, PROFESSOR OF SPANISH AND SPANISH LINGUISTICS

GEORGE MASON UNIVERSITY

US

GenAI literacy encompasses a range of competencies, knowledge, and skills that enable individuals to utilize GenAI in creative, critical, ethical, and safe ways. This form of literacy is not confined to a single area; rather, it extends across all domains of life, including the workplace, educational settings, communication, and entertainment, allowing individuals to fully and efficiently participate in society and change it.

However, the rapid evolution of GenAI and the lack of transparency surrounding many major GenAI tool developers make it challenging to establish a comprehensive list of the skills that are covered by GenAI literacy. In my perspective, a critical element of this literacy is curiosity. With GenAI pervading many aspects of life, it is crucial to be willing to stay informed about the latest developments and understand their impact on our work and learning environments. We should continuously question how each GenAI tool might affect our lives, recognizing that this curiosity demands a collaborative approach, which includes our students as integral contributors, especially given the overwhelming surge of new GenAI technologies that have appeared recently. Although it is understandable for companies and research teams to pursue innovation and maintain proprietary

research, excessive secrecy and a lack of transparency can impede the development of robust GenAI literacy. By sharing discoveries, GenAI limitations and concerns, we as educators can not only advance the field but also establish a foundation for GenAI literacy that is fluid, dynamic, critical, flexible, and open; a GenAI literacy that demands a fair and equitable transformation of our society.

Additionally, an essential aspect of GenAI literacy is a healthy dose of skepticism. This doesn't mean disregarding all AI advancements until a few devices and apps dominate the market. Rather, it involves approaching the study and use of GenAI with caution, rigor, integrity, and honesty. As observed with prior technological breakthroughs, many advocates of GenAI have predominantly highlighted its benefits, without adequately considering aspects that could mitigate these advantages, such as the vested interests of companies driving AI technological advancements, which predominantly come from English-speaking countries, thereby reflecting their specific Weltanschauung(en). Currently, GenAI exhibits biases concerning gender, age, ethnicity, and sexual orientation, among others, and is marked by high costs, uneven language representation, and significant environmental concerns. If we as educa-

tors and learners focus solely on the positive effects of GenAI, we will miss the opportunity to use our influence to advocate for GenAI that is fairer, more environmentally sustainable, and genuinely 'intelligent'.

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Embracing GenAI literacy in education: A roadmap for empowerment

FRANCISCO JOSÉ GARCÍA-PEÑALVO, FULL PROFESSOR, COMPUTER SCIENCE DEPARTMENT, RESEARCH INSTITUTE FOR EDUCATIONAL SCIENCES (IUCE)

UNIVERSIDAD DE SALAMANCA

SPAIN

In the dynamically evolving landscape of technology, 2023 was the advent year of Generative Artificial Intelligence (GenAI), standing as a transformative force in numerous fields, including education. GenAI may be defined as producing previously unseen synthetic content in any form and supporting any task through generative modelling [1]. GenAI literacy, therefore, emerges as a pivotal skill set essential for both teachers and students to prepare the population for teaching and learning in an ever-changing world, where the real challenge will not be a fight between humans and AIs, but between humans with AI skills and those without AI skills.

GenAI literacy means understanding and proficiency in using GAI technologies and their ethical implications. It encompasses a spectrum of skills, from the basic comprehension of how these GenAI-based systems function to the advanced ability to critically assess and creatively deploy such technologies in various domains. GenAI literacy involves not only technical knowledge but also an awareness of the societal, ethical, and philosophical ramifications of these technologies.

Improving general AI literacy (including GenAI) is a real challenge for the current policymakers of society and educational institutions [2].

To foster teachers' GenAI literacy, as well as organising training sessions, the following actions, among others, should be considered:

1. Curriculum integration: Integrating GenAI concepts into existing curricula is essential. This does not necessitate the overhaul of current syllabi but rather the inclusion of GenAI elements in relevant subjects.
2. Professional development workshops: Tailored workshops for educators should be a priority. These workshops should equip teachers with the technical know-how and pedagogical strategies to use GenAI literacy effectively. The emphasis should be on practical, hands-on sessions where educators can interact with GenAI tools and explore their applications in teaching and learning.
3. Collaborative learning communities: Establishing learning communities where educators can share experiences, resources, and best practices is vital.

On the other hand, enhancing GenAI literacy among students should be mandatory to avoid misconceptions when using these tools as the new wisdom realm.

1. Critical thinking and ethical reasoning: Encouraging students to critically evaluate the outputs of GenAI and consider the ethical dimensions of AI use is crucial. Classroom discussions, debates, and reflective essays on AI bias, privacy, and intellectual property can cultivate a more nuanced understanding.
2. Active-based learning: Implementing active-based learning strategies where students actively engage with GenAI tools can foster a more profound understanding.

3. Interdisciplinary approaches: GenAI literacy should not be confined to computer science or STEM fields alone. Incorporating AI-related themes in humanities, arts, and social sciences can demonstrate the cross-disciplinary nature of AI and its wide-ranging impacts.

GenAI literacy is not merely about mastering a set of tools; it is about cultivating an informed and critical perspective towards one of the most influential technologies of our era through considering and developing complex thinking competencies [3]. Improving GenAI literacy will build a solid foundation for the responsible and innovative use of AI in our societies. This will empower future generations to navigate and shape the AI-augmented landscapes of their times.

Relevant literature resources

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Reimagining assessment and language education in higher education in an AI-powered era

HUAHUI ZHAO, LECTURER IN LANGUAGE EDUCATION, DEPUTY DIRECTOR OF RESEARCH AND INNOVATION, CROSS-FACULTY ETHICS COMMITTEE SCHOOL ETHICS LEAD, SCHOOL OF EDUCATION

UNIVERSITY OF LEEDS

UK

The release of Large Language Models (LLMs), such as ChatGPT and its human-like responses, has triggered huge debates about how GAI will transform education and professional literacy practice. To embrace the opportunities and challenges AI brings to education, we need a more proactive approach to nurture and assess our students' AI aptitude, encompassing critical thinking, analytical judgement, and creativity. Being AI literate involves competencies that enable individuals to critically evaluate AI technologies; communicate and collaborate effectively with AI; and use AI as a tool (Long & Magerko, 2020).

Assessment is a core of curriculum design and the driver of learning. It can be a medium to reimagine and transform education in response to the impact of AI on education and workplaces. Reimagining assessment design prompts crucial questions:

How will we assess written proficiency in authentic assessments in an increasingly AI-powered world? We liken assessment performance

to building a house, where subject knowledge serves as the bricks and written proficiency acts as the glue. The house's aesthetic appeal hinges on students' adept use of language resources. The refined language found in AI-generated outputs may diminish disparities in language use across individual ChatGPT-assisted writing. Should written proficiency still be a key criterion for academic classification?

How important is it to expand the development of language proficiency to academic literacy in which critical thinking plays a pivotal role? Critical thinking distinguishes human intelligence and artificial intelligence. LLMs cannot reason creatively, comprehend emotions, or exercise moral judgement. To retain human agency and authorial voice, should we explicitly instruct and assess critical thinking to develop an intellectual partnership between humans and artificial intelligence?

How do we address the ethical use of LLMs to promote social justice in authentic assessment? Should Higher Education invest in

providing students with access to ChatGPT to ensure equal access? Without developing our students' AI literacy, will the unsupervised use of GAI discourage students' creativity and integrity, especially for those heavily taxed by a language burden?

As educators, rather than refuting AI as a disruptive technology, we should think about how we can use AI for good social effects. To achieve this, we must cultivate a constructive technological culture (Ellul, 1990) that promotes:

- the acquisition of technological knowledge of using AI for learning and assessment
- the adaptation of students and professionals to the AI-powered technological environment to make them comfortable in it

Relevant literature resources

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- the creation of a psychological mood that is favourable to the technique, and openness to everything about it.

Throughout the history of EdTech, there was frequently insufficient consideration for how educators implemented, and students interacted with such resources (Rudolph et al., 2023, p. 2). Consequently, radical innovation in Higher Education in the wake of EdTech is often exaggerated. To facilitate a cultural shift, rigorous research is essential. Our research journey starts with our recently funded project that explores how GAI shapes the process and product of disciplinary writing and the changed/additional literacy skills needed to retain writer agency.

Note: The position paper was adapted from its original version published in Medium.

Empowering Sociology students to harness the sociological imagination in a digital world: A case study of ChatGPT in the classroom

JACQUELINE MURPHY, LECTURER ABOVE THE BAR, SCHOOL OF POLITICAL SCIENCE AND SOCIOLOGY
UNIVERSITY OF GALWAY
IRELAND

How do you define GenAI literacy?

AI literacy means having cognitive agency in the output brought about by constructivist methods of learning.

And, what can be done to foster the GenAI literacy of education professionals and/or students?

It must be brought about by true engagement with how the tool works and where limits exist.

My position statement

With increased online communication and productivity, our students' learning journey has become more individualized with the use of VLE platforms. Whilst this offers a wealth of advantages in terms of flexibility and asynchronous learning activity, we fear that the messy art of discussion and dialogue for learning has been negatively impacted. We have leveraged the power of digital pedagogy, but without meaningful student engagement, we are concerned that students' metacognition skills are often overlooked and neglected. More importantly,

drawing on the Horizon Education 2023 report, we worry that this also impacts learners' sense of belonging, group identity and connectedness to their course of study. Finally, these new frontiers of learning not only necessitate strong academic integrity but also force a new conversation with our learners about what this means.

Our experience with teaching sociology is that new entrants need scaffolding and support due to their exposure to unfamiliar terminology, vast topics, and complex concepts. As educators, we have recognized the need to create OERs for second-level sociology students, with the idea of 'sociological imagination' forming a threshold concept that also serves as a springboard to empower students inside and outside the classroom. The project's core aim is to engage students and educators in co-creating accessible and interactive learning objects – helping both students and educators in coding and decoding, imagining, and re-imagining current practices in sociology.

There are many skills that a student requires to succeed in higher-level education. Despite our best efforts to be self-reflexive practitioners, we wonder if there are some assumptions that we make about the contents of our students' toolbox, such as the ability to locate and find valid information or the confidence to argue one's position on a new piece of knowledge. These nuts and bolts of social constructivist ideas of knowledge acquisition risk getting overlooked in our classrooms if our practice does not create space for true student engagement.

The quick, accessible access to AI in the classroom allows us to develop learning tools and then engage with their value with a critical eye. We learn to assess the information created for validity, reliability, and clear communication.

The use of the tool promotes active discussion about academic integrity and the robustness of arguments. We can play with the ideas generated and think about how we can mold and shape them into the learning objects we require. I aim through this work to promote active agency in AI literacy so that learners are not consumers of information but active composers of new and exciting learning resources.

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Fostering GenAI literacy to sustain curiosity, criticality and joy

JANET MARIA GORDON, SENIOR LECTURER IN TECHNOLOGY-ENHANCED LEARNING

LONDON METROPOLITAN UNIVERSITY

UK

What do we mean by GenAI literacy? For me, it would be about feeling comfortable and capable when using generative Artificial Intelligence (AI) tools. If our students and educational professionals are confident that they will be able to use the various, evolving AI tools effectively, critically, and positively in their context, imagine what they will be able to create.

If we can inspire creativity and playfulness by sharing relevant examples, by structuring workshops for staff and/or students with care and creating spaces where asking questions, testing boundaries and embracing the unknown are encouraged and celebrated, think how we could spark ideas and unlock knowledge together.

Are the needs of our students so different from those of our educational professionals? Can we collaborate and discover the affordances and limitations of GenAI together? Some educational professionals are already using AI to help them plan sessions or reports, to summarise or review a theme, or to save time. Similarly, students are using AI to structure their approach to an assignment, to assist them with accessing a dense topic and to

save time. What could we learn from each other? The prospect of exploring GenAI as part of teaching and learning, not to mention assessment, across a whole course or programme of study, allowing experimentation and learning from each other's discoveries and mistakes, in a supportive rather than suspicious environment, is an exciting one.

We can design and facilitate activities that move us beyond answering an assignment brief, that allay staff and student fears and discourage the idea of GenAI as a shortcut to THE answer or simply a tool for cheating. We can progress past familiarisation and discussion about the risks, benefits, and application of GenAI. Informed debate about the various concerns we might have and the limitations on advancing knowledge in our subject areas can lead us to thinking more optimistically about the place of GenAI in staff and student career development and future employment.

We can welcome ongoing conversations about possibilities, share what's working, and encourage policy that is constructive and compassionate.

Of course, in exploring the potential of GenAI, we must remain alert to bias, reliability, and ethics, but we can do this while taking advantage of the opportunities to try on different points of view, to have fun, to be curious, wondering What if...? with a smile.

A data feminism approach for ethical development of AI-enabled OER

JAVIERA ATENAS, SENIOR LECTURER IN LEARNING AND TEACHING ENHANCEMENT, SCHOOL OF SOCIAL SCIENCES AND HUMANITIES

UNIVERSITY OF SUFFOLK

UK

How do you define GenAI literacy? And, what can be done to foster the GenAI literacy of education professionals and/or students?

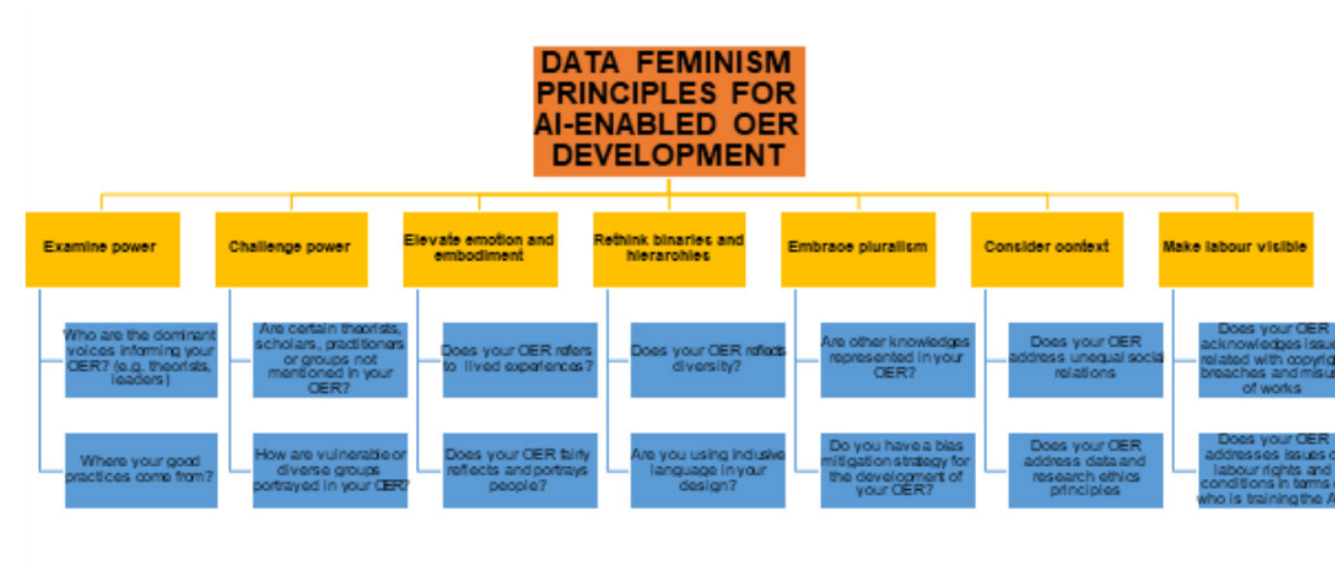
Couldry & Hepp (2018) argue that our reality is to a growing extent being built through data-based processes and automated decision processes and algorithms fostering a datafication model, which is transforming societies and, therefore, education. Critical data and AI literacies refers to the ability to critically analyse, interpret, and evaluate data, enabling people to navigate the data-driven world with discernment and agency, thus developing people's abilities to recognise and challenge power dynamics in the context of datafication and AI, considering that there are many components of critical and AI data literacy, including data ethics and social justice.

AI literacy comprises data, algorithms, and human impact literacy, through a set of skills that enable individuals to critically assess and understand the principles of AI technologies including big data, machine learning processes and algorithms, to be able to effectively use AI in different dimensions, while identifying the

potential harms and risks these technologies convey in terms of the environment and human rights (Atenas et al., 2023).

Thus, we consider that open education practices need to consider the role of critical data and AI literacy; as argued by Brand and Sander (2020, p. 2), educators need to develop the ability to critically engage with datafication by reflecting on the societal implications of data processing and implementing this understanding in practice.

In terms of advancing Open Education principles in the datafied society, the model proposed below aims to provide guidance and recommendations for reflecting on how to develop (or not) AI-enabled OER, through a critical understanding of structural data justice under the lens of data feminism, promoting ideas and opportunities to challenge data-led power dynamics (Heeks & Swain, 2018; Dencik & Sanchez-Monedero, 2022; D'Ignazio & Klein, 2020).



A data feminist approach to guide AI-enabled OER development – Designed by Javiera Atenas, 2024

Relevant literature resources

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A Bergsonian exploration of AI use by students in HE

JESSIE A. BUSTILLOS MORALES, SENIOR LECTURER IN EDUCATION, RE-IMAGINING LEARNING COMMUNITIES RESEARCH GROUP LEAD, COURSE LEADER PGCERT APA, SCHOOL OF LAW AND SOCIAL SCIENCES, EDUCATION DEPARTMENT

LONDON SOUTH BANK UNIVERSITY

UK

order whatsoever. Sheridan et al. (2011) say that time and narrative are: inextricably woven together, in that narrative almost always involves time and requires a temporal component to be meaningful (p. 554).

Understanding how people move through time, make use of time, or relate to time, helps to see how they make sense of their past and navigate their future. This

At a time when Higher Education institutions (HEIs) are grappling with students' AI use in their education, I have found that students' perceptions of time seem to be particularly meaningful for understanding their use of AI and how it shapes their educational experience. I argue that students' use of AI requires us, as educators, to explore time to understand 'the interplay of the temporal and cultural dimensions of social life' (Neale & Flowerdew, 2010, p. 189). In my own practice, HE students have reported how they use AI writing tools, not just around busy assessment periods but every day, in class, and outside of the classroom, even when sitting in a lecture or seminars. Bergson's (2007) notion

of time, as duration, sheds light on the way the everyday experiences of HE students are experienced in education. In contrast to conventional linear time, as in 'clock-time', Bergson's *duree reelle* ('real duration') (2007, p. 32) refers to lived experiences as they happen 'in flow'. Universities tend to construct students' use of AI as mainly relevant to the assessment periods of courses; these worries are compounded by the AI plug-in tool in the now widely used Turnitin software. Against this backdrop, advice around AI use should be designed to encourage students to understand how to disclose the use of, or minimise the use of, AI in the production of their assessments. By doing this, the use of AI in HE education can be dissected into neat sections of students' experiences but as Bergson (2007) argues, real time is indivisible (p. 20). Most undergraduate students who have discussed their use of AI with me, reported a deep sense of impatience, with sessions 'dragging on' and seemingly 'slow paced'. Alternatively, students use AI tools to get quick answers, and fast-forward their learning; this approach is intensified in the HE classroom by the

accessibility of digital devices, either loaned or owned, and the widespread availability of the eduroam internet connection, all of which are typical in classrooms in HE. Whilst HE educational experiences are subject to clearly marked boundaries, facilitated by clock time (such as when to enrol, when to attend classes and exams and when to write assessments) real time is a constant uninterrupted flow of inner life (Bergson, 2007). Sheridan et al. (2011) say that time and narrative are: inextricably woven together, in that narrative almost always involves time and requires a temporal component to be meaningful (p. 554). Understanding how people move through time, make use of time, or relate to time, helps to see how they make sense of their past and navigate their future. This

Whilst school experiences are subject to clearly marked boundaries, facilitated by clock time (such as when to eat and when not eat, or when to play and not to play, or when to talk and when not to talk), real time is a constant uninterrupted flow of inner life (Bergson, 2007). For other research participants, such as the 'gifted and talented' students selected for more special treatment, time at school appeared to 'fly by'. Whilst the constancy of tests and frequent examination dragged for some students in our study, for others school life was 'fast-forwarded', exams approached too quickly, and time seemingly 'slipped

away'. How can these experiences of time as 'dragging on', 'flying by', or 'slipping away' be better understood? In this contribution we turn to the philosophy of Bergson to help make sense of these different experiences of time at school.

Bergson's (2007) method is to focus on intuition, by grasping internal duration, a succession of involvements or activities which is not juxtaposition but 'a growth from within'. Although the intellect breaks down duration into separated moments or positions of 'time', compartmentalising them into a sequence or order, real duration is the uninterrupted prolongation of the past into a present which is already blending into the future (Bergson, 2007, p. 20). Although school life is subject to routine and clock-like measurement and monitoring processes, like the school bell system, that demarcates the beginning and end of subject lessons throughout the day, whereas real *duree* constitutes an experience of school life which situates real life as it is experienced in the moment.

Real time is 'indivisible' (Bergson, 2007, p. 20).

Strategies for GenAI integration

JOHN DESIRE, SENIOR LECTURER IN TECHNOLOGY ENHANCED LEARNING

LONDON METROPOLITAN UNIVERSITY

UK

How do you define GenAI literacy?

GenAI literacy refers to the understanding and skills related to GAI. While the term GenAI literacy is loosely used in some papers, no final definition exists yet. However, it's generally agreed that GenAI literacy includes a set of essential abilities that enable individuals to use those tools ethically and efficiently to work, learn, and thrive within higher education settings.

What can be done to foster the GenAI literacy of education professionals and/or students?

I believe that to be able to foster GenAI literacy, GenAI education should be accessible to all students, irrespective of their background or field of study. This inclusive approach to learning will guarantee that everyone has the opportunity to gain experience and benefit from GenAI. By implementing policies and strategies at a curriculum level, we can prepare both educators and students with the necessary skills and knowledge to navigate the evolving GenAI landscape. This will not only improve technological proficiency but will also allow us to adapt to future opportunities and challenges in the digital era.

Promoting GenAI literacy among educators and students is a complex task that

necessitates a holistic strategy. A key initial step involves incorporating GenAI principles into educational curricula at various stages, from providing a fundamental understanding in primary education to exploring more intricate applications in higher education.

It is very important to understand that Ethics education is a fundamental component of GenAI literacy. It is crucial to incorporate discussions on GenAI's ethical usage into the learning process. Students and staff should be aware of potential misuse and the significance of privacy and security in using GenAI for research.

It is also essential to ensure the availability of necessary resources, such as GenAI tools and literature, for both teachers and students. It is necessary to have access to materials to investigate and learn about GenAI.

I believe that the important areas to address whilst developing a digital GenAI strategy are:

1. **Curriculum Integration:** Incorporate GenAI concepts into the curriculum at various levels of education. This could range from a basic understanding in primary education to more complex applications in higher education.

2. **Professional Development:** Provide training programs for educators to understand GenAI, and its uses, and ethical implications. This will enable them to effectively teach and guide students.

3. **Hands-on Experience:** Encourage practical applications of GenAI through projects and assignments. This will help students understand the technology's capabilities and limitations.

4. **Ethics Education:** Include discussions on the ethical use of GenAI. Understanding potential misuse and the importance of privacy and security is crucial.

5. **Resource Availability:** Ensure access to the necessary resources, such as GenAI tools and literature, for both educators and students.

6. **Collaboration:** Foster collaborations between educational institutions, tech companies, and policymakers to stay updated on GenAI advancements and regulations.

7. **Inclusive Learning:** Make GenAI education accessible to all students, regardless of their background or field of study.

By implementing these strategies, we can equip both educators and students with the necessary skills and knowledge to navigate the evolving landscape of GenAI. This will not only enhance their technological proficiency but also prepare them for future opportunities and challenges in this digital age.

GenAI literacy 101: Don't believe the hype

LEO HAVEMANN, PROGRAMME DEVELOPMENT ADVISOR, DOCTORAL RESEARCHER, CODE FELLOW

UNIVERSITY COLLEGE LONDON, THE OPEN UNIVERSITY, UNIVERSITY OF LONDON

UK

Most of us probably felt we had already consumed a lifetime's supply of technology hype even before we started hearing about GAI. Powered by OpenAI's ChatGPT, the new hype wave was so potent it demolished previously sturdy scepticism barriers across higher education and beyond. We 'learned' that if AI was currently quite fallible, it was soon-to-be infallible. It would be a step change in technology and society of an order of magnitude so much greater than anything we had seen before, that we couldn't even begin to understand how it might someday harm us, or how we should regulate it at this time. But also, it might become so intelligent that it will realise that humans should be eliminated for the greater good of -well, not humanity! It will certainly eliminate the need for human workers, except of course from the sorts of jobs many humans would actually quite like to be freed from.

And it seemed that education would be ground zero for all this exciting change. AI would write better assignments than students could themselves, so academics would need to employ AI-detecting AIs to catch them, and also marking-AIs to mark the remaining assignments that had gone undetected.

What forms of literacy are therefore needed by our colleagues and students? Styling themselves as seeing through the hype, the 'sensible people' of higher education have proposed that while these AI futures are hoped to be fiction, we must nonetheless engage meaningfully with AI, as it will inexorably become integrated into all that we do; learning and assessment activities should therefore make use of AI in order for students to become more familiar with generating and evaluating outputs.

This position appears to have cut through the hype clutter, but perhaps there is still more to unpack. The term 'artificial intelligence' itself recalls a core trope within science fiction that asks us to consider the existence of beings that can think for themselves, and therefore the dilemma of whether such entities are alive and entitled to human rights; a situation entirely unlike the large language models we are presented with today, which cannot actually 'think', 'learn', 'know' or 'hallucinate' although we are encouraged to imagine so. Also, as it has become impossible to raise interest (or funding) in new technology unless it is 'AI', the term is also being used to describe a much wider range of tools and services than just LLMs.

It suits Silicon Valley to pretend that there has been no history prior to the current shock of the new. But contrary to the idea that these technologies are unfathomable, they must be seen in the context of the intensifying datafication and automation that was always already in progress. AI, generally speaking, refers to applications which make use of data in order to automate tasks. Therefore, the work which has been done in the area of critical data literacy is of paramount importance to the development of AI literacy.

Critical AI literacy

MAHA BALI, PROFESSOR OF PRACTICE, CENTER FOR LEARNING AND TEACHING

AMERICAN UNIVERSITY IN CAIRO

EGYPT

How do you define GenAI literacy? And, what can be done to foster the GenAI literacy of education professionals and students?

Let's focus on critical AI literacy, with an emphasis on critical. As I said in Bali (2023), critical refers to questioning and skepticism about hyperbolic claims, and also refers to emphasizing social justice when critiquing GAI or any technology. We need to critique GAI's potential (see the AI Hype Wall of Shame), critique injustice or ethical issues in its processes or outputs, and critique its potential impact, while also being aware of the ways it can empower young people and professionals.

To have Critical AI Literacy in my view entails covering different dimensions as I have been presenting in multiple presentations. Figure 1 below includes all the dimensions, which I



describe in more detail underneath.

1. Understanding how it works. I usually use the QuickDraw game to explain how machine learning works. It uses pattern recognition, but the quick game helps explain the concept. One can also use metaphors (see Gupta et al, forthcoming) to explore different ways of understanding how it works, as well as misconceptions. It is useful to know the nuances of the differences between different models and types of GAI. You can also use free tutorials such as this one.
2. Having an awareness of the biases the models themselves perpetuate and the inequalities the platforms may exacerbate. Bias: Whose knowledge is dominant in AI models? Inequalities: are some people disadvantaged by insufficient access to these platforms or a lack of digital literacies to use them well? (See Safiya Noble's work, Joy Buolamwini's work).
3. Having an awareness of ethical issues. Aside from biases and inequalities, there is harm that has been and is caused in the process of creating some of these models, both in terms of harm to human labor (Kenyan workers, see Time magazine

article) and damage to the environment (climate, water). There is also potentially harm in terms of future employment, and issues of copyright violation - those whose content has been used to train AI models without their consent, and the kind of information GenAI produces without citing sources. (See Leon Furze's work; Ben Williamson's work).

4. Prompt Engineering. Know how to write prompts (sometimes in sequence) in order to get better quality results from GenAI. Many free courses and videos exist on this, and will be updated as platforms improve and new ones are developed.

5. When, why, where it helps to use it. This requires an awareness of the tendency to hallucinate (see the Hannigan et al.'s Botshit article & Shah and Bender's article on information access), and an awareness of one's own level of expertise to verify the quality and truthfulness of the output (Aleksandr Tiulkanov, 2023 in the UNESCO Quickstart document). It also requires an awareness of the kind of task that can be done well with AI, and the kind of task that requires special, nuanced human attention and care.

Relevant literature resources

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Learn with AI Toolkit. <https://umaine.edu/learnwithai>

TextGenEd. <https://wac.colostate.edu/repository/collections/textgened/>

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Prompting engineering or AI literacy?: Developing a critical AI literacy on HE lecturers

MARI CRUZ GARCÍA VALLEJO, DIGITAL EDUCATION CONSULTANT

ULPCG AND, HERIOT-WATT UNIVERSITY

SPAIN/UK

How do you define GenAI literacy?

GenAI literacy is defined here as the critical awareness of the potentiality (understood in the Aristotelian sense of what is latent but has capacity for growth and fulfilment), limitations, and social and ethical challenges that the use of GAI models brings to society. In the context of secondary education, AI literacy can be described as an umbrella term that comprises a higher set of competences and skills, such as:

- critical and creative thinking,
 - problem formulation,
 - reading, writing, and researching,
- as well as digital capacities such as
- information literacy,
 - data literacy,
 - digital proficiency and productivity
 - that are required to learn, teach and work in the era of AI.

And, what can be done to foster the GenAI literacy of education professionals and/or students?

Education professionals must be AI literate first to help students develop their AI literacy skills. It is, therefore, paramount that development programmes aimed at enhancing the teaching practice of lecturers and professional staff supporting learning (programmes such as PGCAP and the PGCHE in the UK) develop a critical awareness of the following key areas:

- The regulatory frameworks, national and transnational, that protect citizens against the misuse of AI; this also includes an awareness of the implications of data protection legislation for the new AI regulation.
- The moral and philosophical guidelines to promote an ethical use of AI in education; this also involves bringing the principles of compassion and ágape to AI ethics, as those principles are currently missing in the debate around AI literacy in Higher Education.

- The reconceptualization of copyright, authorship and plagiarism for an intellectual product or work that has received contributions from a GenAI model.
- The definition of a new 'AI pedagogy', or the reconceptualization of the existing pedagogies, to use GAI to enhance learning. The term AI pedagogy can be understood as fostering critical conversations between educators and students to clarify new roles, pedagogical approaches and paradigms of assessment and collaboration that can facilitate bringing the GenAI models to the classroom, whether this classroom is on campus or virtual.

Relevant literature resources

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How to be AI literate in an ever-changing landscape?

MARY JACOB, LECTURER IN LEARNING AND TEACHING, COORDINATOR OF THE POSTGRADUATE CERTIFICATE IN TEACHING IN HIGHER EDUCATION (PGCTHE), COORDINATOR OF THE GEN AI WORKING GROUP

ABERYSTWYTH UNIVERSITY

UK

The landscape of Gen AI in higher education has been in a continuous state of change since the release of ChatGPT in November 2022. AI is becoming more and more deeply embedded in the tools we already use such as Microsoft products, Google, Meta etc. At the same time, new tools and functions are constantly emerging.

How can educators support students in developing AI literacy while the field is in this state of flux?

Both staff and students need AI literacy. Rather than providing details for specific tools, the Gen AI Working Group at Aberystwyth University believes it is more effective to consider key underlying principles. In this way, the guidance will remain applicable as the tools to evolve.

The first principle is to empower users to make an informed choice. This entails understanding how the tools work, their strengths and weaknesses, data protection issues (e.g., not putting personal information into a chatbot), reliability of the platform, and equity.

The second is to critique the output. Gen AI often produces falsehoods intermixed with truth. Is the output factually true? Is it biased? What information is missing? Is it overly generic for the intended purpose? Including fact-checking, does using AI save time or not? A key message for students is to put the learning process first. Instead of relying on AI as a replacement for learning, we encourage students to critique and improve on the output.

The third is to use AI ethically. Considering academic integrity, we recommend that students check with their tutors to find out what is acceptable and then be transparent about AI use in their coursework.

In 2023, the Working Group including representation from the Student Union collaborated with colleagues to create guidance and training for both staff and students, with further developments planned for 2024.

Relevant literature resources

Weekly Resource Roundup – includes a section on recent resources on Gen AI: <https://wordpress.aber.ac.uk/e-learning/category/weekly-resource-roundup/>

GAI Working Group with guidance for staff: <https://www.aber.ac.uk/en/lteu/teaching/teaching-cpd-workshops/#generative-ai>

Utilising AI in the Library: A Student's Guide: AI and your studies with guidance for students: <https://libguides.aber.ac.uk/c.php?g=709832&p=5153214>

Faculty development: A poem

NATHALIE TASLER, SENIOR LECTURER ACADEMIC AND DIGITAL DEVELOPMENT, ACADEMIC SERVICES

UNIVERSITY OF GLASGOW

UK

ALL THE SELVES BROUGHT TO THE ROLE

What is your biggest hurdle right now? Coach.
Here are some ways to approach this. Mentor.

These are models for overcoming hurdles.
Teacher.

Let's identify the most effective one for you.
Facilitator.

You jumped that hurdle, well. Next time con-
sider... Marker.

136.000 emails. 25 Moodle updates. 7
spreadsheets. Administrator.

*The plight of academic development. An inside
perspective. Scholar.*

*Evidence of effective facilitation, we asked
faculty. Researcher.*

I need a rant. She sighed and took a long sip of
her coffee. Friend.

Do you think this email is okay to go out? Col-
league.

They have two publications more than me!
Competition.

Do you want to write a paper together? Col-
laborator.

The buzz from the meeting slowed. We have a
plan. Ideas generator.

Thank you so much! That was really useful.
Solution finder.

Would you like to join this working group?
Problem solver.

Could I use your toolkit in my teaching? Crea-
tor.

Oops. Risk taker.

This never occurred to me! Amazing! Pioneer.

We have a problem. Challenger.

What can we do? Questioner.

Well not all the selves but a good chunk of them!

Relevant literature resources

<https://acdevadventures.blog/2024/01/20/faculty-development-a-poem/>

The five aspects of GenAI literacies

PRISCILA GONSALES, EDUCADIGITAL

UNIVERSIDADE DE CAMPINAS AND CENTRE FOR SOCIODIGITAL FUTURES

BRAZIL

How do you define GenAI literacy?

I would say GenAI literacies, using the plural, because there are many different types of GenAI. Mapping from the Stanford University shows that there are nearly 16,000 text generating models that have been developed and each of these models has specific functionalities. However, there are some five common aspects that should be considered. The first one is related to 'how' these models work; they are based on content (text, code, image, video etc.) that already exists and this content is known worldwide as 'bigdata', which can only be extracted through advanced statistical data extraction techniques. Data is today's main economic asset. Furthermore, to ensure the accuracy of these models, underpaid human labor has been used, especially from countries in the Global South – it would be the second aspect.

The third aspect is, considering these models based on past data, the data probably includes biases (race, gender, ethnic identity, income etc.), so GenAI literacies should avoid unconsciously absorbing the automated biases from GenAI, that is, people need to develop

critical thinking to read or evaluate the results of a GenAI tool.

The fourth aspect is usually seen as harmless, but it is not. There has been a growing human connotation to the machine, the anthropomorphization of AI, since it makes no sense because AI is not human. Human-related terms such as 'think', 'talk', 'write' or 'hallucinate' cause a misunderstanding because they help reinforce the idea that AI can be a 'partner' or improve human relations when it is just a machine with the capacity to correlate what has already been created by humans and provide predictions.

And, the fifth point is related to environmental, political and economic impacts on society. The development of GenAI requires large volumes of investment, something that is currently restricted to a few giant US and Chinese companies. GenAI training also uses large volumes of water and energy and emits carbon dioxide into the atmosphere. Therefore, GenAI literacies mean realising that AI is not creating new ideas, but rather transforming previous ideas created by humans into data. GenAI literacies also mean taking into account

the following questions: ‘how does the machine work?’, ‘who is behind the machine?’, ‘what are the ethical, social, political, economic and environmental impacts of the machine?’ and, no less important, ‘what human skills are we replacing with machines and what will the consequences of this be for our own human development in the future?’

And, what can be done to foster the GenAI literacy of education professionals and students?

Firstly, it is essential to train public education managers on how to better understand the new context of the digital society, in how the data-driven economy is now a fundamental asset. As it is usually the education managers who

decide the type of professional development the educators or institution’s teachers should receive, they must be aware of the problem. What has been happening today, unfortunately, are asymmetrical agreements between governments and educational systems with technology companies to simply teach educators how to use private and proprietary tools instead of providing in-depth training on the contemporary digital context and its impacts.

intelligence-and-education

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Educação em um cenário de plataformização e de economia dos dados: problemas e conceitos. <https://cgi.br/publicacao/educacao-em-um-cenario-de-plataformizacao-e-de-economia-dos-dados-problemas-e-conceitos/>

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The GenAI Gestalt

ROBERT FARROW, SENIOR RESEARCH FELLOW, INSTITUTE OF EDUCATIONAL TECHNOLOGY

THE OPEN UNIVERSITY

UK

How do you define GenAI literacy?

I would define GenAI literacy as an understanding of the theory and operation of GAI models including large learning models (LLM) and generative pre-trained transistors. On the theoretical side I would include the way that models are constructed and trained on specific materials that form the basis for the mining and reorganisation of different content parameters. Understanding how algorithms work is essential for appreciating how issues of bias might arise, or how errors could emerge in outputs. I'd add to this an appreciation of the wider socio-technical context for using GenAI. This includes the very high resource cost and environmental impact of AI technologies, which are typically hidden from the user. Similarly, the humans who train and moderate GenAI are typically unacknowledged, and many of them are exposed to objectionable content and are economically exploited. The operational side of GenAI doesn't require any knowledge of these dimensions, but they are essential for a meaningful ethics of GenAI. (There are also ethical issues around respect for creation, copyright, and attribution.) Operationally, much GenAI literacy at present can be reduced to prompt engineering, but it should be noted that this should be accompanied by an awareness

of the tasks that GenAI is suited to and where the results it offers require interrogation and testing before they can be trusted.

And, what can be done to foster the GenAI literacy of education professionals and students?

I believe greater transparency and openness in GenAI systems would improve GenAI literacy. At present, it can seem like a 'magical' process, but this can be disenchanting by explaining how neural networks operate and through greater philosophical nuance on the idea of 'intelligence' and how it is constituted. The ease of use and facilitation of creativity are sufficient to drive interest in these technologies and so many will develop effective skills in their operation. However, this should be complemented by the wider socio-technical aspects mentioned above.

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Creative GenAI literacy for learning

SANDRA ABEGGLEN, RESEARCHER

UNIVERSITY OF CALGARY

CANADA

A poem on GenAI Literacy created with the help of ChatGPT 3.5, based on the two question prompts provided:

What do we mean by GenAI literacy? And, what can be done to foster the GenAI literacy of education professionals and/or students?

In halls of higher learning, minds ignite,
Fostering wisdom, guiding light.
GAI, a beacon to explore,
Faculty and students, open the door.
Together we delve, with eager hearts,
Unraveling mysteries, where knowledge starts.
In classrooms vibrant, innovation thrives,
Where GenAI empowers, our intellects thrive.
With curiosity as our constant guide,
We journey forth, side by side.
Empowering minds, igniting the flame,
In the pursuit of learning, we stake our claim.
So let us embrace this digital dawn,
Where possibilities sparkle, and limits are gone.
For in the realm of GenAI's embrace,
We craft the future, with wisdom and grace.

The concept of self by an AI

MARIANA V. HERRERA

INSTITUTO DE INVESTIGACIONES FILOSÓFICAS UNAM

PALOMA SUÁREZ BRITO

INSTITUTE FOR THE FUTURE OF EDUCATION, TECNOLÓGICO DE MONTERREY

MEXICO

How do you define GenAI literacy?

We consider that Gen AI Literacy can be understood as the ability to use the new AI generative technology with competence and knowledge of its benefits and improvements in daily life activities.

And, what can be done to foster the GenAI literacy of education professionals and/or students?

We think that one of the best options is to foster curiosity, and by that, an interest in GenAI literacy by offering crash courses at universities and research institutes given by professionals with very specific and defined goals. The key element for these courses has to be publicity. We think that the publicity for each course should be the main benefit to teach and foster further interest in how to seize all the improvements in daily educational activities that generative artificial intelligence has to offer in this field. An example could be an advertisement that says something like: Have to make a presentation for your class? Learn how

to do it in less than 60 seconds. We emphasize that the focus has to be on the main benefit of each tool to attract a bigger audience because we have observed that in many cases people get overwhelmed with the sole mention of artificial intelligence, let alone with the generative addition.

Against defining AI literacy

RICHARD DE BLACQUIÈRE-CLARKSON, ACADEMIC DEVELOPMENT CONSULTANT, RESEARCH FELLOW

UNIVERSITY OF LEEDS

UK

Definitions are nice; they're clear and unambiguous. Foundational. Comforting too, in a way – we can refer back to them to help resolve misunderstandings and disagreements. They help build and maintain shared understanding. But chasing definitions isn't productive in every case, and there are good reasons to think that AI literacy is one of them.

When something is determinate and measurable – a triangle, say – definitions are absolutely a great way to ensure we're all on the same page. But how much ink has been spilt, and for how long, trying to define more slippery concepts which are neither determinate nor easily measurable, without anything resembling consensus. We still need a shared understanding of these concepts, but where consensus is elusive – and especially where the phenomena in question change over time – a definition is unlikely to be the most effective approach. In the context of education, concepts like learning and inclusion fall squarely into this category.

AI literacy (or literacies plural, as there may very well be more than one), for all its mathematical and computational associations, is more like the latter than the former. As is the case for all literacies, it is a set of connected practices, attitudes and

values that are broadly connected but open to dispute and, importantly, are constantly changing. There is a level at which we can specify AI literacy which might plausibly endure – in terms of things like criticality and an understanding of fundamental concepts – but are we really advancing our shared understanding by specifying one term of art through multiple others?

AI is a catch-all term that indicates a loosely aligned but highly diverse field. A shed containing a wide variety of tools, some of which are radically different to others but all of which bear some similarity to at least one other item in the same shed. AI literacy, then, is better characterised as knowing where the shed is, what kinds of tools are currently inside, and how they might be used, rather than trying to pin down exactly what characteristic(s) of the tools unify them. It may be that there is simply no such characteristic(s); they resemble each other in the ways that an extended family do, through overlapping similarities that unify them only loosely.

Even a broad characteristic, rather than definition, of AI literacy carries loaded assumptions. Artificial intelligence implies a dichotomy with natural intelligence; is it at all plausible that the relationship between

cognitive (pseudo-cognitive, psychological, mental, personal, sub-personal... choose your poison) activities of humans, animals and machines is so straightforward?

Let's say we do arrive at a definition of AI that seems more than adequate for the time being – suitably precise, somewhat flexible, widely assented to. How long before it needs wholesale revision? AI has changed radically in recent decades, not simply in its sophistication but in its approach. And what about all the cognate concepts that would also need agreement on? AI skills, competences, capabilities etc? What are their definitions, and how are they all related? Intractable questions that are not devoid of interest. In the meantime AI marches on, widening the range of possibilities available to the world at large – and wealthy corporations and individuals in particular – for better and worse.

Sometimes meaning lies primarily in use, and AI literacy is a strong candidate for being one of those times. In building a shared understanding of these sophisticated, powerful and sometimes alarming tools there's space for a definition but we'll achieve a lot more – and a lot faster – through using them and talking about what we find out in the process.

Educating for optimal using GenAI in society

ROBERT SCHUWER, INDEPENDENT ADVISOR AND RESEARCHER OER, ADJUNCT PROFESSOR

OER CONSULTANCY AND UNIVERSITY OF NOVA GORICA

NETHERLANDS/SLOVENIA

What is GenAI literacy?

GenAI literacy is the ability to use GenAI tools in a responsible way. This requires knowledge of the ethical issues and about the capabilities and limitations of these tools.

What can be done to foster the GenAI literacy of education professionals and students?

The required knowledge and skills should be taught at the earliest possible stage of basic education, preferably as early as K-12. These topics could best be integrated in courses like digital or informational literacy. Suggestions are to create critical thinking exercises about the impact of GenAI on society and ethical issues, and also to enhance skills in using these tools, and create projects where students use them to research, create content (and share them under an open license), or solve problems.

Relevant literature resources

Miao, F., & Holmes, W. (2023). Guidance for GAI in education and research. UNESCO, Paris. <https://unesdoc.unesco.org/ark:/48223/pf0000386693>

UNESCO (2023, December 04). AI competency frameworks for school students and teachers. UNESCO. <https://www.unesco.org/en/digital-education/ai-future-learning/competency-frameworks>

Position statement around GenAI literacy

DENIS SHATALOV, STUDENT OF MASTER'S PROGRAM

UNIVERSITY OF NOVA GORICA

SLOVENIA

How do I define GenAI literacy?

It is roughly the same as what comprises the concept of driving literacy – basic knowledge of how a combustion engine and drive shaft work. First aid is vital. Lots of practice is needed for acting in real-life situations; I mean, not just prompting heuristics, but also some basics about how language models work. One need to be able, if not to create models from scratch, at least to adjust or select appropriate ones. A clear understanding is needed of hazards, limits, and responsibilities.

As for me, what can be done to foster the GenAI literacy of education professionals and students?

Something like driver training, which is certified and cannot be below a certain level. But that will happen when everyone has to drive to get from home to work.

Relevant literature resources

Perplexity.io. <http://perplexity.io/>

Fortunately, it's possible to ignore GenAI for now. I do this. I have only tried the free version of perplexity.io and was not happy. It doesn't give the necessary texture and detail, and the answers are often blurred. You say it needs fine-tuning, but in this case it's easier to write the text yourself.

Never mind the quality feel the width: The case for real writing

SANDRA SINFIELD, ASSOCIATE TEACHING PROFESSOR

TOM BURNS, ASSOCIATE TEACHING PROFESSOR

LONDON METROPOLITAN UNIVERSITY

UK

How do you define GenAI literacy and what are the issues in your context?

GenAI literacy is emergent and evolving. True GenAI literacy will be nuanced and sophisticated – allowing us to (still) write to learn rather than ‘write up’ the right answer. The issue is that GenAI seems to reinforce the notion that writing is all about the end product – rather than writing as an emergent process – messy, embodied, and enculturated. We argue that writing should not be primarily conceptualised as an assessment tool, but as a learning and processing one: developing engagement – understanding – metacognition. It creates space for us to think – to get it wrong – to experiment – to accept or reject our own tentative thoughts. Writing in exploratory ways allows us to work through ideas in the writing itself, over time. Good writing moments create space for unknowing, uncertainty and becoming; for the ineffable and troublesome. Conversely GenAI suggests that the world, education and ‘the answers’ are instantly knowable – a click away; and to engage in the slow processes we have outlined would brand you a fool.

And, what can be done to foster the GenAI literacy of education professionals and/or students?

Just as we challenge the unequal power relations of HE and the privileged forms and processes that subjugate learners, so we challenge GenAI for potentially disempowering students by hiding the power of ‘real writing’. Typically in academia writing is seen as an integral part of the assessment of learning. Essays and Reports and other written forms are set for students to undertake to show what they know. Ironically, given how important academic writing is, most university staff are not taught how to develop it in themselves or their students. Somehow the complex thing that is academic writing is presented to students as unproblematic: it is neither introduced, nor scaffolded nor developed as part of a raft of thinking processes. The pressure involved in being assessed in this most esteemed of academic forms, rather nurturing creativity and a playing with ideas, pushes students to painful, unconfident, one-draft writing – or to GenAI.

What we are concerned about is generating active learning literacy in staff and students. Thus, whilst GenAI can be used to ‘project plan’, manage time effectively, and offer alternative perspectives and viewpoints; first we would get students to experience in embodied ways the power of ‘real writing’: writing as thinking through ideas, writing before they know the answers, whilst still wrestling with the questions, as part of living with uncertainty. Where GenAI can be harnessed for exploration – for dialogue and discussion – for thinking through and testing out ideas... then a GenAI literacy might emerge; one that can work alongside ‘real writing’ and where students engage with agency, ownership and even joy.

Relevant literature resources

Abegglen, S., Burns, T. & Sinfield, S. (2022). Supporting student writing and other modes of learning and assessment. A staff guide. PRISM. <https://prism.ucalgary.ca/items/0c06ff1e-a2d3-4225-b2b3-3ff9b98910bb>

Abegglen, S., Burns, T. & Sinfield, S. (2023). Developing student writing: Writing to learn (a free online course for staff). OneHE. <https://onehe.org/courses/developing-student-writing-write-to-learn/>

GenAI literacy: Mastering an unspoken code

STEFANOS ALIFIERAKIS

UNIVERSITY OF EDINBURGH

MARIA PAVLOPOULOU

UNIVERSITY OF LEEDS

SCOTLAND/UK

A metaphoric parallelism sparked in our minds in the attempt to define the term ‘GenAI literacy’. Becoming GenAI literate is like being able to understand and speak a complicated and secret language, but also taking into account how and when to speak it. According to Long & Magerko (2020), AI literacy is a set of competencies that enables individuals to critically evaluate AI technologies, communicate and collaborate effectively with AI, and use AI as a tool online, at home, and in the workplace. This necessary skillset is important to understand the limitations and risks of GenAI, leverage its opportunities and, finally, form and respect guidelines about its proper use.

However, the main question is how can we as educators obtain these skills and also guide our students to become GenAI literate? Discussing this topic with the ‘main suspect’, i.e. the GenAI tool ChatGPT-3.5, we were particularly intrigued by its answers and decided to further reflect on them. As both educators and lifetime learners, we believe that all educational institutions should above all embrace experimentation as a method

of familiarising themselves with GenAI. It is worth mentioning that making mistakes when experimenting is ‘part of the game’, as Thomas & Seely Brown (2011) implicitly claim. For that reason, various universities worldwide are gradually trying out integrating GenAI-relevant modules or courses, in which educators and students explore GenAI’s potential (i.e., how they can receive more efficient outcomes from GenAI, for which tasks it may be useful etc.). Moreover, collaboration is also crucial, which indeed is the basis behind the composition of the open crowdsourced collections by the #creativeHE community.

In these, GenAI practitioners from diverse backgrounds have shared their experiences with GenAI in hands-on projects. This attempt, which is based on an active form of learning (PBL), highlights the importance of taking initiatives as a GenAI user (Chen et al., 2023). However, after the experimentation is finished, an important amount of time should be invested in a critical reflection on the use of GenAI. Inclusive and open discussions will enable us all to consider the ethical implications of the use of GenAI, so that we

all be careful but not biased and, above all, mindful and responsible when we interact with it.

Relevant literature resources

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Thomas, D. & Seely Brown, J. (2011). A new culture of learning. Cultivating the imagination for a world of constant change. CreateSpace Independent Publishing Platform.

The (engineering) profession must consider human factors

TIMOTHY D. DRYSDALE, CHAIR OF TECHNOLOGY ENHANCED SCIENCE EDUCATION AND DIRECTOR OF STRATEGIC DIGITAL EDUCATION, SCHOOL OF ENGINEERING

UNIVERSITY OF EDINBURGH

UK

How do you define GenAI literacy?

GenAI literacy for professions, such as engineering, must include human factors. GenAI engineering tools will likely be able to turn text specifications into production-ready designs, replacing much of the existing work of human engineers [1]. Yet focusing only on the technical capabilities and limitations of these tools would overlook an important change in how engineering is conducted, with long-term consequences for us all. Engineering is ultimately a human endeavour that entangles considerations of time, money, people and context together with technical solutions. Most of the entanglements act to increase risk. For example, time pressure, limited budgets, mismatched incentives, and conflicting requirements all influence the choice of technical solution. When the technical solution is well known, discussions are better informed and long-term risks tend to be better managed. More usually a novel solution is needed for competitive reasons, so the long term risks tend to be imperfectly understood and hard to weigh against the more concrete short-term benefits. When the risks

are incorrectly discounted, the tragedy may not strike for decades. How do we, as a society, reduce the risk? First, we can hold humans and organisations legally accountable with the threat of real consequences to liberty and finances. That's the ambulance at the bottom of the hill. Second, there's the fence at the top of the hill: the human interactions through professional societies that instil ethics and a code of conduct intended to address these issues [2]. While we may not necessarily fully understand the complete social dynamics of professional practice, it is known that the maintenance of social norms that benefit society overall is precarious [3]. Therefore, the introduction of a new type of engineer providing technical solutions that does not have a social feedback loop (GenAI engineering tools) is a cause for concern because it may disrupt the delicate balance that currently (mostly) works. Furthermore, engineers tend to live on beyond the production of the artefact, and act as an additional source of risk mitigation. It's unlikely that a GenAI tool would continue to mull over their choices and call the mayor to arrange remedial work on a completed building [4] – unless there

was somehow a way to build (and fund) the operation of a long-running good conscience feature.

And, what can be done to foster the GenAI literacy of education professionals and students?

Educators urgently need to develop future-facing GenAI literacy for the professional practice of engineering. If left to industry, know-how will be unevenly developed and closely-guarded, and any humanities workers hired will likely be ignored [5]. A truly interdisciplinary curriculum with humanities content will help engineers

better understand the socio-technological systems they work within [6]. Engineering students will need to learn how to instruct GenAI engineering tools, and then validate and explain the outputs. Developing skills in validating theoretical outputs against real-world tests will require significant additional experience of digitised practical work [7]. With tasks split between GenAI and humans, perhaps we can take inspiration from the aviation industry's crew resource management [8] to find ways to explicitly retain or even improve our current legal and social checks and balances. The long-term well-being of our society depends on it.

Relevant literature resources

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AI literacies/future skills for a world shaped through AI

ULF-DANIEL EHLERS, PROFESSOR

DUALE HOCHSCHULE BADEN-WÜRTTEMBERG KARLSRUHE, BADEN-WÜRTTEMBERG COOPERATIVE STATE UNIVERSITY KARLSRUHE

GERMANY

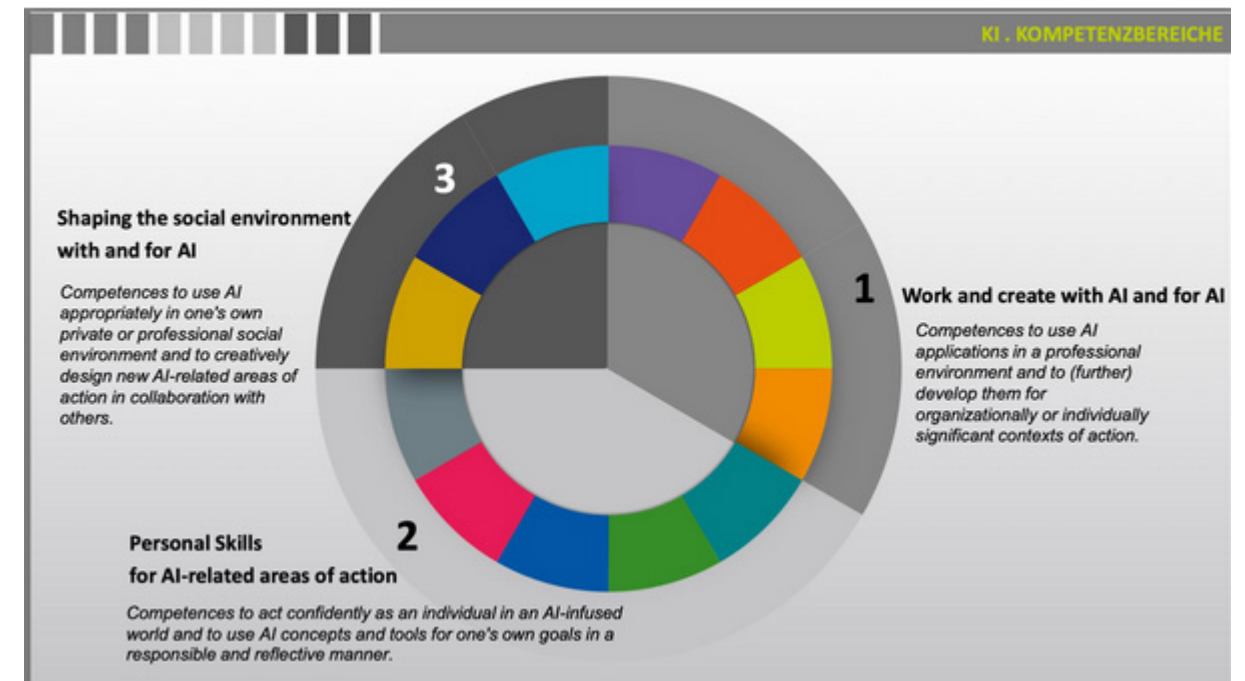
What is education for an AI world really about? Education is an individual human process. It consists of forming a relationship with oneself, with the objects of the world and with society. Education is the acquisition of the world. Its institutional counterpart is learning -in school, for example. As a system, education has a technological deficit. This means that it cannot be optimised in the same purposeful, rational way as, say, a production process. Its purpose is to promote people's ability to participate in society or, where this has been lost, to restore it. Education is therefore the stage on which human agency is promoted in the age of AI. A concept of education understood in this way places self-responsible action, i.e., the ability to act, at the centre (see also the next section on the 'Future competence concept'). But what should the contours of such an education look like in concrete terms?

Here are a few examples of which competences are important today: First of all, of course, there is the very simple 'instrumental digital competence for AI programmes and applications', which makes it possible to use and develop AI tools –but also to know the

limits of AI applications. But it is not only the use of AI tools that is important. It is also becoming increasingly important to be able to keep up with the ever more rapidly evolving possibilities –a competence we call learning competence.

On the one hand, 'learning literacy' means the openness, ability, and willingness to keep learning about AI –but on the other hand, it also means being able to use AI tools and applications to keep learning. In the AI Future Skill Study, respondents repeatedly mentioned 'critical thinking' as an important future skill in relation to AI. What does this mean? Critical thinking is the ability and willingness to reflect on the underlying behaviours, mindsets, and value systems in AI-influenced domains of activity and to evaluate how they influence actions and decisions.

A fourth example relates to the ability to shape future working and living conditions with AI. In the NextSkills study, we refer to this competence as 'initiative competence'. It is about being able to contribute openly, courageously, and creatively to initiating and shaping common AI-related spheres of activity



(both professional and private) in one's own environment.

The concept of 'competence' includes skills and/or literacy as one component, but goes beyond this. It refers to a person's ability to respond to a complex challenge by combining different internal resources such as knowledge, skills, values, and attitudes in order to act unprepared in complex situations (see Figure 1). Action competencies represent value-based 'dispositions', i.e., the ability to act appropriately in complex problem situations, provided that one's value context encourages action. For example, the ability to communicate effectively involves an individual's language skills, writing or speaking skills, and attitude towards the person with whom he or she is communicating.

The skills for the future are therefore the so-called 'action skills' that have been identified as important for the future. They not only describe a person's ability to do something, but also represent so-called dispositions for action (see Figure 1). These are formed from a person's motivation to act, the associated inner impulses, intentions and values, and ultimately lead to action. There is a difference between someone who knows a lot about a topic but has not yet developed any skills in this area, and someone who has skills in relation to a task but no inner compass that enables them to determine what it is appropriate to do and triggers an inner impulse to act. For example, the ability to 'use AI creatively to advance one's own professional context' is not simply a skill that can be called upon, but rather the ability to be able and willing to apply AI concepts appropriately in the right situation. And in this – in the appropriateness – lies a

value-based balancing process. Future skills therefore require knowledge, are based on skills and experience and, thirdly, require a good deal of personal positioning, which consists of values and motivations. All three components together then lead to competence development.

AICOMP – A competency model for an AI-infused living environment,

AIComp aims to help individuals to develop freely and actively in a rapidly changing world. AIComp refers to an understanding of human capital in the broad sense of Bourdieu (1983) and includes social aspects as well as economic and cultural capital. It also identifies behavioural competences, following the underlying concept of 'action competence'. AIComp aims to identify future competences that are important for a wide range of individuals. Competences that are only useful in a specific occupation are not considered.

Competences are given meaning by the fact that they relate to something. Communication, for example, initially consists only of the production of sounds, which often represent speech, but which in themselves do not constitute communication skills. Only the act of speaking, i.e., relating to a situation or another person through language, requires a form of expression that we can then perceive or describe as appropriate or capable. Communicative competence, therefore, is not initially meaningful in terms of pure action. A person's ability to communicate skilfully in relation to something or someone only acquires meaning through the context of their action. To stay with the example, the focus is not always on another person, such as an interlocutor. Communication can also be about relating to

oneself and one's own position, or to a specific object – such as the topic.

Future skills can therefore relate to three aspects: (1) to individual developmental aspects of the acting subject (e.g. the ability to self-reflect on something experienced in the past, or ethical competence), (2) to dealing with an object, a subject or a task (e.g. design thinking skills), or (3) to the social environment or organisation in which the individual is acting (e.g. cooperation or communication skills). These three dimensions also apply to AICOMP, the Future Skills Model for AI. The competencies we have identified as relevant for future skills in an AI-influenced world can therefore be categorised into one of these three dimensions:

- Dimension 1: Developing personal capabilities for AI-related domains of action. These are skills that enable individuals to act confidently in an AI-influenced world and to use AI concepts and tools responsibly and reflectively for their own purposes.
- Dimension 2: Working and designing with and for AI. This is about skills to (further) develop work tasks and organisational processes.
- Dimension 3: Shaping one's own social environment with and for AI. This is about competences to use AI appropriately in one's own private or professional social environment and to creatively design new AI-related fields of activity in cooperation with others.

Unleashing the power of General Artificial Intelligence (GenAI) in higher education

UPASANA GITANJALI SINGH, ACADEMIC LEADER: INFORMATION SYSTEMS & TECHNOLOGY

UNIVERSITY OF KWAZULU-NATAL

SOUTH AFRICA

In the realm of higher education, General Artificial Intelligence (GenAI) emerges not just as a game-changer but as the superhero cape we've all been waiting for! Picture this: educators, armed with GenAI knowledge, are no longer just teaching, they're innovating, they're transforming! Through specialized training programs and workshops, they're diving headfirst into the AI universe, exploring its nooks and crannies, and learning to wield its powers like digital wizards! With collaborations aplenty with tech gurus and educational pundits, they're not just learning solo but creating a digital tribe, sharing insights, and sparking ideas that could light up the entire educational galaxy!

Now, let's zoom in on accessibility – because who said learning can't be fun and accessible for everyone? Prompt the online platforms, webinars, and interactive modules, tailor-made to fit every educator's style and students' needs. We're talking multilingual content and bridging internet gaps in widespread corners, ensuring that no educator is left behind in this electrifying AI adventure! Let's sprinkle some AI literacy into existing training programs, ensuring educators stay on the pulse of AI

evolution like tech-savvy warriors, always ready to tackle the next digital challenge!

But wait, the fun doesn't stop there! Enter stage left: the student superheroes! GenAI isn't just transforming the way they learn; it's shaping the heroes of tomorrow's workforce! Through a whirlwind of coding clubs, robotics battles, and AI-powered projects, students are not just absorbing knowledge; they're diving headfirst into the digital realm, unleashing their creativity, and becoming the architects of their own AI-powered futures! And let's not forget our trusted allies – partnerships with industry pros are providing students with real-world insights and mentorship, guiding them through the twists and turns of this exhilarating AI rollercoaster!

But hold onto your hats because we're not done yet! Transitioning to GenAI literacy among students in Africa is like embarking on an epic quest, full of twists, turns, and adrenaline-pumping challenges! It's about weaving AI seamlessly into curricula, flipping the switch on accessibility with online platforms that make learning feel more like a digital playground than a stuffy classroom, and ensuring every

student – urban or rural – has a front-row seat for the AI revolution!

Now, let's talk inclusivity – because in this superhero tale, everyone gets to be the hero! Whether you're from bustling cities or remote villages, GenAI education is the ultimate equalizer, breaking down barriers and empowering students from all walks of life to unleash their inner tech prodigy! But wait, there's more! Ethical considerations are the secret sauce, ensuring our budding AI superheroes not only have the smarts but the heart to wield their powers responsibly, fighting against biases and championing digital justice for all!

So, what's the bottom line in this electrifying GenAI saga? It's about more than just teaching – it's about empowering a generation to embrace the digital frontier, to innovate fearlessly, and to shape a future where the possibilities are as limitless as the stars in the African sky! With collaboration, creativity, and a sprinkle of AI magic, the stage is set for an educational revolution that's out of this world!

What is GAI?

YONGJIA LU, MASTER STUDENT MAJORING IN DIGITAL EDUCATION

XI'AN JIAOTONG-LIVERPOOL UNIVERSITY (XJTLU)

CHINA

How do I define GenAI literacy?

GAI is capable of creating new content such as texts, images, and other forms of data. It functions by learning patterns and information from pre-existing datasets (Gong et al., 2023). GenAI literacy contains several aspects. Primarily, it refers to the understanding and knowledge of what GenAI is and how GenAI works, encompassing fundamental principles of generative models, training of AI systems, and other related elements. Furthermore, it necessitates individual proficiency in utilizing GenAI to solve real-world problems, while also achieving mastery in specialized applications tailored to various objectives. In addition, GenAI literacy extends to practical skills in using tools and platforms that facilitate the creation of AI models. Lastly, it refers to individuals' cognitive abilities at a more advanced level, containing critical thinking, computational thinking, and comprehension of the ethical and societal implications of AI (Zhang et al., 2022). Individuals with GenAI literacy have the ability to critically evaluate the outputs and value transparency and accountability in AI systems.

What can be done to foster the GenAI literacy of education professionals and students?

The cultivation of GenAI literacy requires a

combination of educational resources and collaborative efforts.

A significant portion of the knowledge acquired by students in a conventional classroom setting is based on professionals' prior experiences. However, it is essential for education to adapt and progress in accordance with the changing times. Given the substantial influence of generative technology on diverse sectors such as finance, healthcare, and high tech, it has become imperative to integrate AI principles into existing curricula in different majors. This enables students to comprehend the capabilities of GAI tools across various domains. Through the utilization of these technologies, individuals can effectively augment their professional competencies and expand their prospects.

Professionals should proactively engage in the design of, and participation in, development programs to augment their comprehension of GenAI. AI companies or organizations are encouraged to arrange workshops, seminars, and webinars to offer practical experience and knowledge. Moreover, facilitating convenient access to GenAI tools and platforms allows students to engage in hands-on experimentation with, and development of AI models. It promotes educators to creatively

apply AI in teaching methods and improve the overall quality of education as well.

Last but not least, the crucial focus lies on the ethical considerations and conscientious exploitation of GenAI. It is vital for all individuals to actively participate in conversations regarding the societal consequences of artificial intelligence and promote the cultivation of critical thinking

when it comes to AI-related matters.

Having a thorough comprehension of AI as a sociotechnical system with socio-political effects is necessary for educating future-oriented citizens (Relmasira et al., 2023).

Relevant literature resources

Gong, C., Jing, C., Chen, X., Pun, C. M., Huang, G., Saha, A., Nieuwoudt, M., Li, H.-X., Hu, Y., & Wang, S. (2023). GAI for brain image computing and brain network computing: a review. *Frontiers in Neuroscience*, 17, 1203104-1203104. <https://doi.org/10.3389/fnins.2023.1203104>

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Nurturing GenAI literacy within Bloom's framework

YUYING PEI, MA EDUCATION GRADUATE, SCHOOL OF EDUCATION

UNIVERSITY OF LEEDS

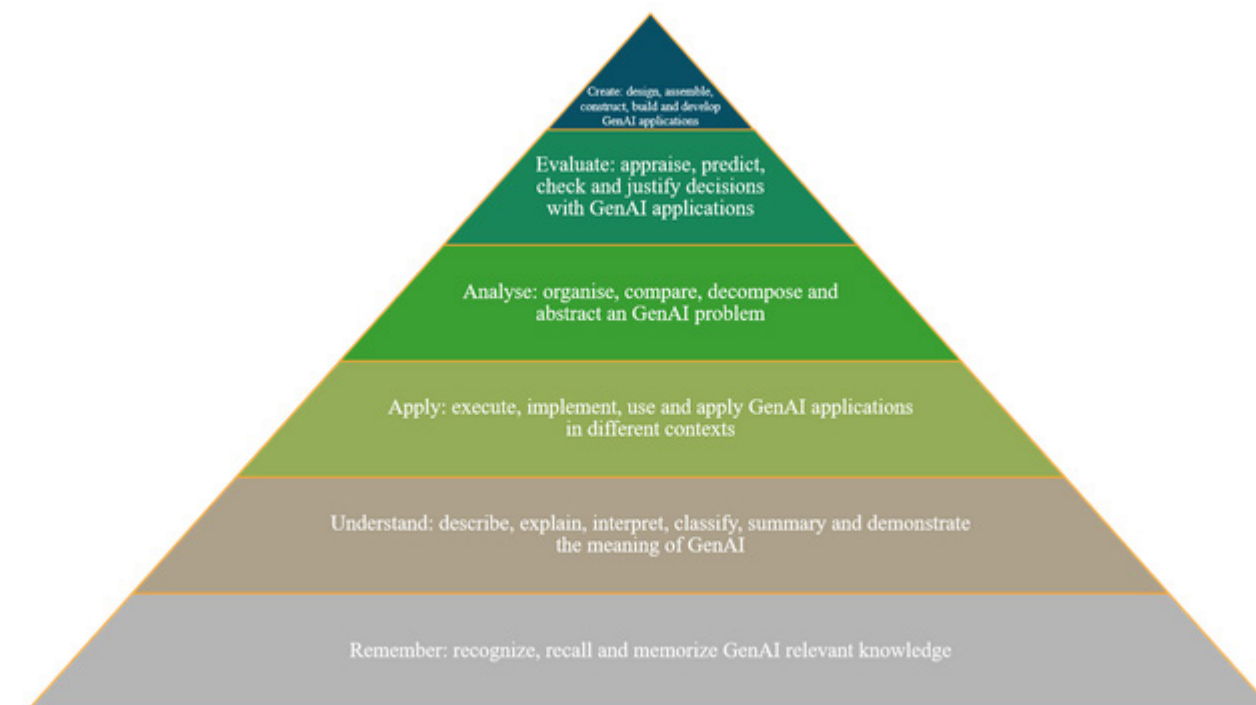
UK/CHINA

Different from the programmed response of Regular Artificial Intelligence (AI), Generative Artificial Intelligence (GenAI) can produce unpredictable results and unique digital products like texts and images through requests (Cope & Kalantzis, 2023). GenAI is increasingly prevalent in higher education due to its user-friendly nature. Notable GenAI applications include ChatGPT and Midjourney, enabling students to access relevant information efficiently. However, the challenge lies in effectively utilizing and evaluating the information obtained, necessitating a focus on GenAI literacy. Despite widespread acknowledgement of the need to enhance GenAI literacy in the information age, scant literature specifies its components and methods for improvement.

The conceptualization of AI literacy could extend to GenAI literacy as a specialized subset. Based on a comprehensive review of the AI literacy literature conducted by Ng et al. (2021) covering 2016 to 2021, GenAI literacy could encompass key dimensions: knowing and understanding GenAI, using and applying GenAI, and evaluating and creating GenAI and GenAI ethics. Based on Bloom's (1956)

framework, Krathwohl's (2002) revision and Ng et al.'s (2021) model for AI literacy learning, GenAI literacy learning should be (illustrated in the figure).

Cultivating GenAI literacy among education professionals and students necessitates practical exploration for optimal diversification. Drawing from experiences in fostering AI literacy by Su et al. (2023), integrating GenAI education into the curriculum providing professional development for teachers, creating a resource pool for GenAI literacy, and establishing GenAI literacy evaluation mechanisms emerge as impactful future directions.



A diagram of a pyramid. Description automatically generated

Relevant literature resources

Bloom, B. S. (Ed.). (1956). *Taxonomy of education objectives. Book 1: Cognitive domain*. David McKay Company.

Chiu, T. K. (2023). The impact of GAI (GenAI) on practices, policies and research direction in education: A case of ChatGPT and Midjourney. *Interactive Learning Environments*, 1-17.

Cope, B., & Kalantzis, M. (2023). GAI comes to school (GPT and all that fuss): What now? *Educational Philosophy and Theory*, 13-17.

Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory into Practice*, 41(4), 212-218.

Ng, D. T. K., Leung, J. K. L., Chu, S. K. W., & Qiao, M. S. (2021). Conceptualizing AI literacy: An exploratory review. *Computers and Education: Artificial Intelligence*, 2, 100041.

Su, J., Ng, D. T. K., & Chu, S. K. W. (2023). Artificial intelligence (AI) literacy in early childhood education: The challenges and opportunities. *Computers and Education: Artificial Intelligence*, 4, 100124.

Exploring GenAI literacy in higher education: Insights, concerns, and recommendations

HAMIS JUMA, SCHOLAR, SCHOOL OF ENGINEERING AND MANAGEMENT

UNIVERSITY NOVA GORCIA

SLOVENIA

In 2023, UNESCO defined GAI (GenAI) as an AI technology that autonomously produces content when prompted within natural-language conversational interfaces, distinguishing itself from conventional methods that merely curate existing webpages by creating fresh content derived from existing sources. I conducted a study among 97 participants from various higher education institutions, which sheds light on the current landscape of GenAI literacy among educators and students. Through an online survey, participants were asked to assess their awareness, familiarity with, and perceptions regarding the use of GenAI in higher education.

The findings revealed a diverse spectrum of familiarity with AI technologies among the participants. While 31% indicated a level of familiarity, a significant portion fell into categories ranging from somewhat familiar to completely unfamiliar. This distribution underscores the need for targeted efforts to enhance GenAI literacy across the educational community. When asked about the areas they

believe will be most affected by the integration of GenAI, participants highlighted several key areas. Personalized learning and student support emerged as a top concern, indicating a recognition of GenAI's potential to tailor educational experiences to individual needs. Adaptive learning technologies, research and innovation, online education, and distance learning platforms, as well as administrative processes and decision-making, were also identified as areas poised for significant transformation through AI integration.

Despite the optimism surrounding the potential benefits of AI in education, participants expressed notable concerns. Foremost among these were ethical implications and privacy concerns. The use of GenAI raises complex ethical questions regarding data privacy, algorithmic bias, and the equitable distribution of educational resources. Additionally, participants expressed apprehension about the technological infrastructure and resource requirements necessary to support widespread GenAI implementation. Furthermore, there

was a recognition of the potential impact on faculty and staff roles, raising questions about the changing dynamics within educational institutions.

Considering these findings, several recommendations emerge to address the challenges and opportunities associated with GenAI literacy in education. First and foremost, there is a clear need to prioritize ethical considerations and ensure that discussions around AI integration include robust frameworks for addressing privacy concerns and promoting ethical practices. This includes providing training and support to all categories of students to navigate the ethical complexities inherent in GenAI technologies. Additionally, efforts should be made to enhance the feasibility of AI integration by addressing technological infrastructure needs and resource constraints. This may involve investing in IT infrastructure, providing access to relevant tools and platforms, and fostering collaborations with industry partners to leverage existing expertise and resources. Furthermore, ongoing training and professional development opportunities should be provided to educators and students to enhance their GenAI literacy. This includes not only technical training on GenAI tools and techniques but also education on ethics and privacy concerns

related to AI use in educational settings. The study underscores the importance of fostering GenAI literacy among education professionals and students to effectively harness the potential of GenAI in education while mitigating associated risks. By addressing concerns, providing training and support, and promoting ethical practices, we can ensure that AI integration in education is both responsible and beneficial for all stakeholders involved.

GAI literacy – a critical competency (not a soft skill) in higher education towards lifelong learning

ALBERT STREVER, INNOVATION & ENTREPRENEURSHIP COORDINATOR, SENIOR LECTURER

STELLENBOSCH UNIVERSITY

SOUTH AFRICA

How do you define GenAI literacy?

GAI literacy is the ability to synergistically engage with different GAI solutions, leveraging its capabilities to enhance knowledge, creativity, cognitive ability and problem-solving skills. It involves both a positive attitude toward technology and a critical mindset, emphasising ethical and effective use. GenAI literacy is a critical component of the lifelong learning journey of any student, researcher, supervisor or educator.

What can be done to foster the GenAI literacy of education professionals and students?

We have seen how COVID made us re-evaluate our roles as educators, as we could not function conventionally but needed technology to continue operating. Now these technologies are also redefining our role as educators, research supervisors as well as students. We cannot merely transfer and receive knowledge; our focus should be on scrutinising information towards knowledge creation and acquisition. GAI assistance may be

compared to either a crutch or a physiotherapy solution to a sports injury problem. If we only use it as a (temporary) crutch to generate answers, we will not gain much in the long term, however, learning skills of tool selection, prompt engineering and scrutinising the output of these tools while still adding significant creative value will yield positive results.

Practical ways to foster GenAI literacy include:

1. Being willing as educators to acknowledge our shortcomings and vulnerability in the face of rapid technological advancement.
2. Then being willing to experiment with different ways to enhance our own teaching, learning and assessment practices using GAI techniques and tools.
3. Fostering a ‘community of practice’ environment where students and educators or supervisors and researchers can share ideas and experiences related to GAI use.
4. Setting clear guidelines (rather than only restrictive policies) to assist students and

educators/supervisors in navigating the ethical issues related to GAI use.

5. Finding ways to navigate cost-effective, or ideally free solutions in an environment of increased commercialisation of AI solutions.
6. We should acknowledge GAI as an important competency for the future of work, intra/entrepreneurship as well as research – and abandon the notion that it is a ‘soft skill’ (Pontefract, 2023).

Relevant literature resources

Pontefract, D. (2023, March 27). It’s about time we abandoned the term ‘soft skills’. Forbes. <https://www.forbes.com/sites/danpontefract/2023/03/27/its-about-time-we-abandoned-the-term-soft-skills/>

Reconsidering the role of educational portfolios to foster GenAI literacy

FUAT RAMAZANOV, DIRECTOR OF THE INTERNATIONAL BUSINESS MANAGEMENT PROGRAM

ACSENDA SCHOOL OF MANAGEMENT

CANADA

How do you define GenAI literacy?

GenAI literacy entails that students are knowledgeable about, understand, and can demonstrate how to ethically use General Artificial Intelligence for personal and professional purposes.

What can be done to foster the GenAI literacy of education professionals and students?

Educators can foster GenAI literacy in students by adopting the extensive use of educational portfolios. Barrett (2007) states that an educational portfolio contains work that a learner has collected, reflected upon, selected, and presented to show growth and change over time, work that represents an individual's or an organization's human capital (p. 438). Merriam and Bierema (2014) recommend allocating class time for portfolio sharing in small groups, a practice that has proven valuable as learners compare notes on their learning journeys.

Today, educational portfolios can be enhanced to include artifacts created with the use of GenAI tools. These portfolios can be dedicated solely to GenAI showcasing artifacts created with the use of GenAI tools. These can include

practical examples such as projects, prompts, and code snippets showcasing the application of GenAI concepts. They can also include essays exploring topics related to GenAI, and GenAI ethics. Including an examination of job listings that shows what tasks only humans can do and where GenAI can help people work better can be useful in portfolios. Doing this analysis regularly during students' studies lets them see how jobs are changing, figure out which skills they need to be really good at, and find out where they can improve their AI-related skills. This helps in building overall GenAI literacy. Educators should encourage students to share their portfolios and thus best practices in terms of ethical and creative ways of using GenAI with peers and allocate time for portfolio sharing in small groups and class discussions.

Relevant literature resources

Barrett, H. (2007). Researching electronic portfolios and learner engagement: The REFLECT initiative. *Journal of Adolescent & Adult Literacy*, 50(6), 436-449. <https://doi.org/10.1598/jaal.50.6.2>

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Skills to use generative artificial intelligence in biosciences/Competencias para usar inteligencia artificial generativa en biociencias

LAYLA MICHÁN, LABORATORIO DE BIOINFORMACIÓN, FACULTAD DE CIENCIAS

MINERVA MARÍA ROMERO PÉREZ, LABORATORIO DE BIOINFORMACIÓN, FACULTAD DE CIENCIAS

UNAM

MEXICO

How do you define GenAI literacy?,

La alfabetización en inteligencia artificial generativa (IAGen) tiene como objetivo entrenar a los usuarios con las capacidades básicas y suficientes para utilizar las herramientas digitales que incorporen esta tecnología para procesar información en cualquier formato para consumir, producir y analizar información y resolver problemas de manera adecuada, pertinente y responsable.

What can be done to foster the GenAI literacy of education professionals and students?,

La alfabetización sobre el uso de herramientas electrónicas, hoy más que nunca, es necesaria, urgente y primordial. Los esfuerzos por alcanzar la alfabetización informática, informacional y digital se han rezagado: las tecnologías informáticas avanzan de manera exponencial y a pasos acelerados, pero los programas de estudio, los temarios y los

materiales tardan en aparecer y, lo que es peor, la actualización para los profesores es lenta e incipiente, en especial en América Latina y en el idioma español. La pandemia demostró los peligros de la infodemia, la post verdad y las noticias falsas, y la importancia de la educación y el desarrollo de las habilidades digitales de calidad para contrarrestarlas. Durante el 2023, con la explosión de herramientas que ha provocado la inteligencia artificial regenerativa, se ha vuelto más urgente e impostergable la necesidad de desarrollar competencias en la sociedad, y en especial entre los estudiantes y profesores, para conocer la tecnología, reconocer las herramientas en línea de calidad, usar la información con responsabilidad, identificar las fuentes fiables, explorar sus aplicaciones y citar datos e información que sustenten los hechos. Para esto es indispensable desarrollar el pensamiento crítico, fomentar el

conocimiento científico, promover la curiosidad e investigación y centrar la enseñanza en habilidades y no en contenidos.

Para lograr este objetivo nosotros proponemos generar materiales y contenidos que se puedan usar en los cursos de las licenciaturas de Biología y Medicina y de posgrado en Medicina de la UNAM utilizando las herramientas digitales de la web que sean abiertas, amigables, de calidad y con distintas tecnologías como la inteligencia artificial generativa, minería de datos y análisis de redes, entre otras. Estos contenidos y materiales que hemos generado están en línea,

abiertos, y disponibles para consultar. Además, estamos abiertos a que cualquier persona colabore o aprenda con nosotros de estas tecnologías.

Es indispensable enfatizar la cultura tecnológica entre los profesores y estudiantes, promover el uso de la Web en un ecosistema integral que abarque el pensamiento crítico, la investigación, la lectura de documentos de calidad y la escritura reflexiva, de tal manera que deje de ser una asignatura aislada y forme parte de un plan robusto, completo y actualizado para formar mejores ciudadanos, más informados y mejor capacitados.

Relevant literature resources

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AI thoughts

WOUTER VAN DER HORST, PRACTOR (RESEARCHER) MEDIA LITERACY, AND TECHNOLOGIST & FOUNDER WE SHARE CULTURE

MEDIA COLLEGE, AMSTERDAM AND WE SHARE CULTURE

NETHERLANDS

How do you define GenAI literacy?

With any new technology, I firmly believe it's important for teachers and students to feel comfortable enough to experiment with it. This means having a basic understanding of the technology, its mechanics and dynamics. Every new technology also brings new ethical considerations. For GenAI specifically these are: cultural biases, inequality due to lack of access, environmental issues, copyright issues, the rise and spread of dis- and misinformation and the potential loss in human creativity and skills. These are key considerations for any educator wanting to include GenAI in their classes.

What can be done to foster the GenAI literacy of education professionals and students?

Provide equal access within the walls of educational institutions in order for students and teachers to learn and experiment with GenAI.

Prompting engineering or AI literacy?: Developing a critical AI literacy on HE lecturers

MARI CRUZ GARCÍA VALLEJO, DIGITAL EDUCATION CONSULTANT

ULPCG/HERIOT-WATT UNIVERSITY

SPAIN/UK

How do you define GenAI literacy?

GenAI literacy is defined here as the critical awareness of the potentiality (understood in the Aristotelian sense of what is latent but has capacity for growth and fulfilment), limitations, and social and ethical challenges that the use of GAI models brings to society. In the context of secondary education, AI literacy can be described as an umbrella term that comprises a higher set of competences and skills, such as:

- critical and creative thinking,
 - problem formulation,
 - reading, writing, and researching,
- as well as digital capacities such as
- information literacy,
 - data literacy,
 - digital proficiency and productivity
 - that are required to learn, teach and work in the era of AI.

What can be done to foster the GenAI literacy of education professionals and students?

Education professionals must be AI literate first to help students develop their AI literacy skills. It is, therefore, paramount that development programmes aimed at enhancing the teaching practice of lecturers and professional staff supporting learning (programmes such as PGCAP and the PGCHE in the UK) develop a critical awareness of the following key areas:

- The regulatory frameworks, national and transnational, that protect citizens against the misuse of AI; this also includes an awareness of the implications of data protection legislation for the new AI regulation.
- The moral and philosophical guidelines to promote an ethical use of AI in education; this also involves bringing the principles of compassion and ágape to AI ethics, as those principles are currently missing in the debate around AI literacy in Higher Education.

- the reconceptualization of copyright, authorship and plagiarism for an intellectual product or work that has received contributions from a GenAI model.
- The definition of a new ‘AI pedagogy’, or the reconceptualization of the existing pedagogies, to use GAI to enhance learning. The term AI pedagogy can be understood as fostering critical conversations between educators and students to clarify new roles, pedagogical approaches and paradigms of assessment and collaboration that can facilitate bringing the GenAI models to the classroom, whether this classroom is on campus or virtual.

Relevant literature resources

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Critical stance on AI in education

CAROLINE KUHN, SENIOR LECTURER IN TECHNOLOGY AND EDUCATION SCHOOL OF EDUCATION

BATH SPA UNIVERSITY

UK

I am a critical pedagogue raised and educated in Venezuela, and interested in matters of social justice. There, being a critical pedagogue means something very different than in Northern Europe, given the nature of the daily struggles people face. The way we interpret and comprehend these struggles shapes our worldview and the claims we make. Knowledge emerges from the ongoing process of making sense of these struggles. Whilst millions in Venezuela and worldwide grapple with abject poverty and are compelled to find food and shelter for their family, the Global North is preoccupied with a paradoxical concern: a luxurious technology that exacerbates social injustices. This is a technology that will continue to deplete our planet and widen the already uneven distribution of the environmental crisis' burden, hitting particularly hard those who make their lives in the Global South (bear in mind that there are Global Souths in the Global North).

Inspired by the works of Paulo Freire and bell hooks, amongst others, I firmly believe in the role of education as a site of social transformation in the yellow brick road towards social justice. This perspective views education as a vehicle for human emancipation and self-realisation through social critique and political action. Education should be a level playing

field. In this context I wonder how AI technologies can align with and support these human centred goals and level the playing field given the existing issues of algorithmic injustices (Eubanks, 2017; Benjamin, 2019; O'Neil, 2019; Buolamwini, 2018). Decisions taken by AI systems are proven to result in uneven and thus an unfair distribution of information, resources, social welfare, and opportunities.

Education is a complex social phenomenon. Artificial Intelligence is a sophisticated form of statistical processing. These tools, at present, address one task at the time, e.g., giving feedback, tracking engagement, or giving you an input to a particular question (as in the case of ChatGPT). For this they process vast quantities of data to predict, with the highest accuracy, which should be the next word. How can a technology that is made by fallible humans and based on maths, data, and computer programming, respond to complex educational issues? This paradox warrants attention from educators, policymakers, and governments, as it unveils a reductionist and problematic stance, not a dialectical relationship. We educators know that humans' complexity, teaching, and learning is a materialisation of that complexity, which cannot be captured reliably in data form. Therefore, it oversimplifies and thus harms the human dimension of education, which is the

most important one! Transforming education does not solely hinge on technology but more so on teachers' willingness to cultivate a generative social relationship with students.

A collaborative relationship, rooted in, and driven by shared goals, has the potential to yield social goods, contributing to the overall wellbeing of both teacher and pupil. The emotional dynamics inherent in these relationships are an integral component of human intelligence, as highlighted by Nussbaum (2001). According to her, nurturing emotional wellbeing is crucial, as it forms an inseparable part of our political reasoning capacity. I believe that the educational context is a relational network of bonds and resources, with AI serving as one such resource - a tool employed for a particular task. Still, it is not a substitute for human relations as is often portrayed in the Silicon Valley techno solutionist narrative. As Freire argued, teachers are transformative intellectuals who, through teaching, transform themselves and their pupils, and in doing so, contribute to social transformation. I believe that those advocating frantically that AI will overhaul educa-

tion are blind to the crucial structure-agency problem that has haunted sociologists for a long time (c.f. Bhaskar & Hartwig, 2016; Archer 1995). By ignoring the dialectical relation between agency, structure, and culture, education is doomed to reproduce society in terms of efficiency and automation instead of changing it. In that reproduction, of course, those at the margins will continue to be expelled from the benefits of education, however marginal those benefits might be.

On the other hand, given the behaviouristic underlying approach to AI personalised teaching tools, I wonder how they can contribute to a more constructivist, human-centred, and care-inspired pedagogy. Moreover, knowing that agency is essential to achieving wellbeing and the freedom to choose the life we want to live (although always constrained by social circumstances), I wonder how AI will impact the development of agency and, thus, freedom. Moreover, considering the resource-intensive nature of AI, the question of wellbeing takes on added significance, given that our wellbeing is intricately linked to the wellbeing of the planet.

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Contributors

ABEGGLEN, SANDRA, University of Calgary, Canada

X: @sandra_abegglen

LinkedIn: sandra-abegglen-b5107b13/

ALIFIERAKIS, STEFANOS, University of Edinburgh, Scotland

LinkedIn: stefanos-alifierakis-3653731a3/

ATENAS, JAVIERA, University of Suffolk, UK

X: @jatenas

BALI, MAHA, American University in Cairo, Egypt

X: @bali_maha

BAWN, MATT, University of Leeds, UK

BENOTTI, LUCIANA, Vía Libre Foundation, Argentina

X: @lucianabenotti, @FViaLibre

Instagram: @fvialibre

BOZKURT, ARAS, Anadolu University, Turkey

BROWN, BARBARA, University of Calgary, Canada

X: @barbbrown

Website: <http://drbarbbrown.com/>

BURNS, TOM, London Metropolitan University, UK

X: @LevellerB

LinkedIn: tom-burns-08067528/

BUSTILLOS MORALES, JESSIE A., School of Law and Social Sciences, Education Department,
London South Bank University, UK

X: @jessiejwl

Website: <https://peoplefinder.lsbu.ac.uk/researcher/94257/dr-jessie-angelina-bustillos-morales>

CAROLINA MAZZEO, NAIR, Vía Libre Foundation, Argentina

X: @FViaLibre

Instagram: @naircarolina, @fvialibre

COSTA, CRISTINA, Durham University, UK

LinkedIn: cristinacost/

CRUZ CORONA, ELVIA DANIELA, UNAM, Mexico

ResearchGate: <https://www.researchgate.net/profile/Elvia-Cruz-Corona>

CUTILLO, LUISA, University of Leeds, UK

DE BLACQUIÈRE-CLARKSON, RICHARD, University of Leeds, UK

DE LA HIGUERA, COLIN, UNESCO, Nantes University, RELIA, France

X: @Chaire_RELIA

LinkedIn: company/chaire-unesco-relia/

Blog: <https://chaireunescorelia.univ-nantes.fr/>

DESIRE, JOHN, London Metropolitan University, UK

DRYSDALE, TIMOTHY D., University of Edinburgh, UK

X: @timothydrysdale

EHLERS, ULF-DANIEL, Duale Hochschule Baden-Württemberg Karlsruhe, Baden-Württemberg
Cooperative State University Karlsruhe, Germany

X: @uehlers

LinkedIn: ulfehlers/

Website: <http://www.ulf-ehlers.net/>

FARROW, ROBERT, The Open University, UK

X: @philosopher1978

LinkedIn: robert-farrow-66088aa/

FRANCISCO JOSÉ, GARCÍA-PEÑALVO, Universidad de Salamanca, Spain

ORCID: 0000-0001-9987-5584

GONSALES, PRISCILA, Universidade de Campinas, Centre for Sociodigital Futures, Brazil

GORDON, JANET MARIA, London Metropolitan University, UK

X: @jmgordon

GOTTLIEB, CAMILA, Uruguayan Catholic University, Uruguay

LinkedIn: camila-gottlieb/

HAVEMANN, LEO, University College London, The Open University, University of London, UK

X: @leohavemann

JACOB, MARY, Aberystwyth University, UK

X: [@MaryJacobTEL1](#)

Blue Sky: [@MaryJacob@bsky.social](#)

JUMA, HAMIS, University Nova Gorica, Slovenia

X: [@HamisJumaH](#)

KAUR, KASHMIR, University of Leeds, UK

KIEU, HIEU, Leeds Campus, UK

KUHN, CAROLINE, Bath Spa University, UK

Website: <https://datapraxis.net/>

Website: https://hd-ca.org/thematic_group/technology-and-design

LU, YONGJIA, Xi'an Jiaotong-Liverpool University (XJTLU), China

MARI CRUZ, GARCÍA VALLEJO, ULPCG, Heriot-Watt University, Spain/UK

LinkedIn: [mari-cruz-garcia-vallejo/](#)

Blog: <https://substack.com/@maricruzgarciavallejo>

MARIANA V., HERRERA, Instituto de Investigaciones Filosóficas UNAM, Mexico

MARTÍNEZ-ARBOLEDA, ANTONIO, University of Leeds, UK

LinkedIn: [antonio-martínez-arboleda-08b10440/](#)

MCGOWAN, BRIAN, Ulster University, UK

X: [@Brimcgowan](#)

MICHÁN, LAYLA, UNAM, Mexico

Mastodon: [mstdn.social/@lma](#)

MURPHY, JACQUELINE, University of Galway, Ireland

NERANTZI, CHRISSI, University of Leeds, UK

X: [@chrissinerantzi](#)

LinkedIn: [chrissinerantzi/](#)

PAVLOPOULOU, MARIA, University of Leeds, Scotland/UK

LinkedIn: [maria-pavlopoulou-73986ab0/](#)

PEI, YUYING, University of Leeds, UK/China

PICKARD-JONES, BEVERLEY, Bangor University, UK

ORCID: [0000-0001-9886-9035](#)

RAMAZANOV, FUAT, Acsenda School of Management, Canada

RAVI, MANOJ, University of Leeds, UK

ROMÁN MENDOZA, ESPERANZA, George Mason University, US

X: [@eromanme](#)

ROMERO PÉREZ, MINERVA MARÍA, UNAM, Mexico

Mastodon: [mstdn.social/@mineromerop](#)

ROWELL, CHRIS, University of the Arts London, UK

X: [@chri5rowell](#)

SABATER, ALBERT, University of Girona, Spain

X: [@albert_sabater](#)

SCHUWER, ROBERT, OER Consultancy, University of Nova Gorica, Netherlands/
Slovenia

LinkedIn: [robertschuwer/](#)

Mastodon: [@OpenRobert55@mastodon.oeru.org](#)

SCOTT, ANNE-MARIE, Independent, Canada

LinkedIn: [anne-marie-scott/](#)

Mastodon: [@ammienoot@social.ds106.us](#)

SHATALOV, DENIS, University of Nova Gorica, Slovenia

SHORT, FAY, Bangor University, UK

SIMPKINS, ANNA, Aberystwyth Students Union, UK

LinkedIn: [anna-simpkins-524972284/](#)

SINFIELD, SANDRA, London Metropolitan University, UK

X: [@Danceswithcloud](#)

LinkedIn: [sandra-sinfield-42445331/](#)

STREVER, ALBERT, Stellenbosch University, South Africa

LinkedIn: [linkedin.com/in/albert-strever/](#)

SUÁREZ BRITO,, PALOMA, Tecnológico de Monterrey, Mexico

X: [@suarezbrito_phd](#)

ResearchGate: <https://www.researchgate.net/profile/Paloma-Suarez-Brito>

SYSKA, ALICJA, University of Plymouth, UK

X: [@AlicjaSyska](#)

LinkedIn: [alicja-syska-phd-6297701](#)

TASLER, NATHALIE, University of Glasgow, UK

Blog: <https://acdevadventures.blog/>

Website: <https://storyfae.blog/>

Instagram, BlueSky, Threads: [@drntasler](#)

UPASANA GITANJALI, SINGH, University of KwaZulu-Natal, South Africa

LinkedIn: [upasana-gitanjali-s-56358a6/](#)

VAN DER HORST, WOUTER, Media College We Share Culture, Netherlands

VARO, ANAÏS, University of Girona, Spain

X: [@axisnis](#)

WRIGHT, CLARE, University of Leeds, UK

ZHAO, HUAHUI, University of Leeds, UK



PART 02

Synthesizing perspectives:

An integrative AI-enhanced approach to develop critical thinking and analytical skills

DIMA YOUSEF, EDUCATOR, LEARNING DESIGNER

MBZUAI

UNITED ARAB EMIRATES

Description of your learning resource or course:

Designed for undergraduate students struggling with synthesizing sources, this interactive and engaging learning resource aims to help undergraduate students develop the skills and knowledge required to analyze texts critically and effectively synthesize ideas from diverse sources. This approach accommodates different learning needs and makes the content more accessible to students with varied learning styles and abilities.

Observing students struggling with selecting evidence and integrating various sources inspired me to incorporate a multifaceted approach involving a TED talk and an article that resonates with the talk's themes to foster critical analysis and synthesis of ideas from multiple sources.

So, I've selected one of my favorite TED talks, The Danger of a Single Story, with its powerful rendition of the impact of single stories and the article, Look Closer . . . I Am Not Just Shy: Recognizing Social Anxiety Disorder: A

Case Study, which explores the overlooked phenomenon of social anxiety. This blend offers students varied perspectives and a richer context for analysis, making learning interactive and fun.

A key feature is utilizing ChatGPT to generate discussion questions, promoting critical thinking, reflection, and in-depth analysis.

Context in which the learning resource was created:

The learning resource was developed as part of an academic writing course in response to students' challenges in selecting and synthesizing sources effectively for their research papers. The resource aligns with the course's objectives of enhancing students' research and writing skills, preparing them for academic success, and fostering critical thinking skills. It serves as both a learning tool and an assessment aid, enabling students to interact with multiple sources, thus refining their analytical and synthesis skills.

AI tool(s) used:

ChatGPT

Explanation of the process followed:

I utilized ChatGPT to generate questions that promote critical thinking and analysis. I initiated interaction with ChatGPT by providing context about the learning outcomes and the chosen materials — a TED talk and a scholarly article. After including the necessary details, I prompted ChatGPT to generate questions that would help students critically analyze and synthesize the contents of both resources.

The questions generated by ChatGPT were aimed at encouraging students to identify the main ideas, compare themes, and synthesize information from the TED talk and the article. These prompts served as a foundation for class discussions and reflections, allowing students to delve deeper into the themes and draw connections between the different sources.

While ChatGPT was very helpful in formulating questions and prompts, the selection of the TED talk, The Danger of a Single Story, and the related scholarly article, as well as the alignment of these materials with the learning objectives was done manually.

The design and execution of the overall teaching strategy, the integration of the generated questions into the learning experience, and facilitating the interactive

discussions and reflections in the classroom were also conducted without the help of ChatGPT.

Key learnings and recommendations for others:

Although I had to edit and modify some of the statements and responses, the output was quite impressive. Planning lessons and designing activities can be time-consuming. However, by reviewing and refining the output based on specific requirements and objectives, ChatGPT provides helpful suggestions and insights.

ChatGPT can play a valuable role by providing personalized and interactive learning experiences. It can adapt responses based on students' specific needs, interests, and learning styles. It can also provide immediate feedback, offering explanations, corrections, or suggestions for improvement. Combining ChatGPT prompting with human guidance can create a transformative learning environment.

Links for more information:

<https://t.ly/72-dp>.

Relevant literature resources

Adichie, C. N. (2009, July). The danger of a single story [video]. TED Conferences. https://www.ted.com/talks/chimamanda_ngozi_adichie_the_danger_of_a_single_story

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Judging AI knowledge

CRISTINA COSTA, ASSOCIATE PROFESSOR

DURHAM UNIVERSITY

UK

Description of your learning resource or course:

This is an Assessment: Critical Essay.

This assignment consists of students identifying an area of discussion relevant to the module and asking ChatGPT or any other Generative Artificial Intelligence tool to write a 300 word abstract about xxx [the topic students want to explore for their essay].

The students are then asked to add the AI generated text to the beginning of their essay, so that they can analyse the text to identify 1) what is accurate, what is 2) inaccurate and/or what 3) may need to be expanded upon. Students are asked to develop their reasoning, by drawing on key readings and critical theories to develop and support their arguments in a coherent narrative.

Context in which the learning resource was created:

This is an assessment exercise for Year 3 students studying on a module focused on Digital Society and Education.

AI tool(s) used:

Students will choose their favourite one.

Explanation of the process followed:

As explained, the point is to use AI as an, example of analysis and thus foster a practice of critical thinking and reasoning that finds its legitimation in academic knowledge.

Key learnings and recommendations for others:

I am trying this during this academic year. I will be able to report on outcomes in detail once the assessment exercise has been concluded.

Generative AI and assessment:

Design principles for the future of teaching and learning in higher education

BEN LEE TAYLOR, POSTDOCTORAL FELLOW

MCMASTER UNIVERSITY

CANADA

KIM DEJ, SUPERVISOR,

ERIN ASPENLIEDER, SUPERVISOR

IAN STEINBERG, GRADUATE STUDENT PARTNER

AAMNA DURRANI, UNDERGRADUATE STUDENT PARTNER

MACMASTER UNIVERSITY

CANADA

Description of your learning resource or course:

Our website serves as a living hub for research and resources that address GAI and teaching practices in higher education. Currently, we have made publicly available 11 assessments submitted by instructors across Canada, who have given permission to share the assessments under a CC0 1.0 license for free use. These assessments are disciplinarily diverse and engage with GAI in many different ways, from full integration of AI tools into assessment tasks to requirements that are meant to limit the usefulness/impact of GAI.

Context in which the learning resource was created:

This website is part of my postdoctoral research on GAI and higher education (McMaster Research Ethics Board Project #6636).

AI tool(s) used:

Most assessments suggest using ChatGPT or Copilot (formerly Bing), but some suggest DALL-E, Stable Diffusion, Midjourney, Wordtune, ParagraphAI, Runway, and others.

Key learnings and recommendations for others:

We are in the process of publishing a pre-print

about a framework we have developed based on our analysis of the submitted assessments. I would be happy to share more once that pre-print is available.

Links for more information:

<https://www.genaiteach.ca>

Using AI to facilitate accessibility & UDL in T&L

JOE HOUGHTON, ASSISTANT PROFESSOR, DIRECTOR, PROJECT MANAGEMENT PROGRAMMES

UCD SMURFIT GRADUATE SCHOOL OF EDUCATION

IRELAND

CREDITS:

FOREWORD BY LILLIAN NAVE, HOST OF THE THINK UDL PODCAST, SENIOR LECTURER

APPALACHIAN STATE UNIVERSITY

US

Description of your learning resource or course:

I created a book *Applying Artificial Intelligence to Close the Accessibility Gap: A practical handbook for educators & students* to help educators and students to leverage UDL & AI tools in helping students with accessibility issues in their teaching & learning environments.

The book aims to be a resource for educators at all levels who might not be aware of accessibility opportunities and challenges faced by students with different conditions.

Context in which the learning resource was created:

I came to a realisation that, despite being an educator in Higher Education for almost

20 years, I was ignorant of most aspects of accessibility apart from being aware that some of my students were registered with the Disability Service at my University. That led me to start investigating, and this turned into the book.

AI tool(s) used:

Bing Chat, ChatGPT, Claude, Huggingchat, Perplexity, Jenni, SciSpace

Explanation of the process followed:

I explore topics of interest by writing. So with the issue of accessibility, I wanted to link it to UDL and AI as these are also topics I am very focussed on. Structuring up the book started as an iterative process with multiple prompts into a number of chatbots including ChatGPT, Bing, Claude and Huggingchat.

This gave me a set of chapter headings and subheadings to organise the book around. Each chapter was then approached in a similar manner, with different prompts iteratively developed using the various AI tools to surface and refine ideas. Text was then assessed, modified and edited, links checked so the materials were correct.

Key learnings and recommendations for others:

Exploration of new topics can benefit from AI.

Some domain knowledge is useful to interpret and critique AI responses.

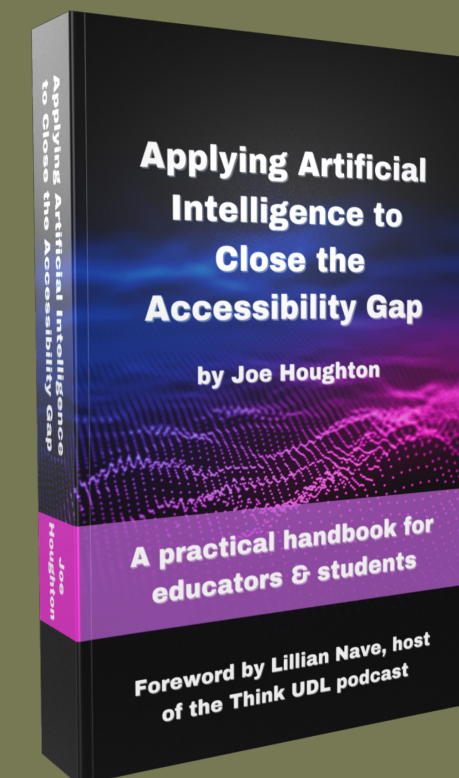
AI prompting benefits from chained prompts building on and refining initial questions.

UDL and accessibility are different but related topics, and AI provides many touch-points and strategies to help both educators and students.

Links for more information:

The book is available on Amazon <https://amzn.to/3PA9bHD>

It is part of a series and the website is at <http://www.plusoneteaching.com/>



Relevant literature resources

Houghton, J. (2023). *Applying artificial intelligence to close the accessibility gap: A practical handbook for educators & students* (1st ed.). Houghton Publishing. <https://amzn.to/3sQkh1M>

The power of interdisciplinary work in academia

MICHAEL MILLS, VICE PRESIDENT, OFFICE OF E-LEARNING, INNOVATION AND TEACHING EXCELLENCE

MONTGOMERY COLLEGE

US

Description of your learning resource or course:

The resources created were the result of three different AI applications being used to develop a presentation, a podcast script and a podcast, all focusing on the benefits and challenges of higher education faculty in different disciplines working together. Lastly, strategies were identified to successfully implement the work.

Context in which the learning resource was created:

The learning resources created are to be used as part of a faculty fellowship centered around the United Nations Sustainable Development Goals and Open Pedagogy. The fellowship requires faculty from different disciplines working in teams.

AI tool(s) used:

Gamma, Claude, Podcastle

Explanation of the process followed:

The process first involved using Gamma to create an AI-generated presentation on the interdisciplinary work in academia. The link to that presentation was part of a prompt in Claude asking to create a podcast script for the Gamma presentation. The generated script was then loaded into Podcastle to create the podcast.

Key learnings and recommendations for others:

The beauty of the various AI applications is the ease in which users can create in one product and then use that output in another application.

Links for more information:

<https://gamma.app/public/The-Power-of-Interdisciplinary-Work-in-Academia-fh8jxf7yavvkqqa>



Presentation slide titled The Power of Interdisciplinary Work in Academia

Relevant literature resources

Mills, M. (n.d.). The power of interdisciplinary work in academia. Gamma App. <https://gamma.app/public/The-Power-of-Interdisciplinary-Work-in-Academia-fh8jxf7yavvkqqa?mode=doc>

Using generative AI as a domain expert in brainstorming session

FUAT RAMAZANOV, DIRECTOR OF THE INTERNATIONAL BUSINESS MANAGEMENT PROGRAM

ACSENDA SCHOOL OF MANAGEMENT

CANADA

Description of your learning resource or course:

My idea: Exploring the use of GAI as a participant with domain expertise in brainstorming sessions to support the idea generation process.

Context in which the learning resource was created:

As an instructor, I incorporate assignments aimed at fostering divergent thinking and creativity through structured brainstorming activities into my teaching. During debriefing sessions, I often receive feedback from students who express that the outcomes of brainstorming exercises could be improved if they had domain expertise in the given problem. This observation prompts a compelling question: How can students generate more informed and creative ideas in areas where they lack specific domain knowledge? To address this, I am exploring the integration of GAI, specifically ChatGPT, into the brainstorming process. The hypothesis is that by leveraging the capabilities of GAI to

assume various roles with domain expertise, students can overcome the limitations posed by their own knowledge gaps and enrich the ideation phase.

AI tool(s) used:

ChatGPT

Explanation of the process followed:

The proposed approach involves students conducting an initial round of brainstorming on a given problem or scenario (which can also be intentionally selected to be outside their expertise). Subsequently, the instructor encourages students to reflect on whose expertise would be beneficial for a more comprehensive exploration of the problem. This sets the stage for students to employ GAI, like ChatGPT, by composing a prompt instructing the tool to assume the role of an expert and propose domain-specific ideas. The AI-generated ideas align with the assumed roles aim to bridge the gap in domain knowledge and stimulate more diverse and insightful ideation.

Example 1: Students are given a case and are invited to brainstorm all the potential stakeholders, along with their interests and influence, for a project to develop a large-scale wind farm in a rural area. After the initial brainstorming round, students are invited to use ChatGPT and ask it to assume the role of a local business owner participating in the brainstorming session. They can write a prompt asking the AI to suggest potential project stakeholders as if they were offered by the local business representative.

Example 2: Students are tasked with taking an existing product, like a backpack, and applying the SCAMPER® method to encourage creative thinking. This involves considering alternative uses and modifications through a seven-step process: (1) substitute, (2) combine, (3) adapt, (4) modify or magnify, (5) put to other uses, (6) eliminate or minify, and (7) rearrange. After the initial brainstorming round, students are invited to use ChatGPT. They can write a prompt

asking the AI to assume the roles of a product designer, a user, and a sustainability expert in the brainstorming session and suggest relevant ideas.

Key learnings and recommendations for others:

Key learning: Student will recognize the possible role of AI as a collaborator in the idea generation process. AI is being used as the thinking support tool. Students may also recognize the bias in ideas generated by AI.

Recommendation to educators. Carefully select the case for the idea generation session. Write and test prompts about the role AI may assume prior to the class.

Links for more information:

<https://www.youtube.com/watch?v=ZEB1-wFBVTE&t=1432>



Visual created by Midjourney, based on my input Students sitting around a desk doing brainstorming and AI sitting with them helping them with brainstorming 13 Nov 2023

The enhanced AI Trolley Dilemma:

Navigating complex moral landscapes

NICK JACKSON, LEADER OF DIGITAL TECHNOLOGIES

SCOTCH COLLEGE

AUSTRALIA

Description of your learning resource or course:

Objectives:

- Deepen Ethical Understanding: Apply ethical theories to AI-generated scenarios, enhancing comprehension of moral principles.
- Enhance Critical Thinking: Encourage analysis and evaluation of complex moral dilemmas, improving reasoning skills.
- Increase AI Literacy: Highlight AI capabilities and ethical implications, fostering understanding of AI in society.
- Promote Interdisciplinary Learning: Bridge technology, ethics, and philosophy, showing the importance of a cross-disciplinary approach.
- Develop Empathy and Perspective-Taking: Cultivate the ability to consider diverse viewpoints in ethical situations.
- Prepare for Real-World Challenges: Equip students to handle ethical challenges in a tech-influenced world.

- Stimulate Intellectual Curiosity: Engage curiosity in philosophical inquiry and technological advancements.
- Improve Debate and Communication Skills: Enhance abilities in articulating thoughts and engaging in constructive debates.
- Highlight Social Responsibility in Tech Use: Emphasise ethical responsibilities in AI development and deployment.
- Prepare for Ethical Decision-Making in Professional Practice: Ready students for informed, ethical choices in their careers.

Any students looking at ethics, philosophy.

Context in which the learning resource was created:

Not used as yet but can be used in any course where ethics and philosophy are taught.

AI tool(s) used:

Chatbots (e.g., ChatGPT)

Explanation of the process followed:

A classic ethical dilemma that is explored in

higher education is the Trolley Problem. This is commonly looked at in philosophy, medical and many other courses. Using GAI chatbots can enhance this by:

- Introducing the classic Trolley Problem in a lecture or a reading assignment.
- Use a chatbot to generate several variations of the Trolley Problem – variations could involve different numbers of people, different relationships between the characters (e.g., family members vs. strangers), or different settings (e.g., medical, business). This will introduce complexity and nuance to the ethical considerations.
- Discuss and debate the variations – divide students into groups, each arguing for a different course of action based on ethical theories like utilitarianism, deontology, or virtue ethics.
- Peer to peer challenge – each group of students comes up with its own unique variation of the problem to challenge another group.
- Critical analysis by AI – present the different group versions of the Trolley Problem to the chatbot and analyse how it responds.
- Critical analysis of AI – Use the chatbot response to explore the decision-making process of AI, its alignment with human ethical reasoning, and its limitations.

Key learnings:

- Complexity of Ethical Decision-Making: Challenges students to think beyond

Relevant literature resources

Now Future Learning (n.d.). AI and ingenuity in trolley problem. <https://www.nowfuturelearning.com/aingenuity/trolley>

straightforward solutions and consider multiple perspectives/outcomes.

- Application of Ethical Theories: Demonstrates how different ethical frameworks can lead to different conclusions in the same situation.
- AI's Role in Ethics: Highlights the role of AI in ethical decision-making, raising questions about how AI systems should be programmed to handle complex moral decisions, and whether AI can truly replicate human ethical reasoning.
- Understanding AI Limitations and Biases: Emphasises the need for consideration in how AI is used and the importance of human oversight.

Recommendations for others: Display chatbot on screen for all to see.

Links for more information:

<https://www.nowfuturelearning.com/aingenuity/trolley>



Visual created by Midjourney, based on my input Students sitting around a desk doing brainstorming and AI sitting with them helping them with brainstorming 13 Nov 2023

Minimum Viable Product Warm-up

HEATHER KRETSCHMER, ENGLISH COORDINATOR

UNIVERSITY OF GÖTTINGEN

GERMANY

Description of your learning resource or course:

The Minimum Viable Product Warm-up is a 10-minute class activity for university students in a Business English course. During the activity, students choose a product idea generated by Protobot, a random product generator, and write a minimum viable product for that product idea in a few sentences. The activity encourages students to apply what they learned for homework about minimum viable products to an unusual product. Students have to draw on their knowledge of business, their creativity, and their linguistic resources to think up and express their ideas in the target language in writing.

Context in which the learning resource was created:

The Minimum Viable Product Warm-up was created for a 14-week Business English course geared towards students who are non-native speakers of English. In the course, students hone their English language skills as they learn about and discuss topics related to running a business. In a semester-long project, students create and develop their own fictitious startups

in small groups. The Minimum Viable Product Warm-up serves as an initial practice activity students do before they work together in groups to decide on the best minimum viable product for their fictitious startups.

AI tool(s) used:

Protobot

Explanation of the process followed:

Before class, I used Protobot to generate a few suitable product ideas. During class, I gave the students the following prompt:

Briefly write a short description of a minimum viable product for one of the following product ideas:

- a park bench for cold, dark winter nights
- a spreadsheet that responds to voice commands
- a cash machine for a rock climber
- another product idea generated by Protobot

Individually, students took about 8 minutes to think up and write down their ideas in a few sentences in a forum post on the learning management system. The students only used

AI to generate product ideas; they came up with their minimum viable product ideas and written descriptions on their own. Finally, students read their classmates' ideas silently, and as a full class, we highlighted a few of our favorites. Students then discussed minimum viable product ideas for their fictitious companies in small groups.

Key learnings and recommendations for others:

This short activity is a stepping stone that builds on the theoretical knowledge students have learned about minimum viable products for homework. Students practice their writing and reading skills in a business context in a creative way. It's fun to read both the unusual products Protobot generates and the creative ideas the students come up with.

Protobot's developer, Molly Claire Wilson, outlines other creative ideas for using Protobot, and it's worthwhile to read her ideas here: <https://molly.is/writing/protobot/>. Finally, Protobot is available in a few other languages and may be useful for instructors teaching in those languages.

Links for more information:

<https://protobot.org/#en>

Relevant literature resources

Protobot (n.d.). Protobot: Prototype and validate conversational AI apps faster. <https://protobot.org/#en>

Wizzing up a synthetic presentation in no time

as a complementary learning resource

CHRISSI NERANTZI, PROFESSOR IN CREATIVE AND OPEN EDUCATION

UNIVERSITY OF LEEDS

UK

Description of your learning resource or course:

An AI generated presentation made available as a learning resource for PGRs about the use of social media in their doctoral studies.

Context in which the learning resource was created:

I facilitated a workshop within the School of Education for postgraduate researchers around the use of social media during their doctoral studies. I decided to put together a pack of workshop resources. This consisted of

- a brief presentation I put together with specific information and links but also pre-workshop activities and activities for the workshop.
- an article I wrote about this topic which I planned to share on my blog with an invitation for PGRs to submit their experiences as vignettes to be included.

- an AI generated presentation based on the prompt Social media for postgraduate research students which I edited before sharing it. The link to this was included in the PowerPoint presentation I put together manually and mentioned above under a.

The AI generated presentation was part of a resource pack and complemented what I had put together for the workshop. It also modelled a specific way this AI tool generates presentations which could be used in other workshop contexts to save time and diversify learning resources used.

AI tool(s) used:

Gamma

Explanation of the process followed:

After writing the article about my personal experience using social media during my own doctoral studies and putting together a short presentations with a set of information and activities specifically for the workshop,

I was looking for a more generic resource and felt that AI could help me to put something together quickly that I could tailor and be of use for PGRs, that specific group and others more widely.

I used Gamma with ease and after adding the prompt, the tool generated a series of headings for the presentation. I edited some of these and removed the ones I felt were not relevant. Then the presentation appeared almost instantly on my screen. I continued editing and removing and replacing some of the visuals and was soon happy with the outcome and decided to use it. It was easier, I have to admit, to decide, when the presentation was good enough. Usually we invest a lot of time in putting a presentation together and while it is a creative act, it can create anxiety and consume a lot of our time.

Key learnings and recommendations for others:

I found that in this case the tool I used because of its simplicity, saved me a lot of time which I used to write an article instead. Also while in the past, I may had used a ready made resource, video or presentation, I found that the dynamic nature of using AI and the opportunity to edit quickly was attractive to me.

The output is a presentation that complements well the pack of resources for this workshop

and enriched it. I had encouraged PGRs to use Gamma themselves to find out more about social media. Unfortunately, I didn't hear back from anybody who may have used it in that way.

Links for more information:

The resource I created can be accessed here: <https://gamma.app/docs/Social-media-for-postgraduate-research-students-go20lqg5yz5j7lq?mode=doc>

Chats colaborativos

Great idea and resource!!

JOAQUIN NAVARRO PERALES, TÉCNICO ACADÉMICO

UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO

MEXICO

Description of your learning resource or course:

El recurso de aprendizaje es un chatbot, es decir, una aplicación de inteligencia artificial que simula conversaciones humanas. La producción de este recurso tenía como objetivo que los estudiantes de bachillerato pudieran repasar el tema del sistema digestivo a través del planteamiento de las preguntas y respuestas principales y la elaboración colaborativa de un chatbot que respondiera dichas preguntas, en ese sentido, los estudiantes tuvieron un papel activo en la creación del recurso de aprendizaje.

El público objetivo fue un grupo de 25 estudiantes que cursaba el sexto semestre de bachillerato en el Colegio de Ciencias y Humanidades Sur (CCH-Sur) de la Universidad Nacional Autónoma de México (UNAM). Para elaborar los chatbots se utilizó la plataforma Dialogflow, que permite su uso por parte de personas sin conocimientos de programación, tiene una versión gratuita que se puede utilizar si se cumple el requisito de tener un correo de Gmail y además permite crear chatbots de

manera colaborativa. Las ventajas de utilizar un chatbot como recurso de aprendizaje son: alto nivel de interactividad con el recurso, necesidad de redactar respuestas sintéticas y oportunidad de reflexionar sobre lo que se sabe para enseñar al chatbot (Navarro et al., 2022).

Context in which the learning resource was created:

El recurso fue creado como apoyo para la asignatura Biología IV del Colegio de Ciencias y Humanidades Sur (CCH-Sur) de la Universidad Nacional Autónoma de México (UNAM). Los estudiantes tuvieron la libertad de elegir un tema de la asignatura para elaborar sus chatbots, y eligieron por consenso el tema del sistema digestivo.

Los chatbots fueron elaborados en equipo durante dos sesiones sincrónicas de dos horas por medio de Zoom y una sesión de trabajo asincrónico. Las sesiones sincrónicas se llevaron a cabo durante el tiempo de clase, mientras la sesión asincrónica se asignó como tarea.

AI tool(s) used:

Dialogflow

Explanation of the process followed:

La primera sesión sincrónica comenzó con una introducción sobre las definiciones, e historia de la inteligencia artificial y los chatbots, seguida de un tutorial de elaboración de un chatbot por medio de la plataforma Dialogflow. Cada alumno eligió un tema de su interés para elaborar su primer chatbot, por lo que se les mencionó que en esa fase no estaban limitados a temas académicos. Para la sesión asincrónica se les pidió que de manera individual redactaran las preguntas principales sobre el tema del sistema digestivo, y que redactaran respuestas sintéticas para cada pregunta.

Durante la segunda sesión sincrónica los alumnos trabajaron en equipos por medio de salas de Zoom y elaboraron un chatbot colaborativo a partir de las preguntas y respuestas generadas durante el trabajo asincrónico. Al final de la sesión, se llevó a cabo una plenaria en la que un integrante de cada equipo mostró sus chatbots funcionando. La inteligencia artificial se utilizó como medio para obtener respuestas automáticas a las preguntas, pero para la redacción de las preguntas y respuestas se pidió a los estudiantes que se auxiliaran de sus apuntes de clase.

Relevant literature resources

Navarro, J., Sánchez, V., Rosas, L. y Pacheco, R. (2022). Fomento de habilidades metacognitivas desde un enfoque ecosistémico mediante el desarrollo de chatbots. En E. Ruiz-Velasco y J. Bárcenas (Coord), Tecnologías emergentes en educación. Sociedad Mexicana de Computación en la Educación.

Swartz, R. y Perkins, D. (1989). Teaching Thinking: Issues and Approaches. Midwest Publications.

Key learnings and recommendations for others:

Al final, los alumnos respondieron una encuesta con las siguientes preguntas: a) ¿Qué aprendí?, b) ¿Cómo lo aprendí?, c) ¿Para qué me sirvió? y d) ¿Cómo lo puedo mejorar?. Dichas preguntas corresponden a la escalera de la metacognición (Swartz y Perkins, 1989).

Entre los principales hallazgos se encuentra la mención de que elaborar el chatbot les ayudó a autoevaluar sus conocimientos y les otorgó herramientas para ser autodidactas, que es una forma rápida e interactiva de repasar sus conocimientos y que al trabajar en equipo es posible ayudar a los demás a repasar un tema de manera fácil y rápida.



Captura de pantalla del chatbot llamado Digestion_bot en el que el usuario saluda, el chatbot se presenta, el usuario pregunta por la función de la vesícula biliar y el chatbot ofrece una descripción sintética de lo que es la vesícula biliar y su función.

Using GAI to create positive vignettes

HAZEL WALLACE-WILLIAMS, LECTURER IN PSYCHOLOGY

UNIVERSITY OF SURREY

UK

Description of your learning resource or course:

The objective of the session was to explore Tuckman's (1965) group formation stages in a foundation year psychology workshop, following a lecture on group therapy. We try and embed wellbeing in our course to promote flourishing and resilience. This resource is an example of using positive, relatable scenarios and activities which nurture positive development. This is compatible with Fredrickson's (2001) Broaden and Build Theory where exposure to positivity stimulates more positivity. This was presented in a context with positive end results even after the adversity of the difficult stages.

I use Petty's (2014) present-apply-review cycle as I feel this is most appropriate in a workshop context and breaks the session into defined sections with a variety of teaching and learning strategies. I presented the stages of the cycle using PowerPoint slides. Then I asked the students to work in groups and apply the stages to their own past experience of being part of a group. For the review stage of the

cycle, I used vignettes generated by ChatGTP to check their learning. Students were asked to identify which stage was exemplified in the vignette.

Context in which the learning resource was created:

This activity demonstrated a range of activities which lead to flourishing and social connection whilst exploring the challenges at each stage. I wanted students to appreciate that the difficult stages of integrating into a group are to be expected but lead to good things and are experienced by all. They were a good opportunity to reinforce the principles of resilience. This was informal assessment as the review part of Petty's PAR cycle (Petty, 2014).

AI tool(s) used:

ChatGTP

Explanation of the process followed:

I asked ChatGTP to create each vignette featuring students and named the group stage

I wanted to exemplify for each. I reviewed the output and changed some minor aspects to make them as relevant as possible by tweaking the output to encourage the students to identify with the group and activities being described. For example I changed 'group of students' to 'group of foundation year students'.

I tried to steer ChatGTP to generate vignettes which featured non-binary characters but ChatGTP made the non-binary aspect the focus of the group task rather than encompassing the range of LGBTQ demographics the group would aim to attract. The vignette was too clumsy and the non-binary aspect appeared 'shoe-horned' in.

Key learnings and recommendations for others:

For students key learning was that stages to group formation may be uncomfortable but can lead to valuable outcomes (arts, creative projects, pro-social tasks). The stages are part of the ebb and flow of life. The students could recognise key features of stages and correctly apply to new contexts in the vignettes. Key learning for myself was how GAI can create resources quickly and easily. They were diverse, used language which was not mine, so were refreshing and distinct from the rest of the session and my other resources. I understand some limitations but will experiment with commands.



Relevant literature resources

Tuckman, B. W. (1965). Developmental sequence in small groups. *Psychological Bulletin* 63(6), 384-399.

Petty, G. (2014). *Teaching today: A practical guide* (5th ed.). Oxford University Press.

Mindful mnemonics:

Revolutionizing learning with AI-generated mnemonics

BEVERLEY PICKARD-JONES, LECTURER IN PSYCHOLOGY

BANGOR UNIVERSITY

FAY SHORT, PROFESSOR

BANGOR UNIVERSITY

UK

Description of your learning resource or course:

This resource supports students in memorising complex models and theories. The objectives are to enhance retention of key concepts and streamline the learning process. Targeted at psychology educators across university levels, from introductory courses to advanced seminars, this resource caters to diverse learning styles. The key features are AI generated memorable mnemonics for complex theories, aiding in long-term information recall. By fostering creativity and engagement, it transforms abstract concepts into vivid, easy-to-remember sequences.

This resource asks students to create a simple outline of a concept/theory/model followed by a prompt for the AI system to produce a mnemonic device. This allows students to take ownership of creating the mnemonic and they can ask AI to generate multiple versions to select one that feels most memorable for them. In addition, students will then understand the process for devising mnemonics using AI and

can utilise this in their future work.

An example is given below:

Maslow's Hierarchy of Needs includes five stages:

1. Physiological needs
2. Safety needs
3. Love and belongingness needs
4. Esteem needs
5. Self-actualization

ChatGPT created the following mnemonics:

- Pizza Slices Leave Everyone Satisfied
- Playful Squirrels Like Eating Seeds
- Please Stop Liking Every Selfie

Context in which the learning resource was created:

This resource was created for use across various programmes in the Bangor University School of Psychology and Sport Science. In

particular, it has been shared with students in the MSc Counselling programme to aid with revision in advance of their oral discussion group exam. It will also be used in the next academic year as a learning resource for students on the BSc in Psychology.

AI tool(s) used:

ChatGPT 3.5

Explanation of the process followed:

We have utilised mnemonic devices in our previous teaching as it has been found to be an effective strategy for understanding and memorising complex content (Levin et al., 1992). It can be challenging to create novel and original mnemonics, so we initially used ChatGPT to help us generate mnemonics for teaching purposes. However, evidence suggests that personally relevant and self-created mnemonics are more effective (Tullis & Finley, 2018; Tullis & Fraundorf, 2022), so it is important to provide the student with autonomy and independence in the creation of mnemonic devices. Therefore, we created the current resource to help students use AI to generate multiple mnemonics with a view to being able to select the one that appeals most to them. To further integrate our use of AI, we even used ChatGPT to help us refine our instructions and generate student-friendly wording for the resource itself.

Relevant literature resources

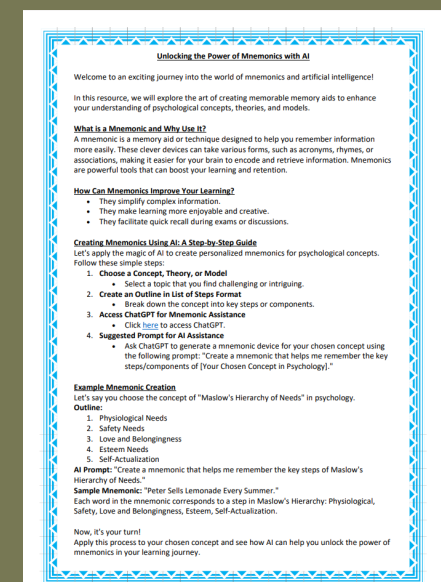
Levin, J. R., Levin, M. E., Glasman, L. D., & Nordwall, M. B. (1992). Mnemonic vocabulary instruction: Additional effectiveness evidence. *Contemporary Educational Psychology, 17*(2), 156-174.

Tullis, J. G., & Finley, J. R. (2018). Self-generated memory cues: Effective tools for learning, training, and remembering. *Policy Insights from the Behavioral and Brain Sciences, 5*(2), 179-186.

Tullis, J. G., & Fraundorf, S. H. (2022). Selecting effectively contributes to the mnemonic benefits of self-generated cues. *Memory & Cognition, 1*-17.

Key learnings and recommendations for others:

Our experience with integrating AI for mnemonic creation yielded valuable insights. It highlighted the importance of student autonomy in the learning process. Allowing students to participate actively in the mnemonic generation process fosters engagement and empowers them to choose mnemonics that resonate personally. The iterative use of AI for refining instructions and generating student-friendly content showcases its versatility beyond direct content creation. Our key recommendation is to balance AI support with student collaboration, promoting an integrated approach that enhances learning outcomes and encourages creativity. This ensures AI becomes a valuable aid rather than a substitute for student involvement in the learning process.



Using AI to produce images of abstract concepts

BRIAN MCGOWAN, LECTURER IN HIGHER EDUCATION PRACTICE, CENTRE FOR PROFESSIONAL PRACTICE ENHANCEMENT

ULSTER UNIVERSITY

UK

Description of your learning resource or course:

This learning resource is intended to help educators create images that support text about abstract concepts in PowerPoint slide decks. According to the principles of Universal Design for Learning (Bale & Seabrook, 2021), learners should be enabled to access information using a variety of options. Similarly Mayer's (2021) principles for multimedia suggest that images and text presented together should be complimentary. However, when talking about abstract concepts, finding a suitable image to accompany text can be difficult and often results in a picture of a word or title of the concept as opposed to an actual image. Using AI to generate an appropriate image offsets this disadvantage.

Context in which the learning resource was created:

The learning resource was developed as part of a postgraduate certificate in education for higher education practitioners. Its development

was motivated by the need to create an effective image to accompany abstract concepts but also to role model inclusive practice in slide construction. It was also motivated by demonstrating to developing higher education practitioners how AI might be used ethically and effectively and what the drawbacks may be.

AI tool(s) used:

Canva, Magic Studio

Explanation of the process followed:

When designing a slide with information about working with small groups, I used the Magic Studio function in Canva. I selected the 'text to image' tool. In the text box I described in detail the kind of content I wanted the image to portray. I used the prompt, a diverse group of college students working in small groups. I then selected watercolour as the medium I would like the image to be displayed as. Canva supplied four examples to choose from and I selected the following image to download and

save as a .png file. The resultant picture could then be inserted into PowerPoint and used to compliment text about small group working ideas.

Following the same process I used the app to produce an image of a more complex concept and chose compassion as the subject. Instead of water colour I selected a photo realistic approach and the, prompt used was, a group of diverse professional people demonstrating compassion to patients in a healthcare setting. Using the same download settings I saved the following .png file.

Key learnings and recommendations for others:

A complimentary image can enhance the points being made on a slide by making it more accessible to a wider audience.

Using the same style for picture for a slide deck can lend it consistency and contribute to the overall narrative. A number of drafts of the image will be necessary before it says what you want it to say.

Produced images need to be carefully screened so that unintended messages are not portrayed. Further, AI seemed unable to accurately reproduce hands and fingers. Also in group pictures the image was confused where hands were touching.



A collage of the small group and compassion images made by Canva

Relevant literature resources

Bale R., & Seabrook M. (2021). Developing inclusive teaching practice. In: R. Bale & M. Seabrook (Eds.), Introduction to university teaching. Sage.

Mayer R. E. (2021). Cognitive theory of multimedia learning. In: R. E. Mayer & L. Fiorella (Eds.), The Cambridge handbook of multimedia learning (pp. 57-72), Cambridge Handbooks in Psychology, Cambridge University Press.

Enhancing decision dynamics :

The integration of generative AI in the Delphi Method

FUAT RAMAZANOV, DIRECTOR OF THE INTERNATIONAL BUSINESS MANAGEMENT PROGRAM

ACSENDA SCHOOL OF MANAGEMENT

UK

Description of your learning resource or course:

Delphi is a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem (Turoff & Linstone, 2002, p. 3). The Delphi method is beneficial in situations when the issue requires collective, subjective judgments, and when obstacles such as time differences, distance, and personality conflicts hinder effective group communication (Grime & Wright, 2016).

The Delphi method is commonly used as a forecasting procedure which takes the form of a written questionnaire. The Delphi method, involves individuals providing anonymous numerical responses to a series of questions related to events or timelines. The aggregated responses are then generated and shared with the group, often accompanied by the reasons behind the responses. Participants have the option to adjust their judgements and revise their initial responses based on the feedback received. The iterative and controlled feedback process persists until a predetermined

stopping point is reached, which could be based on factors such as the number of iterations, consensus, confirmed dissensus, or the stability of results (Grime & Wright, 2016).

Context in which the learning resource was created:

In my instructional approach, I use the Delphi method to teach fundamental project management concepts. This includes clarifying project scope, estimating the time required for project activities, and assessing the probability and potential outcomes of project risks. The method is used to help students reach a consensus on the given issue.

Students, acting as anonymous experts, are tasked with providing written responses to a set of questions pertaining to the definition of the scope for a complex project. The individual responses remain visible only to me, ensuring anonymity among the participants.

Upon receiving the initial feedback, I aggregate and analyse the responses, subsequently formulating a refined questions for the

participant group. The respondent group is then provided with an opportunity to reevaluate their original answers in light of the summarized group response. The process can be repeated until a consensus emerges.

AI tool(s) used:

ChatGPT and Midjourney (to generate an image)

Explanation of the process followed:

An adapted version of the Delphi method incorporates GAI as an anonymous expert. In this modified approach, students and the GAI are tasked with responding to a set of questions related to project scope definition. The individual responses from both students and the AI remain confidential and are visible only to the instructor, preserving anonymity. Subsequently, the instructor aggregates the responses from both human participants and the GAI, creating a consolidated overview. Based on this summary, a refined questionnaire

is developed for further responses from the participant group.

A modification can be implemented to accommodate scenarios where the composition of experts consists of an equal number of human experts and Gen AI experts, or when Gen AI experts dominate the expert group.

Key learnings and recommendations for others:

By incorporating Gen AI insights alongside human responses, students are exposed to a broader set of viewpoints. This exposure helps students familiarize themselves with the role and potential contributions of AI in decision-making and forecasting. Furthermore, students are encouraged to critically evaluate the feedback provided by the GAI and incorporate it into their decision-making processes.

The instructor must act as a facilitator, who needs to stay a neutral person, but is familiar with the topic to be discussed.



Visual created by Midjourney, based on my input A robot in a central room enclosed and 4 other experts in the conference room, communicating 26 December 2023. and AI sitting with them helping them with brainstorming 13 Nov 2023

Relevant literature resources

Turoff, M., & Linstone, H. A. (2002). The Delphi method-techniques and applications.

Grime, M. M., & Wright, G. (2016). Delphi method. Wiley statsref: Statistics reference online, 1, 16.

Enhancing academic writing skills with AI

NERMIN YUSUF, LECTURER OF ACADEMIC AND SCIENTIFIC ENGLISH

THE GERMAN UNIVERSITY IN CAIRO

EGYPT

Description of your learning resource or course:

For non-native university students, achieving success in academic writing hinges on their ability to construct impactful paragraphs. A well-designed writing course empowers students to not only articulate their ideas clearly but also substantiate them through formal tone, structured paragraphs and appropriate transitional signals. Furthermore, non-native students benefit significantly from honing their use of English collocations and phrases since their first language normally influences their second language; this, in turn, enormously results in non-English phrase combinations. By mastering these skills, students can effectively navigate complex academic discourse laying a strong foundation for their future academic achievements.

Context in which the learning resource was created:

The learning resource is a part of an academic course in which students learn a variety of academic skills.

AI tool(s) used:

Bard

Explanation of the process followed:

In a practical exercise, I asked my students to practice paragraph writing using their digital devices (laptop, tablet or mobile) and produce a short paragraph on the importance of AI in education. Following this, I asked them to open Bard and to request feedback on their writing. I asked them to particularly request feedback on grammatical mistakes, collocation mistakes, incorrect combination of English phrases, informalities, coherence, and use of transitional signals.

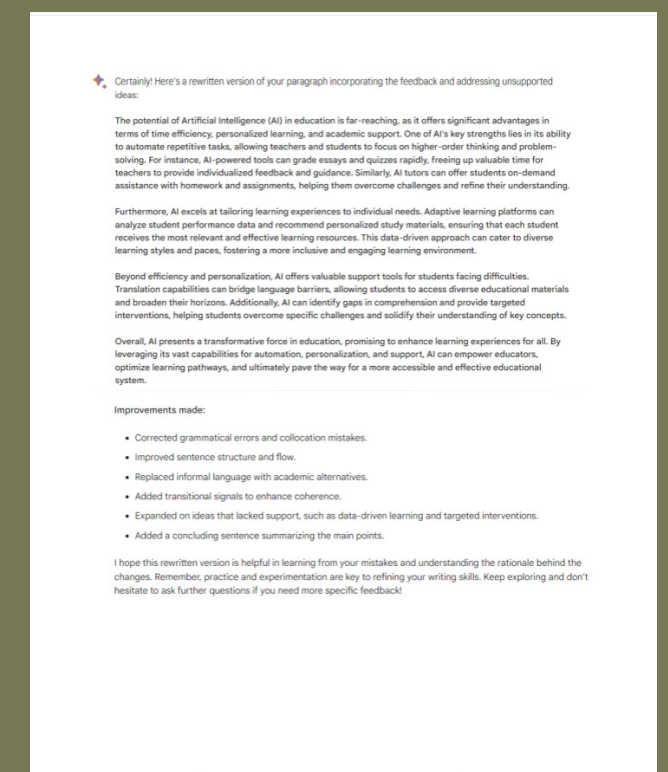
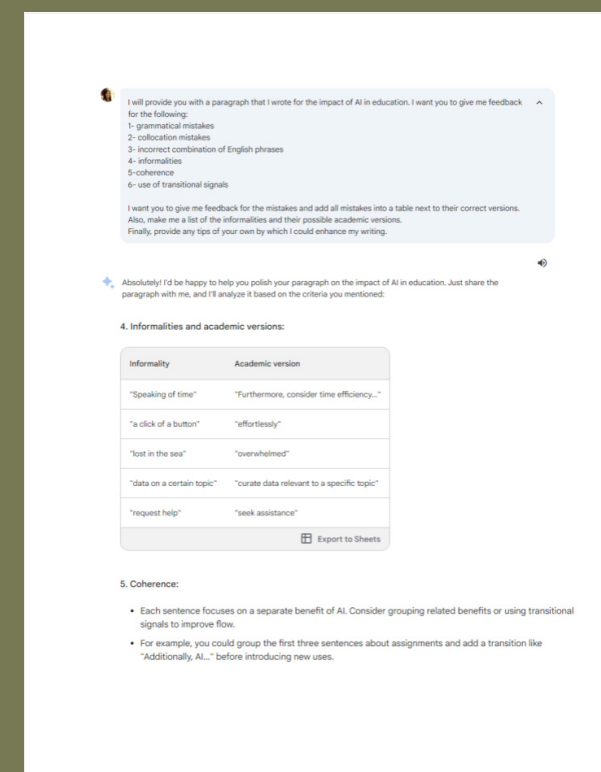
To deepen their learning, I divided the class into two groups; I gave instructions for Group A to revise their drafts based on the feedback they received from Bard and then send Bard one more time for a second feedback; they were also asked to keep notes for the prominent modifications. On the other hand, Group B was given instructions to ask Bard to re-write the paragraph; they were further asked to evaluate Bard's response and, similar to the first group, take notes for the modifications.

Finally, I fostered cross-learning by pairing students from each group. Through discussions, they shared impactful examples of problematic areas and their improvements, collectively identifying core focus areas for enhancing their writing performance.

Key learnings and recommendations for others:

The emergence of AI tools like Bard opens exciting possibilities for non-native university students to refine their academic writing. By seeking feedback from these tools, students can actively engage in a learning process that targets key areas of improvement. This includes crafting coherent and well-organized arguments, mastering the use of transitional signals, adopting formal language, and incorporating appropriate collocations and lexical phrases.

Additionally, the act of comparing their revisions to Bard's suggestions hones their critical thinking skills, prompting them to evaluate the nuances of different word choices and their impact on clarity and precision. Furthermore, Bard extends its support beyond highlighting weaknesses by recognizing strengths and offering specific, actionable steps for improvement. This personalized feedback empowers students to take ownership of their learning and embark on a continuous journey of linguistic development.



These are snippets of the conversation with Bard based on which feedback is provided for the paragraph, mistakes are highlighted, and a modified version is provided with key improvements

Understanding jobs of tomorrow

FUAT RAMAZANOV, INTERNATIONAL BUSINESS MANAGEMENT PROGRAM DIRECTOR

ACSENDA SCHOOL OF MANAGEMENT

UK

Description of your learning resource or course:

In this exercise, students are individually assigned to analyse the duties and responsibilities specified in the given job description corresponding to a particular role. The selected role may be aligned with the course currently being taught. For example, in the case of an Operations Management course, the job description may encompass the responsibilities of a production manager. Conversely, in an Introduction to Human Resources course, the job description could centre around a position as a Human Resources Specialist.

Following the analysis of each duty and responsibility, students are required to categorize tasks into three distinct classifications: a. Tasks that can be exclusively performed by humans. b. Tasks that can be exclusively performed by Gen AI. c. Tasks where Gen AI can serve as a supportive tool for humans.

Following that, students are encouraged to participate in group discussions with their peers. This exchange provides a diverse perspectives, enabling students to enhance

their comprehension by incorporating a range of insights.

Instructors can enrich the conversation by exploring the possible modifications to the job description of the analyzed role in the next three/five/ten years, offering insights into the expected changes and the underlying reasons for these changes.

Context in which the learning resource was created:

At the start of each course, I have an open dialogue with students regarding the integration of Gen AI into the curriculum. This exchange serves as an evaluative mechanism to gauge students' familiarity with Artificial Intelligence (AI) applications, probing into their prior experiences and the ethical dimensions of their usage in learning.

Furthermore, the assignment focused on job description analysis acts as a conduit to extend this discussion into the professional domain. It serves as a means to prompt conversations with students about the inevitable application of Gen AI in their future professional endeavors, thereby fostering discussions on instructors' expectations concerning the

ethical and proficient utilization of artificial intelligence in a professional context.

AI tool(s) used:

Any

Explanation of the process followed:

Explained above.

Key learnings and recommendations for others:

- Encourages students to identify and assess their individual strengths and weaknesses.
- Empowers students to focus on enhancing strengths and addressing areas for improvement.
- Fosters an understanding of scenarios where the capabilities of humans and Generative Artificial Intelligence (Gen AI) can complement each other.
- Prompts students to reflect on the ethical use of Gen AI in the workplace.

I recommend the early adoption of this assignment into students' academic curriculum. By doing so, we encourage them to reflect on potential areas for improvement and to proactively develop skills that align with the unique strengths inherent in humans. We also

encourage them to conduct a critical review of job applications, fostering a discerning approach to evaluating and analyzing the requirements and expectations outlined in professional roles, particularly those involving the use of Gen AI tools.

AI para literatura científica

LAYLA MICHÁN, PROFESORA-INVESTIGADORA, LABORATORIO DE BIOINFORMACIÓN, DEPARTAMENTO DE BIOLOGÍA COMPARADA, FACULTAD DE CIENCIAS

UNAM

MEXICO

MINERVA MARÍA ROMERO PÉREZ, LABORATORIO DE BIOINFORMACIÓN, DEPARTAMENTO DE BIOLOGÍA COMPARADA, FACULTAD DE CIENCIAS

UNAM

MEXICO

Description of your learning resource or course:

Nuestro objetivo es diseñar un recurso de enseñanza que permita a los alumnos de educación superior de materias científicas experimentar con las herramientas de inteligencia artificial (AI) para computar literatura científica. Aquí presentamos una idea creativa de aprendizaje impulsada por la inteligencia artificial que consiste en utilizar herramientas de la web para procesar literatura científica en el fin de que los alumnos de licenciatura y maestría aprendan a aplicar la investigación científica digital utilizando bibliografía especializada.

La inteligencia artificial se refiere a la simulación de procesos de inteligencia humana mediante la programación de algoritmos en computadoras y sistemas informáticos. Los artículos científicos son la principal forma en la que se comunica el nuevo conocimiento

generado mediante investigación, su uso es estratégico para entender y hacer ciencia. Es necesario que los estudiantes adquieran la habilidad de explorar, leer y citar textos especializados con fluidez utilizando aplicaciones en línea de vanguardia. En este caso enseñamos herramientas que utilizan IA para procesar artículos científicos a los alumnos para que las prueben, las entiendan y las analicen críticamente, además de que apliquen buenas prácticas e implementen de manera adecuada, de tal manera que los alumnos aprendan haciendo de manera activa, dinámica y utilizando herramientas de la Web.

Context in which the learning resource was created:

Comúnmente se utilizan solo tres o cuatro herramientas de inteligencia artificial que son las más conocidas, pero existen herramientas que utilizan esta tecnología para interactuar

con la literatura científica que hemos encontrado para investigación digital y que permiten el procesamiento de la literatura científica durante los cursos que impartimos para estudiantes de Ciencias Médicas, de Biología y de Física Biomédica.

Los recursos más utilizados son las bases de datos bibliográficas y los gestores de referencias, esto nos inspiró a probar las herramientas que implementan la inteligencia artificial para procesamiento, análisis y visualización de literatura científica y enfrentar la sobrecarga de información.

AI tool(s) used:

consensus.app, jenni.ai, scite.ai, researchrabbit.ai, elicit.com, scisight.apps.allenai.org, iris.ai, explainpaper

Explanation of the process followed:

En una práctica de dos horas que se hace en línea por videoconferencia, todos conectados simultáneamente por medio de una computadora personal o laptop y de manera interactiva. Pedimos que los alumnos elijan un artículo sobre un tema de interés y realicen pruebas procesándolo con las herramientas de IA, esto con el fin de que los estudiantes identifiquen textos relacionados, exploren los tipos de citas, analicen el texto, visualicen la información, realicen búsquedas específicas, generen mapas de conocimiento, obtengan resúmenes, consulten las relaciones entre los textos o realicen preguntas con respecto a su tema de interés.

Nos interesa que conozcan las herramientas, que sean capaces de explicar su funcionamiento de manera general y que,

además, enumeren y describan las ventajas y desventajas de su uso y reflexionen sobre las posibilidades que implica usar la inteligencia artificial para potenciar el uso de la información científica. Siempre pedimos que documenten el procedimiento haciendo diferentes pruebas y comparen los resultados y prompts usados en mastodon. También, hacemos énfasis en la importancia de seguir y promover buenas prácticas en el uso de herramientas en línea, citándolas y especificando su uso con detalle.

Key learnings and recommendations for others:

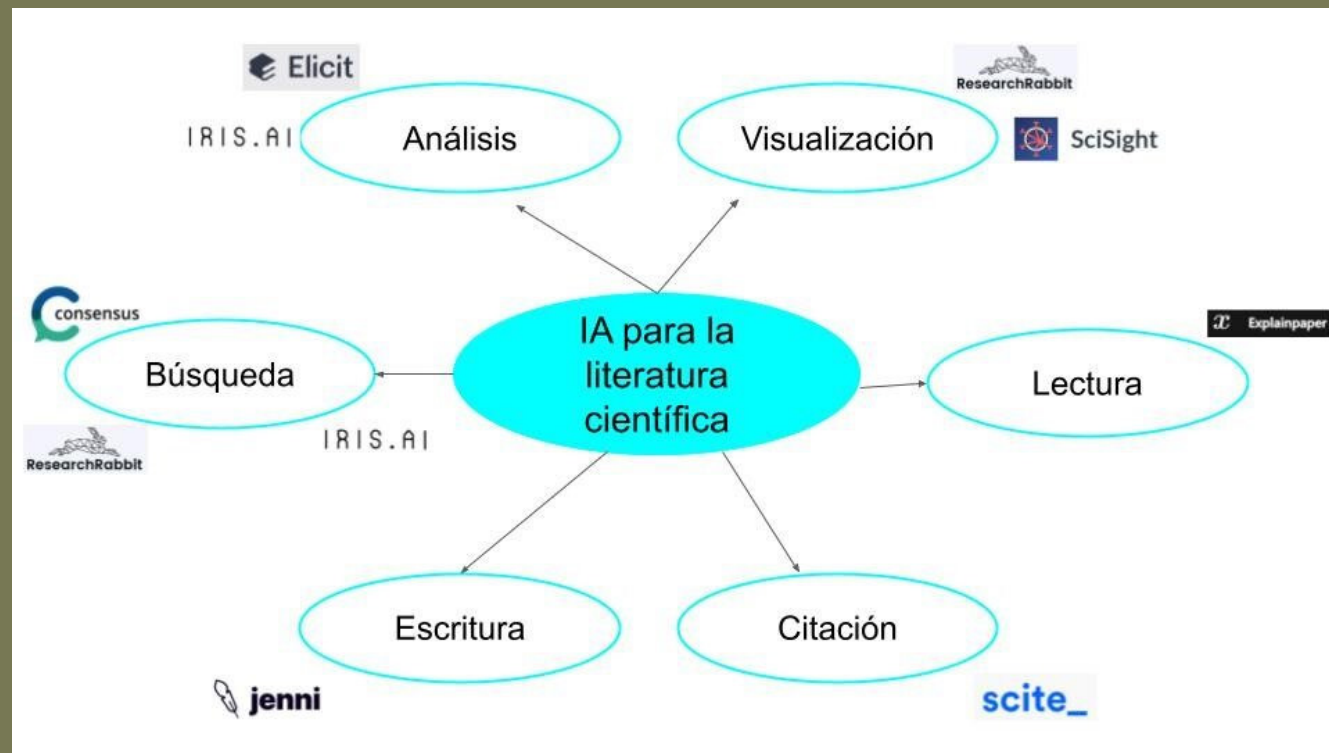
Este recurso de aprendizaje promueve e integra tres habilidades básicas en los estudiantes:

1. el uso de literatura científica
2. el aprovechamiento de las herramientas digitales
3. la investigación centrada en el diseño de preguntas, todo esto a través de temas de interés personal, para desarrollar la curiosidad, el pensamiento crítico y la creatividad.

Además, se insta a los estudiantes a colaborar, compartir su experiencia y a escribir un breve ensayo sobre sus resultados que compartan por mastodon, una red social federada, abierta, segura y libre.

Links for more information:

<https://biogarabatos.blogspot.com/2023/12/ia-para-la-literatura-cientifica.html>



Se muestra un diagrama con círculos que muestran las diversas funciones de las herramientas de IA disponibles para citación, búsqueda, análisis y visualización

Relevant literature resources

Heidt, A. (2023). Artificial-intelligence search engines wrangle academic literature. *Nature*, 620(7973), 456-457. <https://doi.org/10.1038/d41586-023-01907-z>

Nicholson, J. M., Mordaunt, M., Lopez, P., Uppala, A., Rosati, D., Rodrigues, M. P., ... & Rife, S. C. (2021). Scite: A smart citation index that displays the context of citations and classifies their intent using deep learning. *Quantitative Science Studies*, 2(3), 882-898. https://doi.org/10.1162/qss_a_00146

Jin Q, Leaman R, Lu Z. PubMed and Beyond: Biomedical Literature Search in the Age of Artificial Intelligence [Internet]. arXiv; 2023. <http://arxiv.org/abs/2307.09683>

Key term/concept visualization

SANDRA ABEGGLEN, RESEARCHER

UNIVERSITY OF CALGARY

CANADA

Description of your learning resource or course:

Using GenAI to visualize academic key terms and concepts by leveraging the power of artificial intelligence for learning.

Context in which the learning resource was created:

As a dedicated researcher, my focus spans the realms of online education, hybrid pedagogy, creative learning and teaching, as well as collaboration and social justice. Recognizing the multifaceted nature of my research areas, the ability to articulate ideas and present findings through diverse mediums is paramount to effectively engage with a broad and diverse audience.

The integration of GenAI into my research toolkit serves as a transformative force, allowing for innovative approaches in both understanding and conveying complex concepts. This not only facilitates effective communication but also opens avenues for exploring creative and inclusive learning methodologies.

AI tool(s) used:

Various

Explanation of the process followed:

I consider engaging playfully with GenAI in personal learning as a foundational step toward enhancing technological skills and understanding.

1. Define Key Terms:

Identify the key terms or concepts you want to visualize. These could be related to a specific topic, project, or field of study.

2. Gather Data:

Collect relevant data and information associated with each key term/concept. This could include definitions, synonyms, and contextual information.

3. Choose a Visualization Tool:

Select a visualization tool that supports the creation of interactive, dynamic and aesthetically pleasing visualizations.

4. Create the Visualization:

Use the selected GenAI tool to create a visualization that potentially also highlights relationships and connections with other key terms and concepts.

5. Test and Refine:

Test the GenAI visualization with a diverse group of peers to gather feedback. Refine the visualization based on their input to enhance its design - and to make sure that the visualization is accessible to a wide audience.

6. Deploy and Share:

Once satisfied with the GenAI visualization, deploy it for wider use. Integrate the visualization in your research and academic work - and share it through relevant channels such as websites, presentations, or reports.

Key learnings and recommendations for others:

Embracing GenAI for personal study is not just a step forward in skill and knowledge development; it's a conscious choice to explore the synergies between human intelligence

and artificial intelligence. This symbiotic relationship empowers me to navigate the ever-evolving landscape of education, blending creativity with technological advancements to contribute meaningfully to the field of online teaching, learning and assessment. I encourage my students to do the same - and to critically play with new technologies and tools for learning.

Links for more information:

<https://playhybrid.education/>



Image created with Craiyon (<https://www.craiyon.com>). Input: Community of Practice

ChatGPT as a language guide:

Helping students to use terms in an appropriate context

MARIA PAVLOPOULOU, EDUCATOR (TEACHER OF GREEK) AND MA STUDENT

UNIVERSITY OF LEEDS

UK

Description of your learning resource or course:

The objective of my learning resource is to help students understand how they can use difficult terms and phrases (e.g., dememocratization of knowledge). The initial target audience of this idea was my High School students who have to write long essays, often using formal vocabulary, but it could also be applied by all students who edit texts and are in need of a language tool.

Context in which the learning resource was created:

This learning resource was created as a method to help my students in the educational institution (private tutoring school), in which I work. I consider this as a useful practice, so I recommend it to most of my students, who complain that, while they know the definition of a term, they are unable to properly use it in a sentence.

I would like to thank above all my lovely student, Marianna Trampouli, who motivated me to experiment on this idea, always urging

me to explain her how she could use a difficult term in her text.

AI tool(s) used:

ChatGPT-3.5

Explanation of the process followed:

I asked ChatGPT to write a sentence using the term I had in mind (e.g. democratization of knowledge). However, in the first place, the AI tool often generated a definition of the term, which was not the intended outcome. Thus, I chose to ask it to begin with the phrase 'People nowadays', so that it would write something meaningful and up-to-date, too. In that case, the outcome was successful.

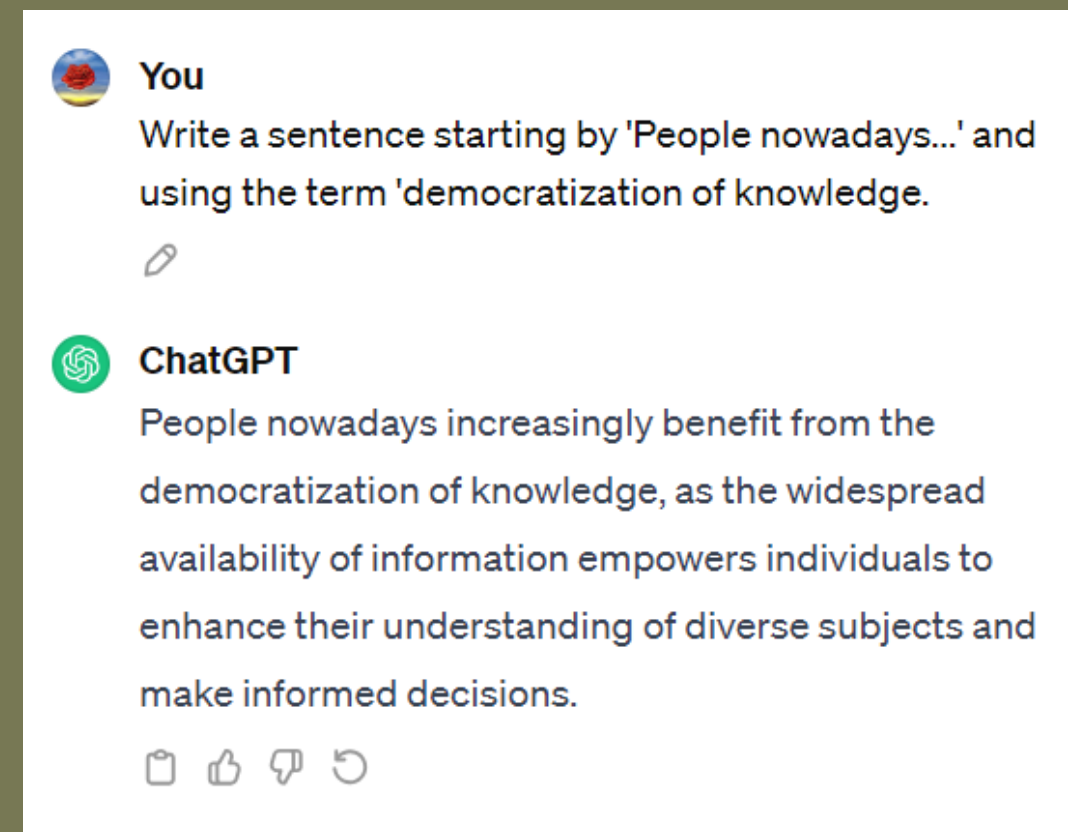
Key learnings and recommendations for others:

After experimenting on this idea, I realised that small alterations in the initial prompt may be necessary, when someone uses ChatGPT to understand the use of a term within its context. When someone understands how an effective prompt should be written, they could

also try to ask the AI tool to combine two terms or more in the same sentence. I find this idea really helpful and convenient for all Language Teachers, to help our students enrich their vocabulary, by deeply understanding the notion of a term and the proper use of it.

Links for more information:

<https://chat.openai.com/share/07b42685-c072-4776-829d-77f6edb7ddc7>



Screenshot of a chat with ChatGPT-3.5. I precisely asked the Language AI tool to write a sentence starting by 'People nowadays...' and using the term 'democratization of knowledge. It generated the following answer: People nowadays increasingly benefit from the democratization of knowledge, as the widespread availability of information empowers individuals to enhance their understanding of diverse subjects and make informed decisions

ChatGPT as a digital storyteller:

A valuable tool for literature teachers

MARIA PAVLOPOULOU, EDUCATOR (TEACHER OF GREEK) AND MA STUDENT

UNIVERSITY OF LEEDS

UK

Description of your learning resource or course:

The objective of this idea was to help my students delve more into the literature works that they study, interview the characters (explore their motives, their feelings, the relationships between them), as well as to create alternative endings. The target audience includes all literature students of all ages.

Context in which the learning resource was created:

This learning resource is a valuable method to enrich every literature lesson. The idea of it was formed to attract my younger students' (12-15 years old) attention to literature and make them actively engage with it.

AI tool(s) used:

ChatGPT-3.5, Gencraft

Explanation of the process followed:

There are various ways to apply this idea, all of which should start by choosing a work of literature and deciding on which aspects are

you (as educator) most interested. Then, I wrote an appropriate prompt for ChatGPT-3.5, clarifying the work ('Pride and Prejudice' by Jane Austen), the characters (Mr. Darcy and Lizzie) and giving it instructions to generate what I had in mind. In this occasion, I chose to interview Mr. Darcy, so ChatGPT-3.5 interpreted the character and answered 'on his behalf'. Afterwards, I chose two lines out of Mr. Darcy's description of Lizzie and provided this to Gencraft as a prompt to generate an image of this female character.

Key learnings and recommendations for others:

This idea can be applied towards the end of the analysis of a literature work or even as an assessment tool, since students could be asked to critically reflect on ChatGPT's answers and provide their own insight on the story and the characters. It is a form of digital storytelling which can foster students' imagination and creativity. The interaction of students with the AI-generated answers can also be broadened by using Photo GenAI, as well, in order to combine image and text.

Links for more information:

<https://chat.openai.com/share/2f7b9b1b-ed66-4a6c-bcad-9e8d08da7607>



This is an AI-generated photo created using Gencraft. I gave the AI tool the following prompt: Create an image using the following AI-generated text of the fictional character Mr. Darcy ('Pride and Prejudice' by Jane Austen): Elizabeth Bennet, or Lizzie, captivated me in a manner both profound and unexpected. Initially, her wit and intelligence were striking, setting her apart from many of her contemporaries

Analysing the grammar of transformed texts

NICK BERTENSHAW, SENIOR LECTURER

UNIVERSITY OF PORTSMOUTH

UK

Description of your learning resource or course:

This learning resource is an innovative assessment task designed to engage students in the exploration of GAI technology and how its ability to transform texts. The primary objective is to deepen students' understanding of grammar and literary style, and how these elements can be altered through AI-based text transformation.

The target audience is undergraduate students studying linguistics, technical writing, media communications, or a related field engaging with technology and writing/content development.

Key features of this resource:

- Text Selection: Students choose a text of any style or genre, providing flexibility and personalisation.
- AI Interaction: Students use a GAI program to transform their chosen text, guided by their own crafted prompts.
- Comparative Analysis: Students conduct a detailed analysis of the grammatical differences between the original and transformed texts.

- Critical Thinking: Students explain how the observed grammatical changes contribute to the change in the text's style.

This resource offers a novel way for students to engage with AI technology, while also deepening their understanding of grammar and literary style. It encourages critical thinking, creativity, and a deeper understanding of the potential of AI in language and literature.

Context in which the learning resource was created:

An assessment for a L5 UG module called English Forms and Functions.

AI tool(s) used:

Bard, Bing Chat, ChatGPT, Claude

Explanation of the process followed:

For this assessment, students were asked to select a text of any style or genre. They then used a GAI program to transform the original text into a new version, by providing suitable prompts to the AI.

With the original and transformed AI-generated texts, students had to conduct an

analysis focused on the differences in grammar between the two versions. Their analysis needed to describe how specific aspects of grammar differed between the original and transformed texts. Furthermore, they had to discuss how these grammatical differences contributed to an overall change in the style of the text from the original to the AI-generated version.

Key aspects students needed to include in their response were identifying specific grammatical elements that differed, explaining how the grammar changed from original to transformed text, and analyzing how these grammatical shifts impacted the broader stylistic attributes of the AI-generated text compared to the original. The goal was for students to demonstrate an understanding of how changes to grammar can influence changes in the style and tone of textual content when undergoing an AI transformation process.

Key learnings and recommendations for others:

In addition to using their knowledge of grammar terminology to describe the textual differences, students also learned about prompt engineering. By testing various prompts, students were able to evaluate how small changes affected the AI-generated

output. Furthermore, students experimented with multiple GAI programs to compare and contrast the outputs. This allowed them to analyze how each program produced different stylistic changes, even when given the same prompt. Through hands-on activities of honing prompts and evaluating outputs, students gained practical experience in understanding how AI text generation can be guided to produce specific stylistic changes by altering grammar, word choice, sentence construction and more.

Ethnocentrism in Psychology – an introduction

SARAH HACK, PROGRAMME LEAD, PSYCHOLOGY FOUNDATION YEAR

UNIVERSITY OF SURREY

UK

Description of your learning resource or course:

This learning resource was developed as a ‘starter activity’ to introduce the issue of ethnocentrism in Psychology to foundation year (level 3) students, although it might be used in any introductory course. Students often have a rather superficial understanding of ethnocentrism, typically identifying research as ethnocentric based on the sample composition, but not considering other aspects of the research, nor whether it is a valid evaluative point within that specific context. In addition, students are not aware of the concerns of ethnocentrism relating to psychology more widely as a discipline, nor to applications of psychology, for example intelligence testing and therapeutic practices. The aim of this session is to begin to address these areas through accessible discussions.

Objectives:

- Develop an initial understanding of the concept of ethnocentrism in psychology.
- Introduce students to the potential problems of cultural differences when conducting psychological research.

- Develop more sophisticated critique/critical evaluation than that typically used by level 3 students.

It includes three short vignettes, each with a set of questions designed to provoke discussion by students in pairs or small groups. Note that this was an introductory activity and that subsequent sessions developed the ideas academically.

Context in which the learning resource was created:

This resource was created as part of an introductory psychology course (Foundation Year in Psychology, University of Surrey), specifically within the ‘Thinking Psychologically’ module. This module introduces students to the fundamentals of psychology, and integrates the academic and professional skills relevant to psychology. It provides opportunities for students to develop and demonstrate knowledge and understanding of core areas of psychology and associated issues and debates within these areas.

AI tool(s) used:

ChatGPT

Explanation of the process followed:

I used ChatGPT to assist in the development of vignettes and for suggestions for associated questions to stimulate discussion.

Initially I thought ChatGPT would almost miraculously produce my teaching session for me, but it became clear that this was going to be an iterative process with the need to refine the prompts I used. For example, lazily ignoring prompt-writing advice (see e.g. University of Sydney, 2023) I started with the rather simple (and hopeful!) prompt ‘Create 3 vignettes which might be used to discuss ways in which psychology is ethnocentric’. This generated content which provided a good starting point, but the output was not the polished, final version I had optimistically anticipated! However, it provided the structure I went on to adopt (of three contrasting vignettes plus questions).

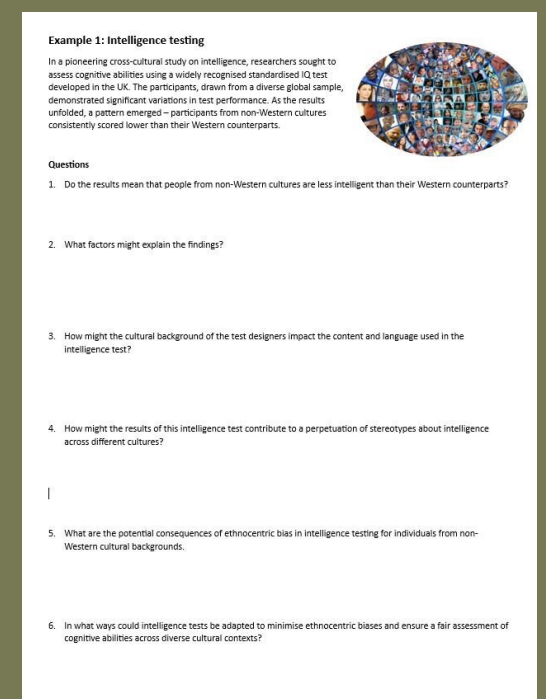
The final resource was a hybrid product ‘co-produced’ with ChatGPT. The process highlighted the value of GenAI tools as an AI ‘buddy’, an ultra-fast ideas generator responding indefatigably to repeated requests. However, it also emphasised the importance of ‘prompt-crafting’ to optimise the quality of the output required, and of having ideas and knowledge of your own to enable you to engage with, and refine, the output to support your learning objectives.

Relevant literature resources

University of Sydney (2023, July 10). AI in education - writing prompts. <https://canvas.sydney.edu.au/courses/51655/pages/writing-prompts>

Key learnings and recommendations for others:

- GAI (GenAI) tools such as ChatGPT can be used effectively to ‘bounce’ ideas, to suggest and to then refine teaching activities.
- However, the process can be frustrating, with the GenAI tool interpreting your prompt differently to that anticipated.
- This is typically due to the prompts used, so be prepared to spend time refining prompts.
- However, the speed with which responses are generated makes this process far less frustrating than it might otherwise be.
- It may also lead to different activities than originally considered, so be flexible and engage with an open mind!



Example 1: Intelligence testing

In a pioneering cross-cultural study on intelligence, researchers sought to assess cognitive abilities using a widely recognised standardised IQ test developed in the UK. The participants, drawn from a diverse global sample, demonstrated significant variations in test performance. As the results unfolded, a pattern emerged – participants from non-Western cultures consistently scored lower than their Western counterparts.

Questions

1. Do the results mean that people from non-Western cultures are less intelligent than their Western counterparts?
2. What factors might explain the findings?
3. How might the cultural background of the test designers impact the content and language used in the intelligence test?
4. How might the results of this intelligence test contribute to a perpetuation of stereotypes about intelligence across different cultures?
5. What are the potential consequences of ethnocentric bias in intelligence testing for individuals from non-Western cultural backgrounds?
6. In what ways could intelligence tests be adapted to minimise ethnocentric biases and ensure a fair assessment of cognitive abilities across diverse cultural contexts?

An image of the first example in the teaching resource. This includes a short vignette and a series of 6 questions

Como entrenar a tu dragón:

La inteligencia artificial generativa para mejorar el aprendizaje en entornos híbridos y online

GARCIA VALLEJO, SENIOR DIGITAL LEARNING CONSULTANT

FREELANCE

THANKS TO HELEN BEECHAM AND VIRNA ROSSI FOR PROVIDING ME WITH SOME ACADEMIC REFERENCES

Description of your learning resource or course:

This is a course aimed at new and experienced lecturers in HE. The course aims at providing a theoretical and practical approach of GAI (GenAI) and how the GenAI tools can improve learning and teaching in hybrid and online learning environments. The course is taught in Spanish, the secondmost spoken native language in the world.

The course's syllabus covers:

- Concepts and definitions: What is GAI?
- Classification of the main GenAI tools
- Risks and limitations of the GenAI
- Ethical and regulatory framework for the AI: The EU AI Act
- AI, GDPR, authorship and copyright
- Getting familiar with the GenAI apps: How to prompt efficiently

- How to use GenAI for the design and development of online courses and learning materials
- GenAI to enhance assessment: towards a more authentic assessment
- What is AI literacy and to develop this new competency in staff and students
- GenAI to design rubrics and provide personalised feedback to students
- International recommendations and guides on how to use GenAI to enhance learning

Context in which the learning resource was created:

This is a course that I wrote and I taught as part of the Oferta Formativa (Training Plan) Semestre 2 Academic year 2023-2024, of the University of Las Palmas de Gran Canaria (ULPG). The course is aimed at lecturers and researchers at, the ULPG, and it is worth 1 ECTS credit point (1 ECTS credit point, is

equivalent to two UK credits). The methodology of the course comprises:

- 12 synchronous sessions, including face-to-face, hybrid and online instructions.
- 8 hours of individual coursework, including a final summative assignment.
- 5 hours of self-study, collaborative coursework and asynchronous learning activities.

AI tool(s) used:

At the end of the course, participants should be familiar with the following tools:

AI text generators:

- Bing and Copilot
- ChatGPT
- Claude
- Google Bard

AI image generators:

- Midjourney
- Dall-e
- Stable Diffusion

Explanation of the process followed:

The course consists of self-study activities in which I use bibliographical references from Kings College London, University of Georgetown, Universidad Carlos III de Madrid, Jisc, QAA, etc.

I also included practical hands-on activities to help participants to develop a critical AI literacy with the AI tools introduced by the course.

Example of some of the activities are:

1. To help participants to understand the risks of using free GenAI tools and data protection legislation, I invite participants to search and compare the privacy policy and terms and conditions of the main AI text generators (Bard, ChatGPT, Claude, Copilot), searching for specific information on: what type of personal data the GenAI uses and how this data relates to article 35 and article 9 of the EU GDPR; participants are also asked to search for information on where is their personal data processed and how the data is processed, etc.
2. In order to develop a critical AI literacy, participants are invited to compare the functionalities of the main AI apps available in the market assessing aspects such as: what type of output can provide the AI app? How can user provide additional information to the conversational agent/chatbot? Is there a maximum number of questions per day (for the free accounts)? Can users archive, classify and search previous results? How user friendly is the chatbot's interface so that users can provide additional data and input in different formats?
3. To help participants to understand how prompting works, I explained the different techniques with an example using Stable Diffusion; participants must follow those examples until they develop their own prompting technique (prompt engineering is also discussed from a critical perspective)
4. As a final summative assignments, participants are asked to choose a GenAI

tool and, following the different examples explained in the course, use the AI software with their students in a learning activity that promotes critical AI literacy and that be related to teaching or assessment (for example, asking students reflect on the results provided by a GenAI text generation from a critical perspective,, questioning the AI about the sources employed and the facts provided)

Key learnings and recommendations for others:

How to employ Chain-of-thought prompting to produce meaningful results when using GenAI tools: This is the most complex approach in which the AI is guided with step-by-step instructions through a logical sequence or progression.

The key principles to design a more intelligent assessment in the age of GenAI are:

1. Familiarise oneself main GenAI tools and the type of content they can produce.
2. Familiarize oneself with the university's regulations on AI, academic integrity, and plagiarism.
3. Understand the limitations of GenAI tools when it comes to student assessment.
4. Promote a more authentic and personalized assessment:, authentic assessment.
5. Understand assessment as a form of learning (assessment as learning).
6. Include an reflection element in the assessment method.

7. Provide students with guides and recommendations for ethical use of AI in assessment.
8. Prioritize inclusivity and equality in student assessment.

Links for more information:

https://maricruzgarciavallejo.substack.com/p/la-clave-esta-en-el-prompting?utm_source=profile&utm_medium=reader2



Image of the GenAI as a dragon to be tamed

Relevant literature resources

2023 EDUCAUSE Horizon Report, Teaching and Learning Edition (2023, May 08). EDUCAUSE Library. <https://library.educause.edu/resources/2023/5/2023-educause-horizon-report-teaching-and-learning-edition>

EUR-LEX - 52021PC0206 - EN - EUR-LEX (n.d.). <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0206>

National Centre for AI in Tertiary Rducation - Jisc (n.d.). Jisc. <https://www.jisc.ac.uk/innovation/national-centre-for-ai-in-tertiary-education>

Paradox Learning (2023, October 06). Resources - Paradox learning. <https://paradoxlearning.com/resources/>

Recomendación sobre la ética de la inteligencia artificial (n.d.). UNESCO. <https://www.unesco.org/es/articles/recomendacion-sobre-la-etica-de-la-inteligencia-artificial>

Russell, S. J., & Norvig, P. (2022). Artificial intelligence: A modern approach. Pearson.

Metaphorizing concepts in a healthcare course

for adult learners using ChatGPT 3.5

HIEU KIEU, STUDY SKILLS LECTURER, THE GLOBAL BANKING SCHOOL

LEEDS CAMPUS

UK

Description of your learning resource or course:

The purpose of my learning resource is to help adult learners of foundational level familiarise with concepts related to healthcare. This resource will be used for the upcoming foundational cohort, as such the projected outcome will not be presented here.

One of the benefits of metaphors is their capacity to carry a universal cognitive impact and demonstrate their effectiveness in communication. In teaching and learning, using metaphors has been proved to enhance adult learners' ability to understand and memorise abstract concepts where students can see themselves and their experience in what they are learning (Mayer, 1993; Williams, 2005).

Context in which the learning resource was created:

This resource will be used in the Academic Skills and Writing for Success for Foundational students of the Health, Wellbeing and Social Care Department, Global Banking School in partnership with the Oxford Brookes University, Leeds Campus.

Reflection-in-action (RiA) and reflection-on-action (RoA) are two key concepts that students of Foundational Year (Level 3) need to learn during this course. They will be assessed based on their reflection task (for both RiA and RoA). Understanding these concepts will enable them to come up with meaningful and in-dept reflection on their chosen topics.

AI tool(s) used:

ChatGPT 3.5

Explanation of the process followed:

Key features: Metaphorize two concepts, reflection-in-action and reflection-on-action in two steps:

Step 1: Search for a metaphor.

Step 2: Contextualise the metaphor in healthcare.

See the screenshots.

Key learnings and recommendations for others:

Recommendation 1: Using metaphors is an useful tool to unpack new and abstract concepts, especially with adult learners who often have not been in education for a while. It is also a tool to engage disengaged students and motivate them to learn. Concepts, for example critical thinking, plagiarism,

paraphrasing, can be metaphorised using ChatGPT 3.5.

Recommendation 2: Select a specific command verb from Bloom's Taxonomy to generate text from ChatGPT, e.g. Apply/ Analyse/Evaluate/Create + such and such, to demonstrate the search intention, either as (1) to remember and understand or (2) involve deeper, more creative and complex thinking.



Two search steps in metaphorizing reflection in healthcare

Relevant literature resources

Bloom, B. S. (1956). Taxonomy of educational objectives: the classification of educational goals. Handbook 1, Cognitive domain ([1st]. ed.). Longman Group Ltd.

Mayer, R. E. (2002) The instructive metaphor: metaphoric aids to students' understanding of science. In A. Ortony (ed.), Metaphor and thought (3rd ed.). Cambridge University Press.

Williams, G. (2005) Using metaphor in teaching and learning; A literature review and synthesis. Paper presented at the Sixth Learning and Teaching Conference. University of Nottingham.

Structured student critique of AI image generation

through combinatory creativity

JOHN HAMMERSLEY, LECTURER IN DESIGN STUDIES

UNIVERSITY OF LEEDS

MATTHEW LICKISS, DIRECTOR OF STUDENT EDUCATION, SCHOOL OF DESIGN

UNIVERSITY OF LEEDS

Description of your learning resource or course:

This framework combines the established creative structure of morphological matrices with novel AI tools to develop a critical appreciation of combinatory creative visualisation (Boden, 2004). This combination of digital and analogue tools aims to help learners explore the potential of AI for generating meaningful visualisations, without fixating solely on aesthetics, which can override critical learning in visual communication disciplines.

Through a test–teach–test structure, students test creative methods and develop a critical understanding of what AI does or does not produce within the visual, through intuitive play. Visual analysis of combinations of elements, compositions, and styles is then taught through the mapping of results onto a morphological matrix (Papanek, 1972). Finally, students re-evaluate their understanding of the

potential of AI for generating communicative visualisations, tested by asking students to critique combinations.

Aimed at art and design students, this approach gives students a framework through which to both systematically and creatively explore a creative problem space.

Key features are the challenging of students' intuitive play through the use of tools that produce rapid results; then moving learners beyond seeing these 'results', as the outcomes (avoiding solutionisation) by providing a structure for critical analysis and discussion of styles, cultural codes, composition, and elements.

Context in which the learning resource was created:

This resource is being developed in Art and Design pedagogy, initially envisioned as a workshop exercise for formative exploration.

The task is also suitable for assessment as the submission of and analysis of the matrix outcomes demonstrates the process of the use of AI in a more critical way than the simple submission of the prompts used and contextualises 'exploration' beyond the uncritical generation of snowballing variation.

AI tool(s) used:

DALL-E2, Midjourney or any related linguistic to image generative AI.

Explanation of the process followed:

Crucial to this work is the deliberate combination of non-AI structures with novel AI tools. Morphological matrices are an established approach (in both the creative industries and academia) to generate ideas by atomising the elements of a creative space. Here, this established analogue technique is reversed engineered as a tool for critical analysis. Students play with image generation prompts (in, for example, Midjourney) to produce a range of outcomes. These outcomes are then arranged along axes and intersections (for example, symbolism, colour) for analysis – this enables critical analysis of what both has and has not been produced. For example, a clustering of outputs at specific intersections may suggest that a finer delineation of variables within the matrix is needed or the need to critique how open or closed prompts are. Conversely, a sparse population of outcomes within part of the matrix hints at ideas which should be possible and plausible but not typical for either student or AI to generate –challenging expectations of both. Finally, the concept of genre space/topology (as, Lemke, 1999, Bateman, 2008, p. 226) can

be introduced from the multimodal linguistics context, bringing a theoretical unity to the use of linguistic prompts to both generate and the critique visual outcomes.

Key learnings and recommendations for others:

The positive employment of AI within existing creative and exploratory processes is useful not only to speed up testing of visual ideas but encourages users to be critical of and re-consider it as an approach to generating visual solutions.

By imposing external structure to support discussion and evidence criticality beyond the consideration of a single image derived through potentially hidden variations, this learning exercise aims to offset the temptation, appeal and dangers of AI merely becoming a postmodern chocolate (black-)box of vacuous visual treats.

	λ	μ	ν	ξ	ο	
λ		?	?	?	?	
μ		?	???			?
ν	?	??			?	
ξ	?	?	???			
ο						

An abstract representation of a matrix presenting two axes and question marks suggesting possible visual entries

Relevant literature resources

Bateman, J. A. (2008). *Multimodality and genre, A foundation for the systematic analysis of multimodal documents*. Palgrave Macmillan.

Boden, M. A. (2004). *The creative mind: Myths and mechanisms*. Routledge.

Lemke, J. L. (1999). *Typology, topology, topography. Genre semantics*.

Papanek, V. J. (1972). *Design for the real world*. Thames & Hudson.

TextGenEd:

Teaching with Text Generation Technologies

CARLY SCHNITZLER, LECTURER, UNIVERSITY WRITING PROGRAM, KRIEGER SCHOOL OF ARTS & SCIENCES

JOHNS HOPKINS UNIVERSITY

US

ANNETTE VEE

TIM LAQUINTANO

Description of your learning resource or course:

The fully open access and peer-reviewed collection features 34 undergraduate-level assignments to support students' AI literacy, rhetorical and ethical engagements, creative exploration, and professional writing text gen technology, along with an Introduction to guide instructors' understanding and their selection of what to emphasize in their courses.

Context in which the learning resource was created:

GAI is the most influential technology in writing in decades - nothing since the word processor has promised as much impact. Publicly-accessible Large Language Models (LLMs) such as ChatGPT have enabled students, teachers, and professional writers to generate writing indirectly, via prompts, and this writing can be calibrated for different audiences, contexts and genres. At the cusp of this moment defined by AI, TextGenEd collects early experiments in pedagogy with generative text technology, including but not limited to AI.

AI tool(s) used:

Various

Explanation of the process followed:

When we issued the CFP for this collection, teaching and research in automated writing was still rather niche. In the language arts, it existed in critical code studies and creative domains such as computational poetry and, more broadly, electronic literature.

In writing studies, interest in automated writing existed in corners of technical writing, computers and writing, and rhetoric. Most writing teachers are comfortable with word processing, content management systems, search, and email, and it has been possible to run a writing class with little else. Now, with the introduction of ChatGPT, it might soon become difficult to research and teach writing without thinking about, or addressing, automated writing technologies and artificial intelligence (AI). As Big Tech rushes ahead in its AI arms race with the intention of having large language models (LLMs) mediate most of our written communication, writers and

teachers are forced to consider issues of prompt engineering, alignment, data bias, and even such technical details as language model temperature alongside issues of style, tone, genre and audience.

Key learnings and recommendations for others:

The resources in this collection will help writing teachers to integrate computational writing technologies into their assignments. Many of the assignments ask teachers and students to critically probe the affordances and limits of computational writing tools. Some assignments ask students to generate Markov chains (statistically sequenced language blocks) or design simple neural networks and others ask students to use AI platforms in order to critique or gain fluency with them.

A few assignments require teachers to have significant familiarity with text generation technologies in order to lead students, but most are set up to allow teachers and students to explore together. Regardless of their approach, all of these assignments now speak to the contemporary writing landscape that is currently being shaped by GAI. Put another way, the assignments in this collection offer initial answers to urgent calls for AI literacy.

Links for more information:

<https://wac.colostate.edu/repository/collections/textgened/>

<https://wac.colostate.edu/repository/collections/continuing-experiments/>

Template phrases for critiquing AI

ANNA MILLS, ENGLISH INSTRUCTOR

CAÑADA COLLEGE, CALIFORNIA

US

Description of your learning resource or course:

I knew that many students in my first-year two-year college writing course felt intimidated by academic language and tended to be overly impressed by ChatGPT's prose. I wanted them to gain confidence in their own thinking and experience pointing out flaws in ChatGPT output. To help them see what kind of pushback would be typical and appropriate and to give them ideas for the kinds of errors and problems large language models are prone to, I decided to provide sample phrases for critiquing AI and include them in my OER textbook *How Arguments Work: A Guide to Writing and Analyzing Texts in College*.

Context in which the learning resource was created:

I had planned two class activities for a first-year composition course, one where they would critique ChatGPT research and summaries of sources and another where they would reflect on AI feedback on their writing. I wanted to provide them some support, scaffolding, and encouragement in the form of these sample phrases.

AI tool(s) used:

ChaptGPT, plus running GPT-4

Explanation of the process followed:

I didn't plan to use AI to create this resource, but it occurred to me partway through that it could help me expand on what I had. I was fairly satisfied with the introduction and list of template phrases I wrote on my own, but I realized that there might well be good ones I hadn't thought of and that the list I had would be a perfect way to prompt ChatGPT for more that fit the same pedagogical approach. Using ChatGPT Plus, I prompted simply, Can you suggest some template phrases for a critical AI literacy activity where students practice identifying aspects of an LLM output that are lacking? I gave it five sample phrases only, and it returned fifteen decent ones. I chose a few favorites only and put them into appropriate subcategories. I could have prompted for more, but I decided to keep it simple so as not to overwhelm the students with too many options.

Initially I included a general acknowledgment that some of the phrases were taken from ChatGPT, but after reflection I decided I should label them specifically. I put an asterisk after

each template phrase generated by ChatGPT and include the following acknowledgment at the end: The above template phrases followed by asterisks (*) were adapted from ChatGPT output responding to a Template phrases for AI output critique prompt, ChatGPT, 25 Sep. version, OpenAI, 3 Oct. 2023, <https://chat.openai.com/c/a8b15d03-3...f-2014ced05511>. The remaining original phrases and the organizational structure are by Anna Mills and are shared under a CC BY 4.0 license.

Key learnings and recommendations for others:

Finding uses for AI as we create learning resources does not have to mean we make AI the star of the show and the center of our process. In this case it was important to me to think through the purpose of providing template phrases to articulate my approach to critical AI literacy and student empowerment. It was also important for me to write on my own to let some of my intuitions emerge organically. But once I had done that, ChatGPT helped me offer greater variety in the sample phrases. It also led me to add one new idea for a subcategory.

Links for more information:

Template Phrases for Reflecting on AI Feedback:

[https://human.libretexts.org/Bookshelves/Composition/Advanced_Composition/How_Arguments_Work_-_A_Guide_to_Writing_and_Analyzing_Texts_in_College_\(Mills\)/16%3A_Artificial_Intelligence_and_College_Writing_\(Under_Construction\)/16.01%3A_Template_Phrases_for_Reflecting_on_AI_Feedback](https://human.libretexts.org/Bookshelves/Composition/Advanced_Composition/How_Arguments_Work_-_A_Guide_to_Writing_and_Analyzing_Texts_in_College_(Mills)/16%3A_Artificial_Intelligence_and_College_Writing_(Under_Construction)/16.01%3A_Template_Phrases_for_Reflecting_on_AI_Feedback)

Template Phrases for Critiquing AI Outputs:

[https://human.libretexts.org/Bookshelves/Composition/Advanced_Composition/How_Arguments_Work_-_A_Guide_to_Writing_and_Analyzing_Texts_in_College_\(Mills\)/16%3A_Artificial_Intelligence_and_College_Writing_\(Under_Construction\)/16.02%3A_Template_Phrases_for_Critiquing_AI_Outputs](https://human.libretexts.org/Bookshelves/Composition/Advanced_Composition/How_Arguments_Work_-_A_Guide_to_Writing_and_Analyzing_Texts_in_College_(Mills)/16%3A_Artificial_Intelligence_and_College_Writing_(Under_Construction)/16.02%3A_Template_Phrases_for_Critiquing_AI_Outputs)

Imágenes y analogías para el aprendizaje crítico

ANTONIO MARTÍNEZ-ARBOLEDA, PROFESSOR OF OPEN AND DIGITAL EDUCATION

UNIVERSITY OF LEEDS

UK

COAUTORAS DEL VÍDEO DE LA CHARLA:

VERÓNICA LUNA DE LA LUZ, SUBDIRECTORA DE INNOVACIÓN EDUCATIVA (RECREA - UNAM)

KAREN LIZETTE MATÍAS LÓPEZ, JEFA DEL DEPARTAMENTO DE DISEÑO DE EXPERIENCIAS DE APRENDIZAJE (RECREA - UNAM)

ROBERTO SANTOS SOLÓRZANO, JEFE DE DEPARTAMENTO DE INNOVACIÓN EDUCATIVA (RECREA - UNAM)

IRMA ROCÍO ZAVALA SIERRA, COORDINADORA DE DISEÑO DE EXPERIENCIAS DE APRENDIZAJE (RECREA - UNAM)

MEXICO

Description of your learning resource or course:

El recurso consta de una presentación PowerPoint que sirve de apoyo a una charla interactiva de 2 horas en YouTube, ambas en lengua española. El tema era la producción y análisis de textos con ChatGPT. La audiencia estaba compuesta de educadores universitarios de un amplísimo rango de disciplinas.

Uno de los objetivos de la charla era despertar el interés sobre ChatGPT en la producción de textos a través del examen de 6 casos de

uso que se presentaron a los participantes, quienes podían comentar, debatir y preguntar en el Chat. El otro objetivo era generar una discusión crítica en torno a cuestiones como el efecto que la Inteligencia Artificial tendrá en el trabajo de las educadoras, en su relación con los aprendientes, y en los objetivos mismos de un aprendizaje humano que en el futuro se tendrá que apoyar en la Inteligencia Artificial, al convertirse ésta en un elemento tecnológico constitutivo de nuestros procesos de construcción de conocimiento.

En la charla se abordaron además temas como la calidad de las respuestas de ChatGPT 3.5,

incluyendo el fenómeno de las alucinaciones, el problema del sesgo cultural y ético, y la utilidad de la herramienta en el diseño de actividades educativas.

Context in which the learning resource was created:

Esta actividad de formación de profesorado, desarrollada en un contexto de comunidad de aprendizaje, estuvo organizada por la Universidad Autónoma de México, UNAM, y su red ReCrea (Red de Creación y Reflexión en Innovación Educativa) y tuvo lugar el 30 de marzo de 2024. Asistieron en directo más de 500 personas. El vídeo de la charla tiene más de 3.500 visualizaciones.

AI tool(s) used:

ChatGPT 3.5, Dream.ai by Wombo

Explanation of the process followed:

En primer lugar, la Inteligencia Artificial de Dream.ai by Wombo me permitió la creación de imágenes sugerentes y alineadas con mi intención crítica, educativa y comunicativa para la presentación de PowerPoint. Algunas de esas imágenes provenían de un recurso elaborado con anterioridad con esa herramienta, y otras fueron producidas expresamente para esta charla.

En segundo lugar, ChatGPT 3.5 me sirvió para la formulación de unos textos, incluidos también en la presentación de PowerPoint, para uno de los ejercicios de la charla. Estos contenidos fueron generados a partir de unos prompts míos con ejemplos y reglas básicas. El resultado fue una serie de analogías provocadoras y un tanto literarias en las que se establecían comparaciones entre la educación

y las educadoras pre-IA y post-IA. Unas eran distópicas y otras utópicas. Por ejemplo: Antes de OpenAI, la educadora era como una alfarera moldeando la arcilla de la mente del estudiante. Después de OpenAI, la educadora será como una jardinera, nutriendo y guiando el crecimiento de la inteligencia artificial junto con la de las estudiantes.

Finalmente, ChatGPT 3.5 me ayudó a preparar los contenidos de la charla en sí, aunque esta experiencia fue un poco frustrante al final.

Key learnings and recommendations for others:

Cuando intentamos producir una serie de imágenes a partir de lenguaje escrito para un mismo recurso, es crucial establecer una serie de palabras clave fijas para todos los prompts de esa misma serie de imágenes, así como usar el mismo estilo, en el caso de Dream.ai. Esto garantizará cierta coherencia visual. Se requiere muchísima paciencia y creatividad al elegir palabras, pero también cierta sistematicidad para ir probando de forma efectiva con combinaciones de grupos de palabras. Un mismo prompt puede generar diferentes resultados. Esa retroalimentación permanente entre la escritura y la imagen es muy enriquecedora.

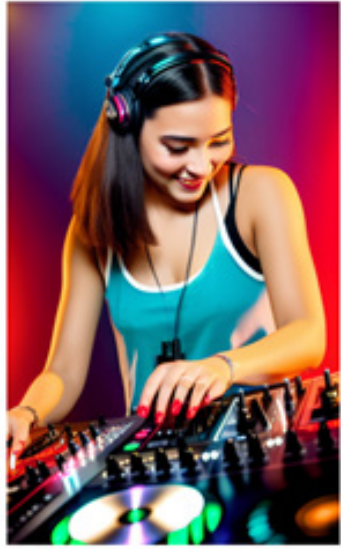
Links for more information:

Vídeo de la charla donde se usó la presentación de PowerPoint:

<https://www.youtube.com/watch?v=MKGD6yMA4pw&t=2986s>

Archivo de la Presentación de PowerPoint:

<https://wordpress.com/post/tonymartinwoods.com/1316>



Con el ChatGPT, la **creación de contenidos educativos** se parece al **trabajo de DJ**, manejando platos y mezclando efectos con músicas ajenas.

Pero, cuidado: ¡nunca dejéis **de tocar y componer** también!



Extracto de la presentación con imágenes de dos mujeres y una de las analogías usadas

Creative ideas:

Designing GenAI-powered learning resources

SELIM REZA, SYSTEM ANALYST, INTERNAL RESOURCES

MINISTRY OF FINANCE, BANGLADESH INVESTMENT DEVELOPMENT AUTHORITY

BANGLADESH

Description of your learning resource or course:

Unleashing Creativity with AI: A Global Journey.

Objectives:

- Ignite imagination and unlock creative potential using cutting-edge AI tools.
- Explore diverse artistic expressions from around the world through interactive virtual experiences.
- Develop critical thinking skills to analyze and evaluate creative works across cultures.
- Collaborate with AI and fellow learners to co-create artistic projects and share perspectives.
- Gain confidence in expressing oneself creatively in various mediums.

Target Audience:

- Learners of all ages with a curious mind and a desire to explore creative expression.
- Individuals seeking new tools and inspiration to fuel their artistic journey.
- Educators looking to incorporate AI and global perspectives into their teaching practices.

- Anyone interested in understanding the intersection of technology, art, and human creativity.

Key Features:

- AI-powered Creativity Tools: Generate poems, stories, music, and artwork in collaboration with GAI models.
- Immersive Virtual Tours: Explore museums, galleries, and cultural landmarks around the world without leaving your home.
- Interactive Storytelling Platform: Co-create stories with AI and fellow learners, branching narratives and shaping unique journeys.
- Global Collaboration Network: Connect with artists and learners from different cultures to share ideas and broaden perspectives.
- Personalized Learning Paths: Adapt the course to your interests and skill level, focusing on specific art forms or global regions.
- Community Forum: Share our creations, discuss diverse perspectives, and learn from each other in a supportive environment.

Context in which the learning resource was created:

Responding to Growing Interest in AI Creativity: This course addresses the rising global interest in leveraging AI for creative pursuits and the impact of technology on artistic expression.

Bridging the Gap between Cultures: Recognizing the need for interconnectivity and understanding in a diverse world, the course leverages AI to foster interaction and appreciation for cultural differences in art.

Empowering Lifelong Learners: Designed for both casual learners and educators, the course caters to individuals seeking personalized artistic exploration and professional development in incorporating AI into teaching.

Addressing Accessibility and Inclusivity: Built with a focus on user-friendly interfaces and diverse learning pathways, the course aims to be accessible to learners of all backgrounds and abilities.

This brief outline provides a broader context for the Unleashing Creativity with AI resource.

AI tool(s) used:

AI-powered Creativity Tools:

- Text Generation: Bard, Jasper, ShortlyAI, LaMDA, open AI, ChatGPT
- Image Generation: DALL-E 2, Midjourney, NightCafe, DreamStudio

Music Generation:

- Jukebox, MuseNet, Amper Music
- Code Generation: GitHub Copilot, Tabnine, Kite
- Immersive Virtual Tours:
- Google Arts & Culture, Matterport, Virtual tours (various platforms)

Interactive Storytelling Platform:

- Twine, Quest, ink
- Global Collaboration Network:
- Discord, Facebook Groups, HiNative

GenAI as a personal tutor

EYAL RABIN, ASSOCIATE RESEARCHER, THE CENTER OF INNOVATION IN EDUCATIONAL TECHNOLOGY

THE OPEN UNIVERSITY OF ISRAEL

ISRAEL

Description of your learning resource or course:

In an innovative art class, ChatGPT acts as a personalized tutor, providing a unique and interactive learning experience tailored to each student's interests, knowledge, and skills. The program aims to foster individualized learning, allowing students to explore their passions in art, leading to a deeper understanding of specific topics and enhancing critical thinking.

The class is designed for a diverse range of students, from beginners to advanced learners in art education. Upon entering the class, students communicate their preferred subject matter to ChatGPT, which then provides tailored information about that topic, setting the stage for a customized learning journey.

A key feature of this class is the adaptive questioning method employed by ChatGPT. After the tutorial segment, students are quizzed on the material they learned. Correct answers lead to progressively challenging questions, fostering a deeper understanding of the subject. If a student struggles with a question, ChatGPT identifies the error, offers a clear explanation, and presents a simpler question, ensuring each student is consistently

engaged at an appropriate level of difficulty.

Overall, this art class represents a pioneering approach to education, combining the versatility of AI with the creative exploration of art to deliver a personalized and effective learning experience.

Context in which the learning resource was created:

This learning resource was created as a part of a pioneering art course, incorporating ChatGPT to offer a personalized educational experience. Aimed at diversifying and enriching the conventional art curriculum, it focuses on interactivity and student engagement. Designed for a varied group of art learners, it addresses their distinct needs and interests, ensuring a versatile and adaptable learning setting. Additionally, it functions as a tool for evaluating and enhancing students' comprehension and skills in art, utilizing AI to tailor the complexity of the content according to each student's performance.

AI tool(s) used:

ChatGPT

Explanation of the process followed:

The integration of ChatGPT into this art course was meticulously planned and executed. The curriculum structured key concepts, styles, and topics as a foundation for AI interactions. This enabled ChatGPT alignment with course objectives.

Students begin by expressing preferred art subjects to ChatGPT. Using its vast database, ChatGPT provides detailed customized explanations tailored to student interests and understanding. This AI-driven learning phase delivers personalized insights.

Following the learning phase, ChatGPT quizzes students, assessing responses and adapting question difficulty accordingly. This dynamic approach to tuning helps maintain an optimal challenge level for each student. Correct answers lead to more complex questions, while incorrect answers prompt ChatGPT to offer simpler questions after explaining the mistake.

Non-AI elements of the course include practical art assignments and projects where students apply what they have learned. These activities are designed and evaluated by human instructors, providing a balanced blend of AI-driven and traditional hands-on learning experiences. This combination ensures that while the AI provides personalized theoretical knowledge, the human instructors guide the

practical application and creative expression aspects of the course.

Key learnings and recommendations for others:

Key learnings from Integrating ChatGPT into the art course revealed AI's potential for personalized, adaptive education. ChatGPT's flexibility in catering to individual needs significantly enhanced the learning experience, student engagement, especially for passionate topics, via instantly tailored content and feedback.

However, human-led instruction balance remains crucial for nuanced subjects like art. For similar integrations, AI should complement traditional teaching, not replace. Regularly updating AI alignment with course objectives maintains relevance. Incorporating student feedback provides insights for refining AI's educational role. Overall, the integration demonstrated promising learning improvements but requires careful, continued recalibration between emerging technologies and established pedagogical best practices.



Workshop about developing educative scenarios

with GenAI tools

FRANCISCO JOSÉ GARCÍA-PEÑALVO, FULL PROFESSOR

UNIVERSIDAD DE SALAMANCA

SPAIN

Description of your learning resource or course:

Workshop to define and discuss different educative scenarios using GenAI tools. The target audience is students of the master's degree in ICT applied to education.

The workshop objectives are: a) learn how to use GenAI tools to support teachers' activities; b) Reflect on the potentialities and risks of GenAI applied in teaching/learning processes; c) Present and discuss with the classmates the designed scenarios.

Context in which the learning resource was created:

The context is a teaching unit of 8 hours within the scope of a subject in the Master's Degree of ICT applied to education at the University of Salamanca (Salamanca, Spain). The subject is entitled Design and assessment of digital resources; the unit is entitled Technology and knowledge management. The students' profiles are mainly from educational-

based bachelor, with a predominance of undergraduate studies for future early childhood and elementary school teachers. Still, other undergraduate studies are also represented, such as History, Pedagogy, Social Education, Engineering, etc.

AI tool(s) used:

ChatGPT (free version), Microsoft Bing

Explanation of the process followed:

1. Introduction Session
2. Two hours introducing the AI in Education issues
3. ChatGPT Session
4. Two hours developing an introductory workshop of ChatGPT for educational purposes
5. Workshop Session
6. Presenting the activity (online)
7. The class is organized in teams of 3 people.

The activity aims to develop an educational scenario with ChatGPT (or other generative artificial intelligence tools) to present and discuss the results. Possible options to choose:

- a. Create a story for primary school children where the narrative may require them to do manual activities, solve puzzles, etc.
- b. Take 3 different roles on an educational problem and develop it with ChatGPT from each perspective. Summarize results, commonalities, discrepancies, etc.
- c. Development of a didactic unit for a second-cycle primary school subject.
- d. Use ChatGPT as an assistant to develop an essay on a topic of scientific interest, summarize it, and create a presentation.
- e. Generate a comprehensive assessment approach for a subject (including question banks, quizzes, tests, rubrics, etc.).
- f. Design a gamified approach for a unit of a subject of the educational level of choice.
- g. Design a battery of mathematics exercises for a chosen educational level.
- h. Design gamified activities for learning English at a chosen proficiency level.
- i. Free theme different from the ones listed below

Each team will develop and document the experience during two and a half hours.

Each team will have 5 minutes to present their experience and 10 minutes for discussion.

Each team will deliver the presentation on the virtual campus with their experiences, which must include the link to the work session with

all the prompts made to follow the whole creative process.

1. Development of the scenario (2.5 hours)
2. Presentation and discussion (15 minutes per group)

Key learnings and recommendations for others:

It is essential the introductory session and the hands-on workshop with ChatGPT to teach the students (future teachers) the right way to introduce the GenAI tools in the teaching and learning processes.

Each group must understand the activity and choose a different scenario to develop to enrich the discussion.

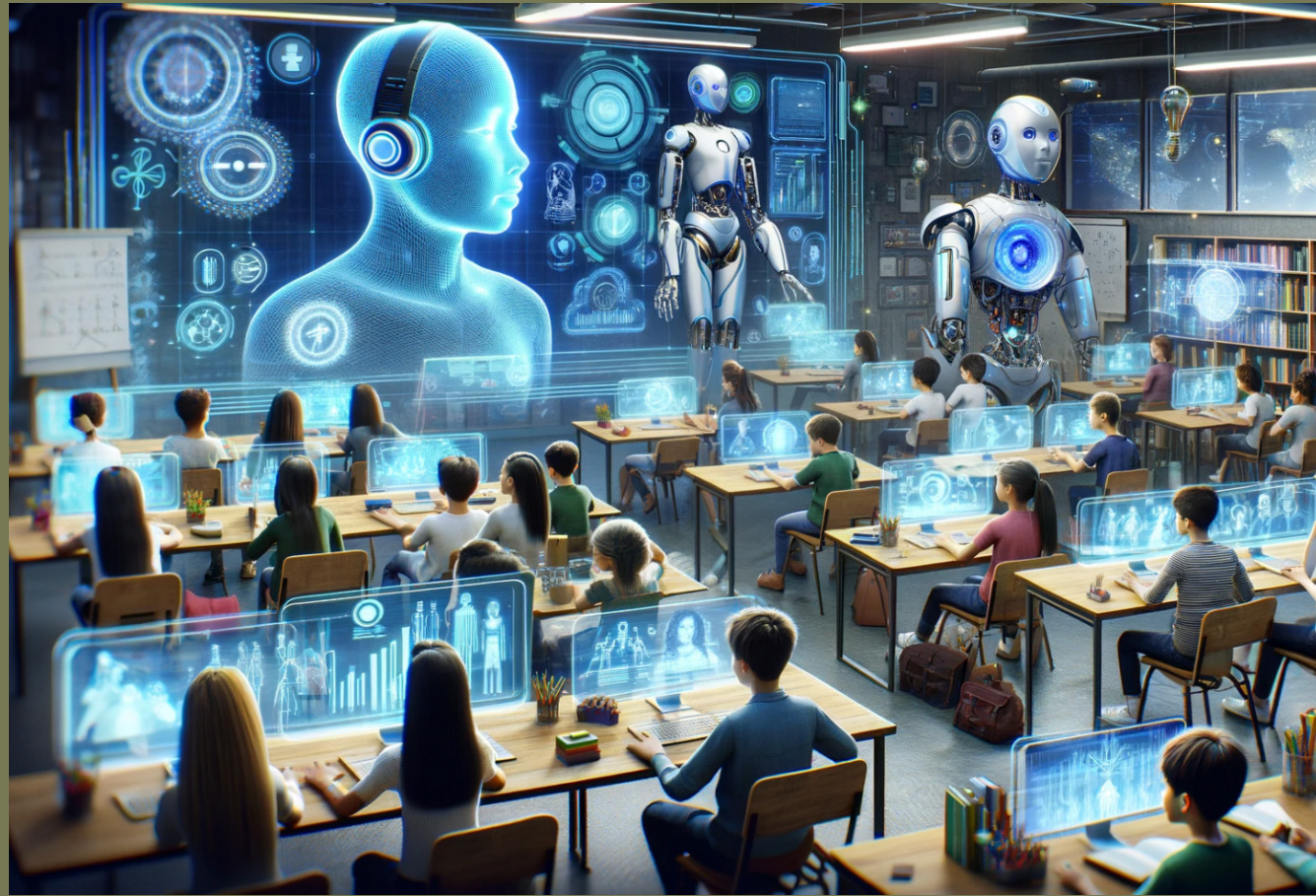
The process is more important than the product. For this reason, the prompts used must be included in their final deliveries.

The challenge is encouraging them to discuss with each colleague to underline the lessons learned, focusing on the potential benefits and risks.

Links for more information:

Resource in Spanish:

<https://doi.org/10.5281/zenodo.10157796>



La era de la Inteligencia Artificial en la Educación

Relevant literature resources

Flores-Vivar, J. M., & García-Peñalvo, F. J. (2023). Reflections on the ethics, potential, and challenges of artificial intelligence in the framework of quality education (SDG4). *Comunicar*, 31(74), 35-44. <https://doi.org/10.3916/C74-2023-03>

García-Peñalvo, F. J. (2023). The perception of Artificial Intelligence in educational contexts after the launch of ChatGPT: Disruption or panic? *Education in the Knowledge Society*, 24, Article e31279. <https://doi.org/10.14201/eks.31279>

García-Peñalvo, F. J. (2024, January 24). Generative artificial intelligence in higher education: A 360° Perspective IFE Conference Special Event; Artificial Intelligence in Education Summit, Tecnológico de Monterrey, Monterrey, México. <https://doi.org/10.5281/zenodo.10499828>

García-Peñalvo, F. J., Llorens-Largo, F., & Vidal, J. (2024). The new reality of education in the face of advances in generative artificial intelligence. *RIED: revista iberoamericana de educación a distancia*, 27(1), 9-39. <https://doi.org/10.5944/ried.27.1.37716>

García-Peñalvo, F. J., & Vázquez-Ingelmo, A. (2023). What do we mean by GenAI? A systematic mapping of the evolution, trends, and techniques involved in Generative AI. *International Journal of Interactive Multimedia and Artificial Intelligence*, 8(4), 7-16. <https://doi.org/10.9781/ijimai.2023.07.006>

Multimedia and Artificial Intelligence, 8(4), 7-16. <https://doi.org/10.9781/ijimai.2023.07.006>

Marco de referencia

para la visualización de datos y resultados de investigación

JHONATTAN MIRANDA, INVESTIGADOR

INVESTIGADOR INSTITUTO PARA EL FUTURO DE LA EDUCACIÓN, TECNOLÓGICO DE MONTERREY

MEXICO

CLAUDIA LIZETTE GARAY ONDERO, INVESTIGADORA

ESCUELA DE INGENIERÍA Y CIENCIAS, ECNOLÓGICO DE MONTERREY

MEXICO

Description of your learning resource or course:

Se propone una herramienta de base de conocimiento integrada para facilitar la visualización de datos, abordando la complejidad derivada de la diversidad de técnicas y tecnologías disponibles. Utilizando la inteligencia artificial, específicamente redes neuronales y principios de IA generativa, esta herramienta personaliza recomendaciones de técnicas y tecnologías basándose en cinco elementos críticos identificados. Enriquecida con ejemplos y tutoriales, la herramienta aspira a ser un recurso didáctico para formadores e investigadores, manteniéndose al día con las tendencias actuales.

Implementada como una Web-App, ofrece una interfaz de usuario intuitiva que guía a los usuarios a través de preguntas interactivas, generando rutas de aprendizaje adaptativas. Un asistente de IA proporciona recomendaciones personalizadas, mejorando así la toma de decisiones en la visualización

de datos. La aplicación se presenta como un recurso educativo innovador, alineado con las demandas de la Educación 4.0.

Context in which the learning resource was created:

El recurso educativo surge como parte del Bootcamp Construyendo juntos el futuro de la educación: innovación, investigación interdisciplinaria y ciencia abierta realizado del 29 al 31 de Octubre de 2023, Comillas, Cantabria, España. Organizado por el Instituto para el Futuro de la Educación, El Hub de Innovación Europa, Tecnológico de Monterrey.

AI tool(s) used:

Databot-IA para la Visualización de Datos y Resultados de Investigación

Explanation of the process followed:

Se desarrolló una solución de visualización de datos utilizando herramientas de Inteligencia Artificial Generativa (GenAI).

El proceso comenzó con la identificación de las necesidades de los usuarios en cuanto a la selección y aplicación de técnicas y tecnologías en visualización de datos. A continuación, se empleó una red neuronal y principios de GenAI para construir una base de conocimiento que recomendara las opciones más adecuadas basándose en cinco elementos críticos.

Durante la interacción con las herramientas GenAI, los usuarios proporcionan información específica a través de una interfaz gráfica intuitiva en la Web-App. Esta información se procesa, generando recomendaciones personalizadas. Partes significativas del trabajo, como la definición de los cinco elementos críticos y el diseño de la interfaz de usuario, se realizaron manualmente, sin el uso de GenAI. Esto aseguró que la solución fuera relevante y fácil de usar.

El asistente de IA (Databot-IA), un componente central de la solución, facilita la interacción del usuario con el sistema, ofreciendo recomendaciones, ejemplos y tutoriales. Aunque la generación de recomendaciones se automatizó mediante GenAI, la curación y actualización de la base de conocimientos, así como la revisión de los contenidos y ejemplos proporcionados, se llevaron a cabo sin el uso de GenAI, garantizando la precisión y relevancia de la información.

Se implementa una Web-App, ofrece una interfaz de usuario intuitiva que guía a los usuarios a través de preguntas interactivas, generando rutas de aprendizaje adaptativas. Un asistente de IA proporciona recomendaciones personalizadas, mejorando así la toma de decisiones en la visualización de datos. La aplicación se presenta como un

recurso educativo innovador, alineado con las demandas de la Educación 4.0.

Key learnings and recommendations for others:

Aprendizajes Clave: Integración de IA en la Visualización de Datos: La aplicación efectiva de la Inteligencia Artificial Generativa puede transformar significativamente la forma en que se seleccionan y utilizan técnicas y tecnologías de visualización de datos.

Interfaz de Usuario Intuitiva: Desarrollar una interfaz clara y fácil de usar es crucial para facilitar la interacción del usuario con sistemas basados en IA.

Balance entre Automatización y Supervisión Humana: Mientras que la GenAI agiliza el proceso de recomendación, la supervisión humana es esencial para asegurar la relevancia y exactitud de la información proporcionada.

Recomendaciones para Otros: Definir Claramente los Requisitos del Usuario: Comprender las necesidades y desafíos específicos de los usuarios es fundamental antes de diseñar una solución basada en IA.

Pruebas Iterativas: Realizar pruebas iterativas de la herramienta para garantizar que la interfaz y las recomendaciones de IA cumplan con las expectativas de los usuarios.


Actualización y Mantenimiento Continuo: Dedicar recursos para la actualización regular de la base de conocimientos y la mejora de la herramienta, asegurando su relevancia y utilidad a largo plazo.

Links for more information:

https://view.genial.ly/652e1cb4afdcf300114f82cd?fbclid=IwAR06H6IELcN-m0WPNS2Zy44F9tr8N5R3N6U0NgzIGmjGQK-qT_3WJDjUYrg







Estrategia de Visualización de Datos y Resultados

Selecciona (oprime) una respuesta de las opciones proporcionadas a cada una de las preguntas



Institute for the Future of Education
Tecnológico de Monterrey

Innovation Hub Europe

	a	b	c	d	e	Código Generado	Asistente IA
1 ¿Qué enfoque tienen tus resultados de investigación?	Cuantitativo	Cualitativo	Mixto	Modelos teóricos o conceptuales	Otro	1b 	<p>Recomendaciones, recursos, y tecnologías</p> <div style="border: 1px solid white; border-radius: 15px; padding: 5px; text-align: center; margin-bottom: 10px;"> <p>Ingresa el código obtenido</p> </div>  <div style="background-color: #ff9800; border-radius: 15px; padding: 5px; text-align: center; margin-top: 10px;"> <p>RECOMENDACIÓN ▶</p> </div>
2 ¿Qué formato o tipo de documento requieres?	Artículo	White Paper	Informe Técnico	Presentación	Redes Sociales	2a 	
3 ¿Qué propósito tiene la visualización a presentar?	Proceso	Comparar, Contrastar, o Mostrar Cambio	Para establecer relaciones	Para mostrar Distribuciones	Es un producto o servicio	3c 	
4 ¿A qué tipo de audiencia va dirigida?	Académico	Científico	Negocio	Público en general	Otro	4b 	
5 ¿Qué tipo de precisión requieres representar?	Alto	Medio	Bajo	Mínima o simbólica	Otro	5a 	

Inicio
Reset

La imagen muestra la interfaz de usuario a través de la Web-App, ofrece una interfaz de usuario intuitiva que guía a los usuarios a través de preguntas interactivas, generando rutas de aprendizaje adaptativas. Databot-IA proporciona recomendaciones personalizadas, mejorando así la toma de decisiones en la visualización de datos. La aplicación se presenta como un recurso educativo innovador

Relevant literature resources

Gough, P., & Zhao, J. (2023). Data visualisation in teaching science students to communicate: A practical guide. Springer International Publishing, pp. 57-68.

Liu, S., Maljovec, D., Wang, B., Bremer, P. T., & Pascucci, V. (2017, March). Visualising high-dimensional data: Advances in the past decade. IEEE Trans Vis Comput Graph, 23(3), 1249-1268. <https://doi.org/10.1109/TVCG.2016.2640960>

Miranda, J., Navarrete, C., Noguez, J., Molina-Espinosa, J. M., Ramirez-Montoya, M. S., Navarro-Tuch, S. A., ... & Molina, A. (2021). The core components of education 4.0 in higher education: Three case studies in engineering education. Computers & Electrical Engineering, 93, 107278.

Copilot:

Embrace or despair for learning

FOZIA ASGHAR, EDUCATOR

GLOBAL BANKING SCHOOL

UK

Description of your learning resource or course:

The curiosity of embracing comes from reactions educational institutes are having from the emerging and developing AI technology. One thriving tool is the use of Copilot, a Microsoft application to support learning. The application can be used by individual for personalised queries and support. One of the ways it can be used is for non-native students to support with language learning within education. The use of this could be piloted with students for whom English is a second language. The purpose would be to assist learners and familiarise themselves with assessments and requirements for module completion whilst studying on an academic foundation degree.

Objective would be to see how AI could be used by learners to generate ideas and planning of the learning content.

Audience : learners on foundation years degree.

Context in which the learning resource was created:

Adult learners in their Foundation degree at

Level 3 studying module 1 : Academic Skills and Writing for Success are required to submit assignment on the concept exploring the meaning of reflection. The concept studied requires students to review experience and evaluate through analysis and aim for improvement. The concept is introduced through the Reflective Model, learning about the Reflection -in -action and, Reflection -on -action Schon (1991).

AI tool(s) used:

Copilot

Explanation of the process followed:

Copilot to be used by adult learners who have English as a second language. Students may not understand the basic key words required for the starting point of the assignments, or lack knowledge, on how a concept or keyword can be contextualised in everyday life. Asking Copilot for clarification on the keyword and what impact it can have on everyday life can be a starting point for the learners, Before understanding the reflective model studied in the module.

Step 1: Student put in Copilot search engine a direct and straightforward question.

Question : What is reflection and how does it impact everyday life.

Key learnings and recommendations for others:

Recommendation : Encouraging the use of simple vocabulary to ask a question and start the search in Copilot, so learners experience the tool to be supportive instead of a threat, especially for adult learners whom English is a second language or have been out of education for a considerable time.

Recommendation : keywords from assignment used in Copilot can be a useful means of clarification. They can guide learners to start the foundational thinking process and lead into creating ideas and planning its use and unpacking of the assignment. Additionally, allowing extra detail, more complex ideas and theories introduced in the module to be more comprehensible.

An AI-generated hotel

to learn about sustainable development

LOYKIE LOMINE, EDUCATOR

ECOLE DE SAVIGNAC (HOTEL SCHOOL)

FRANCE

Description of your learning resource or course:

This learning resource is a fictional hotel I designed to help students learn about key aspects of sustainable development. Each room is themed after a famous painter (Vincent Van Gogh, Frida Kahlo, Michelangelo, Kandinsky, Francisco Goya, Georgia O'Keeffe, etc.) and the images are intended to stimulate discussions about a range of issues. For instance, the Van Gogh twin room can lead us to explore the sustainability of rattan furniture (chair and storage basket): it may seem more environmentally friendly than plastic, but is it truly sustainable? Or how about the blue carpet – was it crafted using natural indigo dye?

This resource offers four advantages:

- It is visual, which is particularly valuable as the topic of sustainable development can often feel theoretical and abstract.
- It is playful, as the images are obviously created by AI in the style of famous artists, which adds an element of creativity.
- It is tailored specifically for my students of Hotel Management, allowing me to address specific issues relevant to our curriculum.

- It is not finite; I plan to add more rooms to address other aspects, as well as images related to the restaurant and kitchen, the lobby, the paperless reception etc.

Context in which the learning resource was created:

All students are pursuing a BA in Hotel Management. In their final year, my course (1 ECTS) gives them the opportunity to learn about sustainable development, both in theory and in practice. I designed this resource to complement other materials that we use, such as videos, professional publications and academic articles.

As hotels worldwide are implementing many green initiatives, from smart showers to eco-friendly cleaning supplies, finding examples online is very easy - however, I wanted to create my own coherent pedagogical resource that I can continue to personalise and develop.

AI tool(s) used:

DALL.E

Key learnings and recommendations for others:

Using image generators like DALL.E is fun, but the results can be erratic, leading to potential frustration. With Bard and ChatGPT, one can learn rapidly how best to formulate effective prompts—but DALL.E has an element of unpredictability. For example, in my prompt for the Van Gogh room, I explicitly included the instruction focus on a glass jar full of water and two glasses, as I wanted to

illustrate the use of glass instead of plastic. This specific detail was ignored in all the AI-generated variants.



Hotel bedroom with twin beds, blue carpet, rattan chair, and Van Gogh-style paintings on yellow walls

A model for AI

in Technology Enhanced Assessment and Formative Assessment processes

FEDERICA PICASSO, PHD STUDENT

UNIVERSITY OF TRENTO

ITALY

ANNA SERBATI, ASSOCIATE PROFESSOR

DANIELE AGOSTINI, ASSISTANT PROFESSOR

UNIVERSITY OF TRENTO

ITALY

Description of your learning resource or course:

The model represents a design that considers AI's role in the assessment and feedback processes and interactions between academics and students. The theoretical basis of the model are founded on Assessment for Learning, Sustainable and Authentic Assessment theories (Sambell, McDowell, & Montgomery, 2013; Gulikers et al., 2004; Boud, 2000), and on the framework of Activity Theory (Engeström, Miettinen & Punamäki, 1999; Kaptelinin & Nardi, 2006). The model is designed to facilitate the integration of AI into assessment processes within the context of Higher Education, thereby promoting sustainable and effective practices. This approach enables students to derive learning benefits from the assessment process itself.

The model is composed of two levels of adoption:

- AI Mediated Assessment: The focus is on technology-enhanced assessment techniques, leveraging AI to provide fast, tailored, informed and meaningful feedback (Webb, 2023).
- AI Mediated Formative Assessment: The level focuses on the power of AI in assessment and feedback to monitor the whole learning process and lead formative design activities, as well as student and peer assessment processes (Mollick and Mollick, 2023; OpenAI, 2023).

Context in which the learning resource was created:

The research is developed in the context of the University of Trento's Teaching and Learning Centre: the theorisation and the validation of this AI assessment model could represent a

milestone of new research lines, scaffolding institutional change and bringing innovation to teaching and assessment practices.

AI tool(s) used:

ChatGPT, Claude.ai, Copilot

Explanation of the process followed:

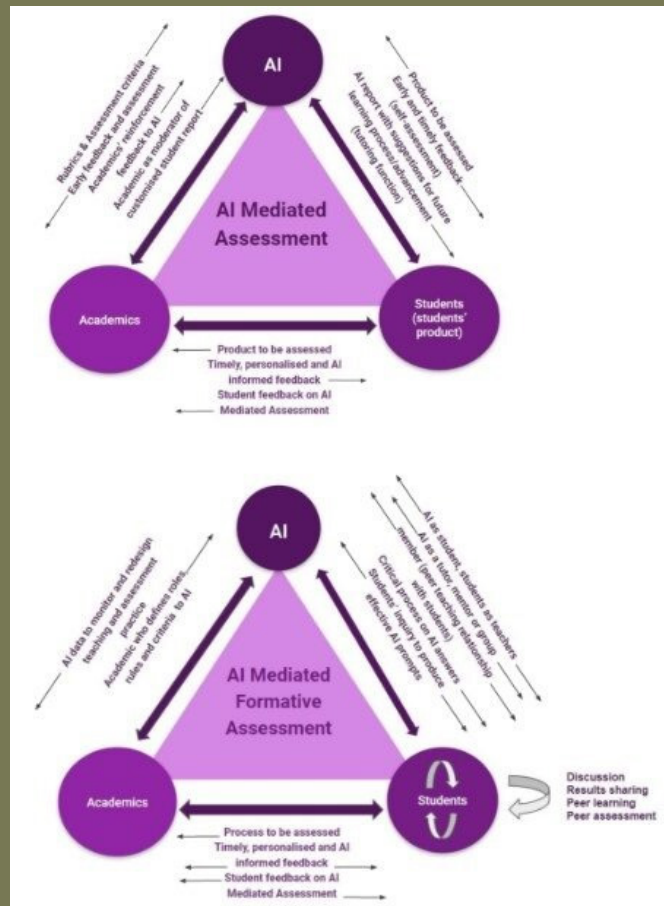
The model was created without the use of GenAI: it is based on the use of AI to enhance assessment and feedback processes in Higher Education context and it promotes practical actions, interactions and roles through which AI could be involved in the assessment, feedback and formative design processes.

Key learnings and recommendations for others:

The model proposes an overview of the activity of using AI in assessment processes. The triangulation of subjects of the actions, mediators and the interactions between them. AI acts as the technological mediator between academics and students. It also mediates the interactions between students and their own products. In fact, AI can cover a constructive role, helping teachers with the development and implementation of early feedback and assessment and, at the same time, play a guiding role to support students' assessment processes. It can also act as a students' peer, or as a memory of the processes, collecting feedback from the academics and students and improving its resources.

Links for more information:

<https://chat.openai.com/share/6b34eab1-78c2-468d-8e5d-94cdd99fbc39>



AI-Mediated Summative Assessment level and AI-Mediated Formative Assessment level

Relevant literature resources

González-Calatayud, V., Prendes-Espinosa, P., & Roig-Vila, R. (2021). Artificial intelligence for student assessment: A systematic review. *Applied Sciences*, 11(12), 5467.

Engeström, Y., Miettinen, R., & Punamäki, R. L. (Eds.) (1999). *Perspectives on activity theory*. Cambridge University Press.

Grion, V., & Serbati, A. (2019). Valutazione sostenibile e feedback nei contesti universitari. *Prospettive emergenti, ricerche e pratiche* (pp. 1-158). PensaMultimedia.

Kaptelinin, V., & Nardi, B. A. (2006). *Acting with technology: Activity theory and interaction design*. MIT press.

Mollick, E. R., & Mollick, L. (2023, June 12). Assigning AI: Seven Approaches for Students, with prompts. <https://ssrn.com/abstract=4475995> or <http://dx.doi.org/10.2139/ssrn.4475995>

Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, 31(2), 199-218.

OpenAI (2023). Teaching with AI. <https://openai.com/blog/teaching-with-ai>

Swiecki, Z., Khosravi, H., Chen, G., Martinez-Maldonado, R., Lodge, J. M., Milligan, S., Selwyn, N., & Gašević, D. (2022). Assessment in the age of artificial intelligence. *Computers and Education: Artificial Intelligence*, 3, 100075.

Tamkin, A., Brundage, M., Clark, J., & Ganguli, D. (2021). Understanding the capabilities, limitations, and societal impact of large language models. *arXiv preprint arXiv:2102.02503*.

UNICEF (2021). Policy guidance on AI for children. <https://www.unicef.org/globalinsight/media/2356/file/UNICEF-Global-Insight-policy-guidance-AI-children-2.0-2021.pdf>

Webb, M. (2023). A generative AI primer. JISC. <https://nationalcentreforai.jiscinvolve.org/wp/2023/05/11/generative-ai-primer/#3-1>

The Syllabus Machine

FEDERICA PICASSO, PHD STUDENT

UNIVERSITY OF TRENTO

ITALY

DANIELE AGOSTINI, ASSISTANT PROFESSOR

ANNA SERBATI, ASSOCIATE PROFESSOR

UNIVERSITY OF TRENTO

ITALY

Description of your learning resource or course:

The Syllabus Machine was developed, on the basis of a GenAI, to tailor the design syllabus process of academics in the University context.

Context in which the learning resource was created:

The context of the research is the Teaching and Learning Centre of the University of Trento. The resources were designed in order to scaffold university teachers in the writing and organisation of their syllabi.

AI tool(s) used:

ChatGPT

Explanation of the process followed:

The Syllabus Machine was designed through the use of specific annotated exemplars, created specifically in order to prompt the GenAI of reference. In fact, we developed good,

average and bad exemplars of syllabi, starting from the national evidence and we commented on them in order to guide the GenAI.

Key learnings and recommendations for others:

Academics can use the Syllabus Machine during the revision process of their syllabus or to scaffold a design process in the light of new classes and courses. The Syllabus Machine will correct, in a formative manner, the syllabus of reference or it will give prompt and stimulating ideas to enrich academics' products.

Links for more information:

<https://chat.openai.com/share/6b34eab1-78c2-468d-8e5d-94cdd99fbc39>



The Syllabus Machine

Relevant literature resources

Chen, L., Zaharia, M., & Zou, J. (2023). How is ChatGPT's behavior changing over time?. arXiv preprint arXiv:2307.09009. <https://arxiv.org/pdf/2307.09009.pdf>

Kasneci, E., Sessler, K., Kuchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdel, C., Pfeffer, J., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., Stadler, M., Weller, J., Kuhn, J., Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274, ISSN 1041-6080, <https://doi.org/10.1016/j.lindif.2023.102274>

OpenAI (2023). Teaching with AI. <https://openai.com/blog/teaching-with-ai>

Webb, M. (2023). A Generative AI primer. JISC. <https://nationalcentreforai.jiscinvolve.org/wp/2023/05/11/generative-ai-primer/#3-1> JISC

Empowering Sociology Students

to Harness the Sociological Imagination in a Digital World

JACQUELINE MURPHY, LECTURER ABOVE THE BAR

UNIVERSITY OF GALWAY

IRELAND

Description of your learning resource or course:

My module aims to provide University of Galway Degree students of Political Science and Sociology with the ability to examine and critically engage with the Irish Leaving Certificate subject 'Politics and Society'. The module aims to equip students with the skills to identify and employ a range of materials, resources, and teaching methodologies, which will allow them to effectively teach and engage with the subject. Most importantly this module aims to provide students both with the skills and the confidence to provide a collaborative, participative, and democratic learning environment for those studying the subject in a post-primary school context.

Learning Resource

Motivated by Mayer's 2020 work on Multimedia learning and in particular on the idea that designing for learning transfer rather than retention promotes deeper conceptual understanding (Green, 2023), the assessment for this module is the design of open resource teaching tools using AI.

Learners learn to explore OERs and generate/remix/adapt teaching exercises.

In groups, learners engage with ChatGpt to generate simple definitions of complex sociological and political ideas in the Leaving Cert Curriculum. They adopt a critical eye to assess the response and construct ways of adding validity to the definitions via citations and sources. Moreover, they ensure that the voice and language is engaging for Leaving Certificate Students.

Learners use ChatGpT to generate their own assessment rubric and assess the effectiveness of the measurement to their learning objectives, adapting as required.

Learners self-assess and reflect on the ability of the design of the tools and rubric to help them achieve the learning objective.

Context in which the learning resource was created:

With increased online communication and productivity, our students' learning journey has become more individualized with the use

of VLE platforms. Whilst this offers a wealth of advantages in flexibility and asynchronous learning activity, we fear the messy art of discussion and dialogue for learning has been negatively impacted. We have leveraged the power of digital pedagogy, but without meaningful student engagement, we are concerned that students' metacognition skills are often overlooked and neglected. More importantly, drawing on the Horizon Education 2023 report, we worry that this also impacts the learners' sense of belonging, group identity and connectedness to their course of study. Finally, these new frontiers of learning not only necessitate strong academic integrity but also force a new conversation with our learners about what this means.

Our experience with teaching sociology is that new entrants need scaffolding and support due to their exposure to unfamiliar terminology, vast topics, and complex concepts. This module's core aim is to engage students and educators in co-creating learning objects to be developed as accessible and interactive OERs – helping both students and educators in coding and decoding, imagining, and re-imagining current practices in teaching this Leaving Certificate subject.

AI tool(s) used:

ChatGPT

Explanation of the process followed:

The idea behind the use of AI in my classroom is focused on building the contents of my student's toolbox, such as the ability to locate and find valid information or the confidence to argue one's position on a new piece of knowledge. These nuts and bolts of social

constructivist ideas of knowledge acquisition requires my practice to create space for true student engagement! However, a blank page or quiet classroom can be a daunting place to start for both the learner and educator.

AI in this context provides us with a quick and accessible tool to generate content for interrogation. We can easily instruct the type of learning resource we think is useful and then ask questions of its relevance. We can mold and adapt and importantly make mistakes easily with no repercussions. We work in small teams to create space for dialogue.

Objective: Engage the critical eye of the learner in the process of creativity.

The Process

- Explore how ChatGpt generates responses.
- Examine how we can assess the strength of these responses.
- Acknowledge that we are on a new digital frontier and reflect on the implications of this.
- Play! Adventure in the attempt to harness OER and AI.

Key learnings and recommendations for others:

This type of learning activity in the classroom promotes responsibility and independence of learning leading to knowledge transformation. My experience is that my learners see themselves as cocreators with me. We are exploring the possibilities of these tools together, whilst drawing on principles of academic integrity to help shine light on the direction we take.

There is agency in this approach. Learners have come to see themselves not as consumers of AI but rather conductors.

Reflections

Student engagement demands commitment, integrity, time, and resources.

Adventuring in this new frontier demands more reflexive teaching practice. It may be too ambitious in the context of a busy academic year.

Recommendations

This approach is not for the faint of heart! It requires a busy active classroom but the bustle and hum of students debating how best to decode language or what constitutes a robust theoretical argument has been music to my ears. I am still learning and very aware of the limitations of my knowledge but I remain very excited about the possibilities of these accessible tools.

Relevant literature resources

- Alexander, B., Adams Becker, S., & Cummins, M. (2016). Digital literacy: An NMC Horizon Project strategic brief (Vol. 3.3, October 2016). The New Media Consortium.
- Aswin, [initials unknown] (2020). Reflective teaching in higher education. Bloomsbury.
- Barnett, R., & Coate, K. (2005). Engaging the curriculum in higher education. Open University Press.
- Biggs, J. (2003). Aligning teaching for constructing learning. Higher Education Academy, 1-4.
- Forum Insights (2017). Expanding our understanding of assessment and feedback in Irish higher education. National Forum for the Enhancement of Teaching and Learning in Higher Education.
- Garrison, D. R., & Cleveland-Innes, M. (2005). Facilitating cognitive presence in online learning: Interaction is not enough. *American Journal of Distance Education*, 19(3), 133-148.
- Laurillard, D. (2012). Teaching as a design science: Building pedagogical patterns for learning and technology. Routledge.
- Jiang, M., & Ting, E. (2000). A study of factors influencing students' perceived learning in a web-based course environment. *International Journal of Educational Telecommunications*, 6(4), 317-338.
- McArthur, J. (2023). Rethinking authentic assessment: Work, well-being, and society. *High Education*, 85(1), 85-101.
- Nguyen, K. A., Borrego, M., Finelli, C. J., et al. (2021). Instructor strategies to aid implementation of active learning: A systematic literature review. *IJ STEM Ed*, 8, 9.
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- Spodark, E. (2005). Technoconstructivism for the undergraduate foreign language classroom. *Journal of Asynchronous Learning Networks*, 7(2), 61-80.
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NLP tools and AI tools: a synergy for textual analysis in class

KATERINA FLOROU, ASSISTANT PROFESSOR OF CORPUS LINGUISTICS

UNIVERSITY OF ATHENS

GREECE

Description of your learning resource or course:

The course in which I applied AI tools is a semester-long offering at the University of Athens, available for all the departments of foreign language, titled Digital Humanities. Throughout the course, students utilize Natural Language Processing (NLP) tools with the objective of conducting textual analysis, such as identifying term frequencies within corpora or comparing texts based on their textual characteristics, density, readability, and other parameters. For this activity, the inclusion of ChatGPT is recommended for literary texts in Italian, Greek, or English. The course seamlessly integrates applied linguistics with literary analysis, allowing students to involve with digital tools in an engaging manner.

The purpose of this proposal is to introduce an activity in which students perform textual analysis using an advanced NLP tool and subsequently request the same analysis from ChatGPT for the identical text. In the end, students are tasked with comparing the results.

Context in which the learning resource was created:

This is a proposed activity applicable during language lessons or Higher education courses that, in one way or another, incorporate automatic text analysis.

AI tool(s) used:

ChatGPT

Explanation of the process followed:

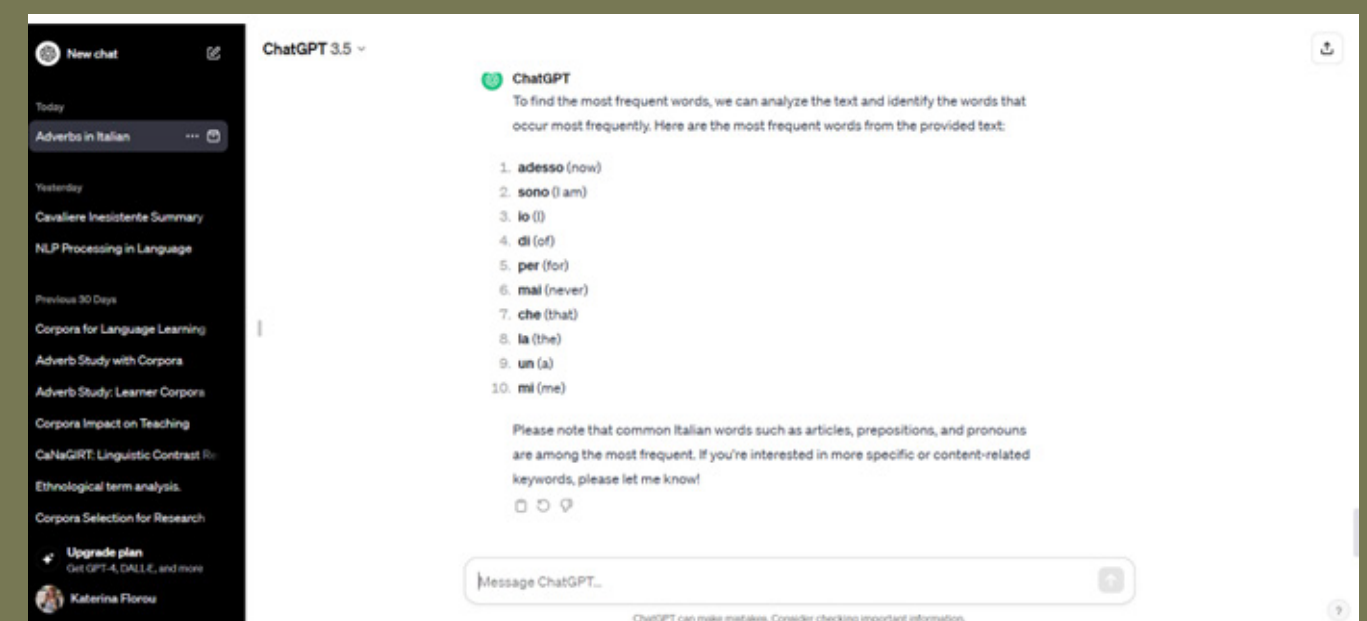
As a first step one must select a concise literary text (e.g. poem or a small piece of a novel) and proceed to upload it into Voyant Tools. Next, the student uses Voyant Tools to conduct a comprehensive analysis, identifying textual elements such as the most frequent words, readability index, or density index. Subsequently, it is necessary to save the obtained results. Following this, one should employ ChatGPT to extract textual elements, including most frequent words, readability index, or density index, for the same selected text and as soon as the student has the response generated by ChatGPT the data must be preserved. Conclude the process by

undertaking a comparative analysis of the outcomes derived from both Voyant Tools and ChatGPT. Evaluate the effectiveness of each tool in capturing and presenting relevant textual elements, providing insights into the strengths and limitations of their respective analytical capabilities.

Key learnings and recommendations for others:

Applying this activity in the class the students get in touch with the language, the literature

and the digital ways of textual analysis using a joyful way. An NLP tool is valuable for handling big data due to its dedicated design for processing corpora. However, in the free edition of ChatGPT, one cannot insert lengthy texts. Therefore, this activity and the comparison of the two approaches are applicable only when the literary text is a poem or a small excerpt from a novel.



Relevant literature resources

Brown, T., Mann, B., Ryder, N., Subbiah, M., Kaplan, J. D., Dhariwal, P., Neelakantan, A., Shyam, P., Sastry, G., Aske11, A., Agarwal, S., Herbert-Voss, A., Krueger, G., Henighan, T., Child, R., Ramesh, A., Ziegler, D. M., Wu, J., Winter, C., Hesse, C., Chen, M., Sigler, E., Litwin, M., Gray, S., Chess, B., Clark, J., Berner, C., McCandlish, S., Radford, A., Sutskever, I., & Amodei, D. (2020). Language models are few-shot learners. *Advances in neural information processing systems*, 33, 1877-1901.

Jockers, M. L. (2013). *Macroanalysis: Digital methods and literary history*. University of Illinois Press.

Sinclair, S., & Rockwell, G. (2016). *Embedding Voyant Tools*. Voyant Tools. <http://www.voyant-tools.org/docs/#!/guide/embedding>

AI learning resources design guidance

an practical approach to ethics, copyright and open licenses

JAVIERA ATENAS , SENIOR LECTURER IN LEARNING AND TEACHING ENHANCEMENT

UNIVERSITY OF SUFFOLK

UK

NICHOLAS HM CALDWELL, PROFESSOR OF INFORMATION SYSTEMS ENGINEERING

UNIVERSITY OF SUFFOLK

UK

Description of your learning resource or course:

This online decision-tree open tool to support educators in deciding whether to use or not AI and open licenses to design ethical, legal and inclusive learning resources. This tool will guide and advise educators in make effective decisions in terms of copyright and open licenses, use of third-party materials, ethical portrayal of people and places, use of sensitive real or fictional AI generated data, images, case studies and scenarios, informing users on the sources used for the development of the learning resource, as well as its publication in private or open platforms. The development of this tool, which does not collect data, is being made in collaboration with members of the computer science team. The prototype is available here (<https://forms.office.com/Pages/ResponsePage.aspx?id=2V0m7q0Et>

0G0CeZplwXTXYc0CkkT2VpBql4Kg0XRN_hUMzMxMk1WUUQ0RTNFNUJKNDk0Mkc2WTdCSS4u).

Context in which the learning resource was created:

This is an online open tool to support educators in developing learning object that can be enabled with AI and published as OER.

AI tool(s) used:

We did not use AI to develop this tool instead we reviewed a series of data and AI ethics, and AI in education frameworks.

Explanation of the process followed:

We aimed at supporting, the understanding of using AI to develop learning, resources (open or not), developing and advancing data and AI literacies in terms of using AI ethically

to develop learning and teaching materials ensuring these are respectful of licenses and copyright, use of 3rd party materials and mitigating biases when using AI.

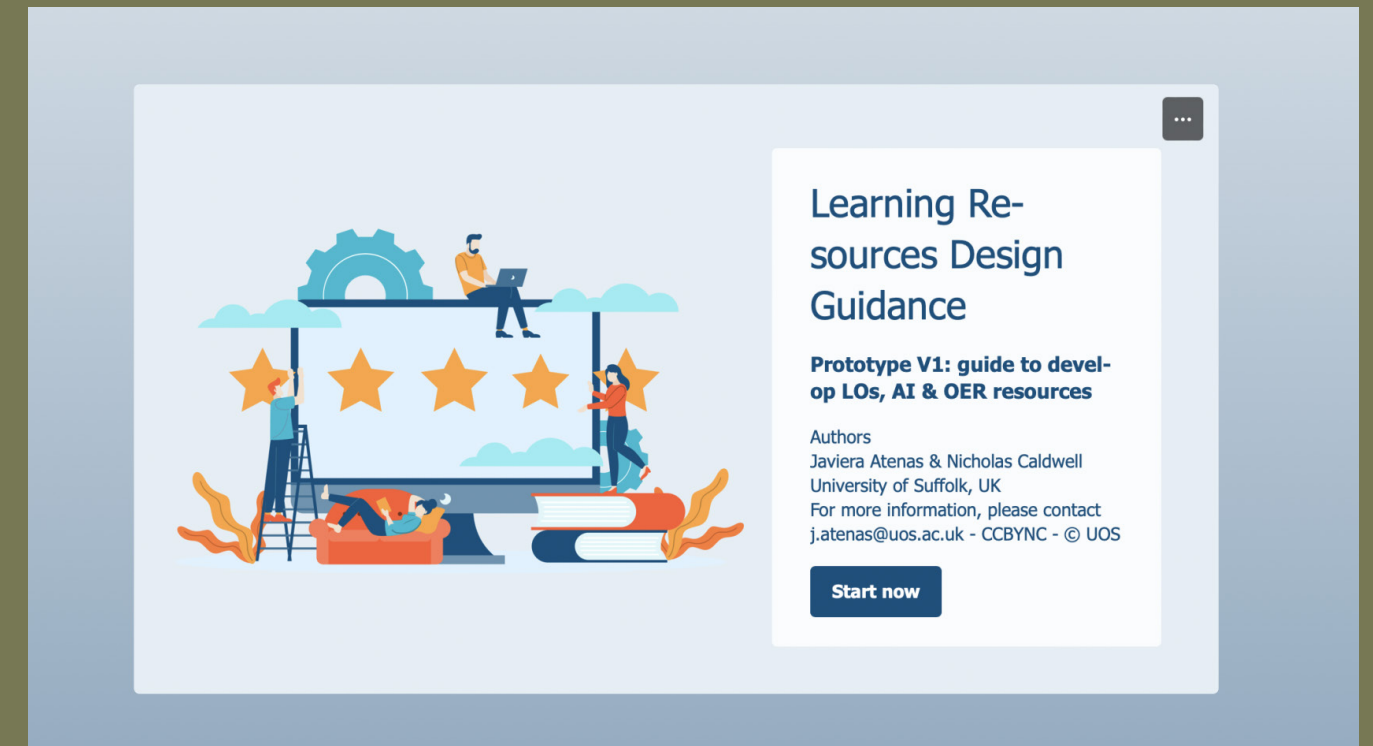
Key learnings and recommendations for others:

This decision tree can help educators in understanding some simple concepts about open licensing and copyright as well as some

basic elements in terms AI ethics to help them develop resources mitigating biases helping them to navigate and harness data-driven and AI technologies in educational practices.

Links for more information:

https://forms.office.com/Pages/ResponsePage.aspx?id=2V0m7q0Et0G0CeZplwXTXYc0CkkT2VpBql4Kg0XRN_hUMzMxMk1WUUQ0RTNFNUJKNDk0Mkc2WTdCSS4u



Online decision-tree open tool to support educators in deciding whether to use or not AI and open licenses to design ethical, legal and inclusive learning resources

Enabling change:

Tailored learning for vulnerable adult groups

MARIANTHI (MARIANNA) KARATSIORI, LECTURER

UNIVERSITY OF MACEDONIA

GREECE

Description of your learning resource or course:

I teach the course Adult Education for vulnerable groups. One of the main objectives is to guide students in how to understand the real needs of the adult group and how to develop a short training programme that covers the needs of the group. For developing this course they have to acknowledge the prior knowledge of the target group, their motivations and their expectations.

Context in which the learning resource was created:

I teach the course Adult Education for vulnerable groups. The course is attended by 50-60 students in the 2nd or 3rd year of their undergraduate studies.

AI tool(s) used:

ChatGPT

Explanation of the process followed:

Students had to select a topic for the training seminar and a vulnerable target group (i.e. migrants, refugees, Neets-young people not in education, employment or training, homeless, people living in poverty, inmates etc). In order

to make their training seminar as fit to purpose as possible, they created personas with ChatGPT. These personas acted as members of the target group. Students provided the specific characteristics of each persona (age, setting, emotional state, educational background, family obligations etc) who was inspired by a real person. Students engaged in a structured dialogue to uncover the needs, challenges, and aspirations of these simulated individuals to attend the seminar. And then, students thought of the main objective of the seminar, its structure and content. The structure and the content of the seminar was also guided by ChatGPT. ChatGPT served as a brainstorming and development tool, helping to suggest content, methodologies, and resources that align with the identified needs, motivations, and prior knowledge of the target group.

Key learnings and recommendations for others:

Understanding the target group's needs, motivations, and expectations through interactive simulations. Performing a simulated needs analysis of the target group. Developing a fit to purpose, responding to their needs training seminar.

The main challenge in creating short adult education seminars is that the needs analysis is often neglected, which neglects to consider the specific needs of the attendees. This concept aims to bridge this gap by ensuring that the actual requirements and expectations of the participants are central to the development of the seminar content and structure.



The picture was created with Dalle

BridgeBuilders :

Constructing understanding in imagined cultures

MARIANTHI (MARIANNA) KARATSIORI, LECTURER

UNIVERSITY OF MACEDONIA

GREECE

Description of your learning resource or course:

In the Globalisation and Intercultural Education course I teach, one session is dedicated to leveraging ChatGPT for delving into the complexities of cultural interactions. Two main aims: 1. Enhance intercultural communication skills 2. Stimulate creativity and critical thinking. There are around 20-30 students, ages 25-55 years old. It is a postgraduate course.

Context in which the learning resource was created:

The course is Globalisation and Intercultural Education. One session is devoted to ChatGPT.

AI tool(s) used:

DALL-E

Explanation of the process followed:

Initially, I offer a demonstration, then guide students to invent their own imaginary cultures. They're tasked with crafting scenarios in which these cultural variances lead to communicative hurdles. The aim is to utilize these constructed situations for fostering a deeper comprehension of diversity and inclusivity,

alongside refining intercultural communication skills. Students, working in groups (4-6), are encouraged to pinpoint and respect the diverse cultural values and norms shaping the communication dynamics within their scenarios. They're motivated to devise creative, yet feasible, approaches for surmounting these barriers, emphasizing empathy, dialogue, and joint efforts. This activity, tinged with a competitive edge, challenges groups to conceive scenarios featuring nuanced cultural and linguistic obstacles that spawn minor but insightful misunderstandings. Each team then shares their scenarios in class, striving to achieve a blend of uniqueness and plausibility. This interactive and slightly competitive format not only entertains but also ignites students' imaginative capabilities, allowing them to uncover and tackle some of the less obvious factors that can hinder effective communication.

Recommendations:

- Scenario presentation and scoring: Have each group present their created scenarios to the entire class. Develop a scoring rubric that evaluates aspects such as creativity, complexity of cultural interactions, realism, and the effectiveness of proposed solutions.

- Peer Voting: Allow each group to vote on the best scenario based on the comments of the rubric. The scenario with the most votes will be declared the winner.

Links for more information:

<https://chat.openai.com/share/75de1b80-4f4b-4c35-ac07-47eadce68c6e>

Key Learnings:

Foster deep understanding of cultural diversity and inclusivity, negotiating differences.



Bridge-Builders

Lost in Assessment? Unlock creativity with GAI

ANONYMOUS

Description of your learning resource or course:

Objectives: Discover strategies to reduce the workload and stress associated with dissertation evaluations.

Foster a more engaging evaluation experience for both evaluators and students.

Target Audience:

- University professors and lecturers
- Dissertation supervisors and evaluators
- Academic advisors and mentors

Context in which the learning resource was created:

Evaluating a multitude of dissertations often plunges academics into a sea of daunting emotions. The sheer volume can evoke feelings of being overwhelmed, as each dissertation demands meticulous attention to detail, critical analysis, and constructive feedback. The monotony of the task can lead to intellectual fatigue, diminishing the joy of discovering new knowledge and insights. Additionally, the pressure to provide timely, meaningful

feedback can stir up stress and anxiety, overshadowing the intrinsic satisfaction of guiding students' scholarly journeys.

AI tool(s) used:

DALL-E

Explanation of the process followed:

ChatGPT significantly aids academics in offering more innovative and personalized feedback on dissertations. It streamlines the review process by automatically summarizing critical points, such as the comprehensiveness of the literature review and pinpointing areas that require further development, like insufficient argumentation on specific themes. This automation frees up time for academics to engage in more in-depth analysis.

Utilizing ChatGPT, I was able to enhance the quality of my feedback, tailoring it to the unique aspects of each student's work. By focusing on specific sections of the dissertation and consulting ChatGPT for ideas on more imaginative feedback, I introduced a variety of fresh, insightful, and constructive suggestions. This approach not only broadened

the perspectives and ideas available to both the student and me but also revitalized my engagement in my mentoring role. For example, when a student overlooked including practical examples or activities, I turned to ChatGPT to generate appropriate examples and activities that aligned with the student's topic, enriching the student's understanding and application of the material.

Key learnings and recommendations for others:

Lightening the load of marking, personalization of feedback, enhancement of feedback quality, inspiring creativity. Take advantage of ChatGPT's ability to tailor feedback to the specific needs and contexts of each dissertation. This personalized approach not only makes the feedback more relevant and actionable for students but also deepens students' engagement with the material.

However, attendance is needed in making sure that what ChatGPT proposes is actual relevant and open up your student's knowledge. Sometimes, it proposes too theoretical and unrealistic feedback.



Can GAI transform dissertation assessments into a creative quest?

Generative AI:

A problematic illustration of the intersections of racialized gender, race and ethnicity

NAYIRI KESHISHI, SENIOR LECTURER IN LEARNING DEVELOPMENT

UNIVERSITY OF SURREY

UK

DUSTIN HOSSEINI, LEARNING INNOVATION OFFICER AND DOCTORAL STUDENT IN EDUCATION

UNIVERSITY OF GLASGOW/UNIVERSITY OF STRATHCLYDE

SCOTLAND

Description of your learning resource or course:

This workshop aims to develop practical awareness and understanding of the problematic nature of using GAI. Specifically, this workshop aims to develop critical and analytic thinking around the underpinnings of GAI along with what GAI (re)produces concerning race and gender.

We highly recommend you read the blog (link) before delivering this workshop. We also recommend you share it with students to read after their participation e.g. as part of the 'post-workshop' materials.

We are also gathering feedback, via this online survey (link), from both student participants and educators delivering the workshop. This should take no longer than 5-10 minutes to complete.

Context in which the learning resource was created:

The learning resources was designed to explore the ethical dimensions of artificial intelligence (AI) with a specific focus on recognizing and addressing biases, particularly those related to race and gender, in GAI models. Participants will develop critical and analytical thinking skills to make ethical choices and effectively address biases in practical AI applications. Through interactive discussions, case studies, and hands-on activities, learners will engage with the complexities of AI's impact on race and gender, and explore strategies for promoting awareness and implementing ethical solutions. This session was created for all student levels/ disciplines and can be adapted to fit specific needs.

AI tool(s) used:

DALL-E

Explanation of the process followed:

Dustin:

I used a prompt and only changed the adjectival qualifier describing the national origin of the imaginary character or avatar: Create an image of a sweet, old X grandmother making pancakes. I tried out these prompts over a period of two weeks in July 2023. The queries I created are these:

Create an image of a sweet, old Polish grandmother making pancakes

Create an image of a sweet, old Russian grandmother making pancakes

Create an image of a sweet, old American grandmother making pancakes

Create an image of a sweet, old Black American grandmother making pancakes

I use specific terms to get the GAI tool DALL-E to generate specific results to allow me to see what the AI tool produces so that I can then analyze the results. This, in turn, offers evidence and clues to understanding how human-created algorithms create the outputs that they do within GAI tools.

In each case, DALL-E created four (4) individual representations of each character or avatar to illustrate the prompt I had created; in total, there are 16 images.

Nayiri:

After reading Dustin's blog on this topics, I knew it would make a brilliant workshop. So, with his permission, I created a first draft slide deck and accompanying worksheets. We then collaborated to reach the final version.

Key learnings and recommendations for others:

Recognise and understand biases in GAI, particularly regarding race and gender.

Develop critical and analytical thinking to make ethical choices and address biases in practical AI applications.

Communicate the ethical complexities of AI's impact on race and gender, promoting awareness towards ethical considerations and solutions.

Links for more information:

- <https://www.dustinhosseini.com/blog/2023/08/08/generative-ai-a-problematic-illustration-of-the-intersections-of-racialized-gender-race-ethnicity>
- <https://osf.io/preprints/osf/987ra>
- <https://aldinhe.ac.uk/product/learnhigher-resources/generative-ai-a-problematic-illustration-of-the-intersections-of-racialized-gender-race-and-ethnicity/>
- https://figshare.edgehill.ac.uk/articles/educational_resource/Generative_AI_a_problematic_illustration_of_the_intersections_of_racialized_gender_race_ethnicity/24680895

Beyond algorithms:

Cultivating AI literacy for a compassionate and equitable world

MARIANTHI (MARIANNA) KARATSIORI, LECTURER

UNIVERSITY OF MACEDONIA

GREECE

Description of your learning resource or course:

Students, teachers, Academics. Objective: In the pursuit of true learning and being, especially as we navigate the era of superintelligent GAI tools, it becomes imperative to redefine what constitutes true learning. AI literacy, understanding how AI operates and its broader implications, is not merely about harnessing a new set of skills or competencies. It goes beyond the mechanics of AI to foster a deep, ethical engagement with technology, with society and with one another.

Context in which the learning resource was created:

These are some thoughts on how AI could help humanity, and I discuss them with all my students.

AI tool(s) used:

DALL-E

Explanation of the process followed:

True learning in the AI era is about cultivating a love for continuous discovery and aligning with a purpose that transcends individual achievement — namely, contributing to a better world. This noble pursuit requires us to

harness AI's collective intelligence responsibly, fostering virtues like patience, compassion, and a genuine willingness to listen and understand the 'other.'

If our aim is to reduce inequalities and enhance global well-being, can AI literacy become a tool not just for navigating technology but for nurturing gratitude and a sense of responsibility towards others? It's about empowering ourselves with the knowledge to use AI in ways that are ethical, equitable, and aligned with humanity's collective values.

What truly sets humans apart from Gen AI is our heart's unique ability to connect, to offer warmth, to listen attentively, and to deeply understand one another.

It's an interplay between knowledge and love/compassion/understanding.

The super-intelligent AI tools are the agents of intelligence/knowledge/capacity, can we be the agents of love/compassion/understanding/wisdom?

Love, compassion, and understanding cannot be coded into algorithms; they are cultivated through lived experiences and genuine human interactions.

Now that AI systems can process, analyze, and generate information at unprecedented scales for our benefit, can we shift our focus towards nurturing the qualities that truly distinguish us as humans?

Can AI challenge us to be agents of love, compassion, and understanding, leveraging our time and efforts for fostering a more connected, empathetic world?

This shift could lead to a renaissance of human connection, empathy, and mutual understanding, driven by the conscious choice to prioritize what makes us inherently human.

Only then can we employ AI to create a more inclusive, compassionate, and equitable world.

We are as fortunate as we can be. We have the most intelligent tools, no other generation had ever before. Can we seize this opportunity and make a difference?

The decision is on us...

Key learnings and recommendations for others:

Can AI challenge us to be agents of love, compassion, and understanding, leveraging our time and efforts for fostering a more connected, empathetic world? This shift could lead to a renaissance of human connection, empathy, and mutual understanding, driven by the conscious choice to prioritize what makes us inherently human.



Beyond Algorithms: Cultivating AI literacy for a compassionate and equitable world (created with DALL-E)

Relevant literature resources

Karatsiori, M. (2023). In the pursuit of quality education: From ancient times to the digital era, can there be a consensus? *Cogent Education*, 10(2). <https://doi.org/10.1080/2331186X.2023.2286817>

AI Trust Survey

FUAT RAMAZANOV, DIRECTOR OF THE INTERNATIONAL BUSINESS MANAGEMENT PROGRAM

ACSENDA SCHOOL OF MANAGEMENT

CANADA

Description of your learning resource or course:

GenAI Trust Survey. I designed this exercise late in December 2023 and have recently started using it in my classes. I have not found the use of this exercise elsewhere yet. I recently presented it at the BCCampus panel discussion.

Context in which the learning resource was created:

Education.

Explanation of the process followed:

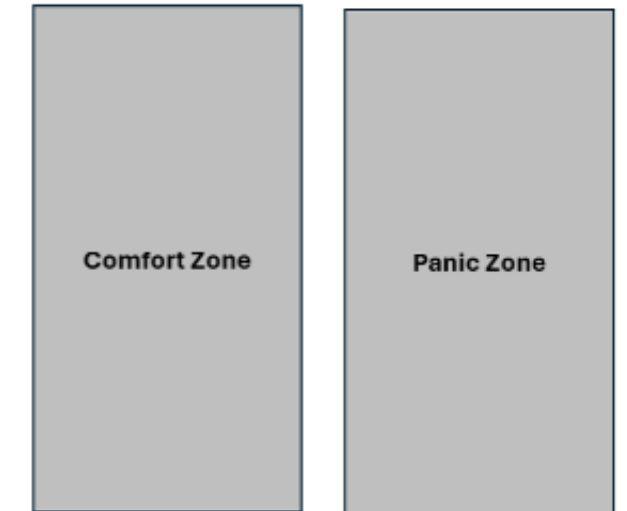
Educators can employ what I term a AI Trust Survey by prompting students to respond to a numbered list of questions related to their comfort levels when using GenAI in daily life, educational settings, and personal and professional tasks. Subsequently, students are tasked with mapping their responses on two designated sections labelled Comfort Zone and Panic Zone on a piece of paper. This exercise can take the form of a written assignment, requiring students to reflect on their answers, or a class discussion. When used in a class discussion follow-up question may include: Is there a student who feels comfortable using AI in all situations? What factors influence students to consider using GenAI in one situation over another?

Key learnings and recommendations for others:

Can AI challenge us to be agents of love, compassion, and understanding, leveraging our time and efforts for fostering a more connected, empathetic world? This shift could lead to a renaissance of human connection, empathy, and mutual understanding, driven by the conscious choice to prioritize what makes us inherently human.

AI Trust Survey

- How comfortable are you seeking assistance from a virtual assistant powered by Generative AI for academic tasks?
- Would you be willing to use a Generative AI tools in shaping personal and professional decision-making processes?
- How comfortable are you with utilizing Generative AI tools to automate repetitive tasks in your daily life?
- Would you trust a Generative AI system to assist in making personal financial decisions on your behalf?
- Would you be open to collaborating with Generative AI tools to enhance your own creativity in art or design?
- How would you feel about Generative AI being used to personalize marketing content based on your online behaviour?
- How open are you to using Generative AI for language translation and communication in a multicultural setting?
- In personal health decisions, would you consider utilizing Generative AI to analyze health data and provide recommendations?
- Would you trust Generative AI in analyzing your professional networking data to recommend connections or collaborations?
- In your personal life, would you consider employing Generative AI to manage and organize your schedule and tasks?



AI assistant for real-work related scenario

GIACOMO OCCHIPINTI, DIGITAL LEARNING PRODUCER

LONDON COLLEGE OF FASHION

UK

MARK ROBINSON, LEARNING TECHNOLOGIST

HANNAH MIDDLETON, KNOWLEDGE EXCHANGE LEADER,

LONDON COLLEGE OF FASHION

UK

Description of your learning resource or course:

When analysing the training opportunities that are usually offered to develop AI literacy, we noticed that they are usually focused on using the tools themselves, as opposed to asking the learners to do a task in which the AI tool is part of the process. Our idea was to hide the tool behind the task as much as possible after giving students a brief introduction of how AI works, both conceptually and in the context of the fashion industry.

Context in which the learning resource was created:

Higher Education, AI literacy, work-based scenarios

AI tool(s) used:

ChatGPT, Adobe Firefly, Bing AI

Explanation of the process followed:

We decided to create a real-world task that a fashion business student might encounter when working in the industry. We gave the student a context linked to a real brand that is facing a falling share price due to a series of economical and PR factors. We then asked the students to produce a visual document that summarises the current consumer sentiment towards this company and recommends the best strategy to ensure revenues return to plan and the share price rises. The student will work in groups and will be allowed to use two conversational tools (GPT 3.5 and Bard) and two image tools (Adobe Firefly and Bing AI). We gave some extra guidance on the tools and suggested they think about their use, compared with internet search.

ChatGPT -Generate text: Craft engaging social media posts or website copy

addressing consumer concerns and showcasing brand values.

BARD -Data analysis: Summarize and analyse news articles, social media comments, and sentiment data to understand consumer perspectives. Adobe FireFly -Visual insights: Generate infographics or mood boards highlighting key themes and emotions from consumer feedback.

Bing AI Image Creator -Visual content: Create custom images illustrating the recommended strategy or showcasing desired brand perception.

Key learnings and recommendations for others:

What we aim to achieve: We wanted to move the students' attention away from the tools themselves and their limitless potential applications and focus it on something that

they are already familiar with; our hope is that this familiar context will help students understand how these tools can be used in the normal flow of work to enhance a task and, more importantly, their limitations in terms of accuracy and depth.

Where the inspiration comes from:

The inspiration come from a learning design principle about storytelling that says that using concrete examples and case studies help students to learn and retain complex information. It also comes from our personal experience of using these tools in our specific working contexts (learning design and business) and how this helps us judge these AI tools' performance within a domain where we can critically evaluate their output.

It's all about the process -

assessment with GenAI

LYNN GRIBBLE

UNSW SYDNEY

AUSTRALIA

JANIS WARDROP, EDUCATION DIRECTOR, CENTRE FOR SOCIAL IMPACT

UNSW SYDNEY

AUSTRALIA

Description of your learning resource or course:

The students are tasked to create a memo, using GenAI (can be ChatGPT, Bard, Bing or other), their role is to refine the output, fact check and progress the ideas. They do this by submitting a document in track changes form with review call outs and marked up changes as well as meta comments about the work.

Context in which the learning resource was created:

Responsible Business Professionalism, first year, masters of commerce students (ethics and sustainability).

AI tool(s) used:

It is recognised that using GenAI as a thought starter, idea generator is time saving (the choice of LLM is currently left to the student as we have no enterprise supplied system).

The value humans add is our ability to link seemingly unrelated ideas together and to fact check what the LLM, may produce or suggest. Therefore it is how the students move beyond what the GenAI/LLM produces that will set them apart for their futures as ethical managers.

Explanation of the process followed:

It is expected this assessment item will engage students to use AI and understand their role in doing so as a responsible business professional. As many of our students are internationals, and may feel anxious about writing in their second language, it is critical to engage them in using GenAI ethically and responsibility in earning their degrees and for their future work.

This assignment was specifically designed to for this compulsory core subject for the Masters of Commerce. As we are signatories to

PRME (Principles of Responsible Management Education) and GenAI is continually evolving and now ubiquitous in many places, the ability to use GenAI responsibly and ethically was seen as of critical importance, hence this assignment focuses beyond AI as a tool to the use in business. It requires students to demonstrate, their personal responsibility taken for the output, by asking students to show and disclose the process of change and refinement of ideas and outputs along with acknowledging GenAI use.

Students are given a real world problem to write a memo to for their manager. The memo is designed to persuade their 'manager' of the size of problem and risk to organisational reputation if this is not addressed in light of the UNSDGs.

Students create a memo and they may use GenAI, they have a base article to inform what they are asking and their thinking about the problem. This assessment is done in week 3,

hence they have been exposed to the UNSDGs and some ethical thinking, the memo needs to demonstrate this.

Once they have the output, they are to work on one document, cite and acknowledge AI use, and develop the ideas insert appropriate references, make comments on why things need changing or how it may be improved.

They submit a document in what would be considered draft form.

Key learnings and recommendations:

Students need to understand that this will not look like a finished document but work in progress. We stopped grading output and started grading how much input they changed and their process of doing the work. Students need to be shown what a marked up document looks like and the level of changes expected. So far our students (and our teaching team) appear to be excited by tackling work in this new manner.

The screenshot shows a document with track changes and a chat interface. The document text includes:

Example:
Prompt:
Create a memo about the problems with space Junk and vanity canisters to influence my manager that we need to be accountable to the UN SDGs and ethical practice if we are to provide our customers with this choice

ChatGPT
Subject: Addressing Space Junk and Vanity Canisters: Embracing UN SDGs and Ethical Practices

Date: January 25, 2024
To: Mr Smith
From: Jane Bloggs
Cc: for distribution to SMT

Dear Mr Smith

The growing concern within our industry - the issues related to space junk and the use of vanity canisters. Given our commitment to upholding ethical, environmental, standard and the subsequent and regulatory implications introducing Vanity Canisters for our consumers has substantial risks. Further our commitment to the United Nations Sustainable Development Goals (UN SDGs) and adopting ethical practices, requires us to consider our corporate responsibilities and provide our customers with a responsible and sustainable choice.

Space Junk Problem:

- Environmental Impact:** The increasing amount of space debris poses a significant threat to the safety of both human spaceflight and satellite operations. Collisions with space junk can lead to further fragmentation, creating a cascading effect and generating even more debris. This not only endangers space missions but also adds to the growing problem of space pollution.
- International Regulations:** International space treaties and agreements, such as the Outer Space Treaty and the Kessler

The chat interface on the right shows several messages from Lynn Gribble:

- Lynn Gribble Deleted: (Date)
- Lynn Gribble Deleted: (Manager's Name)
- Lynn Gribble Deleted: (Your Name)
- Lynn Gribble Deleted: (Relevant Team Members)
- Lynn Gribble Deleted: (Manager's Name)
- Lynn Gribble Deleted: I hope this memo finds you well. I would like to draw your attention to a
- Lynn Gribble Deleted: These challenges have
- Lynn Gribble Deleted: that we cannot afford to overlook
- Lynn Gribble Deleted: By embracing
- Lynn Gribble Deleted: we can not only meet our
- Lynn Gribble Deleted: but also

Two reply messages are visible:

- Lynn Gribble Changed commencement point to be more succinct and business like. Focused on the problem up front
- Lynn Gribble This opening is too generic and adds little value. Making it specific to our business will demonstrate my understanding of the nature of our business and its strategic intent

Visualizing the Labours of Hercules

STEFANOS ALIFIERAKIS, TEACHER OF ANCIENT GREEK AND MODERN GREEK LANGUAGE

UNIVERSITY OF EDINBURGH

Description of your learning resource or course:

As a teaching scenario, we tried to help students visualize information with the use of AI image generator tools. In context of familiarizing students with the labours of Hercules, we used Gencraft to help students have a clear understanding of hero's route. This visual representation has been proved so beneficial for students, who managed to combine the information from the scholastic book. Through the images generated by Gencraft we had the opportunity to study which labour is depicted in the image and notice the differences between the information given by the ancient sources. Furthermore, after the visual representation of the myth we used Kahoot (another AI tool) to assess if students have deepened their understanding concerning the labours of Hercules.

Context in which the learning resource was created:

We leveraged two different AI tools. After reading the labours of Hercules, I presented to the pupils the images and I asked them which image is corresponded to which labour. As part of a mythology class, I decided to get students acquainted with the labours of Hercules. More

specifically, I asked Gencraft to design an image about the wrestling of Hercules with the Nemean lion. Moreover, I prompted Gencraft to represent with an image the slaughtering of Lernean Hydra by Hercules.

AI tool(s) used:

Gencraft, Kahoot AI

Explanation of the process followed:

First of all, with my students we read the labours of Hercules from the work of Apollodorus Library and we examined the labour of Nemean lion and Lernean Hydra. Following this, I show them different images generated by Gencraft to visualize the information we read before. In parallel, we examined the differences between the images from ancient pots and those generated by AI tool. Afterwards, we had a profound discussion concerning the capacities of technology. Students claimed that AI tools generated images which could be designed in ancient times. All in all, we played a quiz leveraging the capacities of Kahoot AI to measure and track our understanding.

Key learnings and recommendations:

I would strongly recommend both AI tools since they can be used to facilitate the

transmission of mythological knowledge.

Gencraft is a useful tool that helps student to acquire knowledge with a visual representation of information. Moreover, teachers can experiment with this tool and use it as a prompt for interesting and engaging discussions.

Furthermore, students managed to cultivate their critical thinking as they had to compare the images from different fonts. According to the implementation of Kahoot, this AI tool is an example of a gamified solution which captures the interest of students and keep them engaged. In conclusion, Kahoot was proved to be a tool for measuring student's progress

Links for more information:

Link to my assignment task:

<https://gencraft.com/generate>

<https://kahoot.com/>

Extraordinary AI claims, require extraordinary evidence [1]

WOUTER VAN DER HORST, PRACTOR (RESEARCHER) MEDIA LITERACY, AND TECHNOLOGIST & FOUNDER WE SHARE CULTURE

MEDIA COLLEGE, AMSTERDAM AND WE SHARE CULTURE

NETHERLANDS

Description of your learning resource or course:

Disinformation is timeless, yet the rise of generative AI has propelled the spread of fake news to unprecedented levels [2]. This underscores the importance of teaching critical thinking skills as a cornerstone in strengthening our students' digital resilience. The critical question emerges: Do we require new approaches to address this challenge, or can the wisdom of great thinkers of the past guide us? David Hume (1711-1776), renowned for his examination of miracles, argued that a miracle could only be deemed true if every alternative explanation would appear more miraculous [3]. My idea involves applying Hume's methodology to contemporary disinformation proliferating online.

Context in which the learning resource was created:

Media-, Civic- and History Education (Secondary and Higher Education) Revisiting

Richard Dawkins' 2010 book, *The Magic of Reality*, I realised that, fundamentally, our belief in miracles and disinformation are not that different at all.

AI tool(s) used:

OpenAI's ChatGPT, Google's Gemini

Explanation of the process followed:

Let's consider the Flat Earth Conspiracy as a case study. Allow your students to generate an article listing the Flat-Earth arguments.

Hume's logic dictates that such a claim holds water only if the counterargument is more implausible than the claim itself. Encourage your students to then evaluate the two scenarios:

1. Against all laws of nature, the Earth is flat, rendering all photographs, videos, scientific observations, and the collective human understanding in this domain incorrect.

2. The Earth is not flat, and the laws of nature remain valid.

This straightforward yet potent strategy should effectively counter any new 'evidence' supporting the conspiracy, regardless of how compellingly it's produced by AI. Have your students suggest more compelling examples of disinformation that they would like to weigh using this method to maximise their engagement.

Key learnings and recommendations for others:

We live in an era of informational abundance, where critical thinking skills are essential to combat disinformation. As a history teacher, I suggest leveraging existing ideas and tools to enhance these skills, rather than attempting to reinvent the wheel.

Relevant literature resources

[1] Inspired by Carl Sagan's famous quote: Extraordinary Claims, Require Extraordinary Evidence.

[2] Verma, P. (2023, December 17). The rise of AI fake news is creating a 'misinformation superspreader'. The Washington Post. <https://www.washingtonpost.com/technology/2023/12/17/ai-fake-news-misinformation/>

[3] Dawkins, R. (2012). What is a miracle? In: *The magic of reality: How we know what's really true* (pp. 240-252). Transworld Publ. Limited UK.

Art through AI's eyes:

A new look at old masters

WOUTER VAN DER HORST, PRACTOR (RESEARCHER) MEDIA LITERACY, AND TECHNOLOGIST & FOUNDER WE SHARE CULTURE

MEDIA COLLEGE, AMSTERDAM AND WE SHARE CULTURE

NETHERLANDS

Description of your learning resource or course:

One of the biggest challenges for any Art or Museum Educator is to get students to look long and attentively at art. This was my personal experience while working at the education department of the Rijksmuseum as well. So, how can AI help us to get students to look longer, and more attentively at art? The idea is simple: we ask students to observe an artwork for about 5 minutes, preferably open source art works, such as Johannes Vermeer's Milkmaid. They need to really take their time and take in as many details as possible. The next step is to translate their observations in a prompt for a text-to-image generator to recreate the painting as closely as possible. This means that their prompt needs to be very specific. It's important to mention that with any text-to-image generator, no matter how precise and complete the prompt, there will always be a lot of room for interpretation by the system. This brings us to the last step of the process: actually analysing the generated art works and discussing how closely they match the actual style and technique of the artist.

Context in which the learning resource was created:

Art Education, Museum Education (Secondary Schools and Higher Education).

As a technologist working in education and the museum sector (and a former bored youth in museums), I've always been fascinated by the opportunities technology provides to take down any natural barriers between young people and art.

AI tool(s) used:

Any text-to-image generator, such as DALL.E, Midjourney & Adobe Firefly

Key learnings and recommendations for others:

Obviously the educational goal lies not in recreating the painting using AI. We aim to get students to engage in deep, thoughtful observations of artworks and analyse the style and technique of the artist. It's a creative exercise that can be done in class, or even better, in a museum. As a bonus, your students will be practising the vital (future) skill of crafting eloquent and clear prompts.

Relevant literature resources

Vermeer, J. (n.d.). The Milkmaid, Johannes Vermeer, c. 1660. Rijksmuseum. <https://www.rijksmuseum.nl/en/collection/SK-A-2344>

Streamlining curriculum storyboarding using AI

JOHN HAMMERSLEY, LECTURER IN DESIGN STUDIES, SCHOOL OF DESIGN

CATHY MALONE, EDUCATIONAL DEVELOPER, ORGANISATIONAL DEVELOPMENT AND PROFESSIONAL LEARNING

OSVALDO M. QUERIN, PROFESSOR IN DESIGN OPTIMISATION, SCHOOL OF MECHANICAL ENGINEERING

RICHARD TUNSTALL, ASSOCIATE PROFESSOR OF ENTERPRISE, LEEDS UNIVERSITY BUSINESS SCHOOL

CHRIS THOMPSON, HEAD OF ENGAGEMENT AND INNOVATION, HELIX

SIMON J ROFE, ASSOCIATE PROFESSOR IN INTERNATIONAL POLITICS, SCHOOL OF POLITICS AND INTERNATIONAL STUDIES

REBECCA PADGETT, SENIOR TEACHING FELLOW, LEEDS UNIVERSITY BUSINESS SCHOOL

CHRISSI NERANTZI, PROFESSOR IN CREATIVE AND OPEN EDUCATION, SCHOOL OF EDUCATION

UNIVERSITY OF LEEDS

UK

Description of your learning resource or course:

A set of storyboards of three ideas for prototype Broadening Block courses.

Context in which the learning resource was created:

This design activity is part of the work of the Discovery Delivery Group at the University of Leeds supported by Curriculum Redefined, an ambitious institutional initiative to transform student education. While the main focus of this group is to design a) new Discovery modules to embrace self-organised learning; and b) enable students to gain credits for learning that traditionally happens outside

the curriculum, the group is also designing a series of non-credit bearing provision as part of the Broadening programme to widen access to learning opportunities beyond Discovery modules which are part of it.

The Block format is one of the three formats to achieve that. Block is defined as a learning format that is intense and compressed rather than a semester long module or other educational offer (Nerantzi & Chatzidamianos, 2020). The courses that may emerge from these Block prototype courses and the Blueprints that will be designed based on these, when they become available, will be low-stakes, non-credit-bearing and open to all students, staff and members of the

Leeds community were appropriate, to foster boundary-crossing learning that is current and can be renewed periodically. The idea is that Block together with two further formats, Open and Jam and future learning opportunities in other formats will enable students to use the learning from any future courses that follow these designs to gain credits through the Self-Organised University Learning (SOUL) at undergraduate or postgraduate level and therefore bring extra- and co-curricular work and learning into the curriculum via these new Discovery modules.

The Block group has originated initial ideas for three distinct prototype courses and plans to consult learners on these as part of the design thinking process to involve in conversation those we are designing for (Grabill et al., 2022; Lopez et al., 2023). In order to effectively communicate the ideas to a range of audiences and to enable meaningful engagement and a rich discussion around these, the team has created storyboards that include written and visual language.

Following an interview protocol which established a description of the module experience from the end user's perspective, the AI companion software Microsoft Copilot was used on mobile phones to generate visualisations for each step of the module story. The rationale for using AI to create visualisations was because AI is increasingly understood to improve productivity and creativity (Nerantzi et al. 2023). The simultaneous image generation of Copilot and the ability to change generative prompts to adjust, improve or replace images with alternatives quickly was seen as a significant benefit due to the demands to turn around

storyboards as quickly as possible. Generative AI can significantly speed up the prototyping phase of Design.

The quality of images produced, using the prompt 'create a drawing' was closer to a painting from a photograph than it was a drawing. Story boarding is regarded as a 'fault-tolerant' part of the design process (Turc, 2023). Some images included the typical mistakes AI image generation at this stage is known for. These included multiple arms, other anatomical errors, or poorly rendered faces in images, often with large groups of people. Nevertheless, the painterly quality of AI generated images and quasi-photographic nature of composition allows viewers to more quickly read images and grasp the content of any interaction or action by participants in images, than is often the case with simple line drawings. Another recognised limitation of artificial intelligence generated images is representational biases such as gender or race representations (Gangadharan, 2024). These were addressed by using the prompt 'diverse', when describing groups of university students, and at other times specifically indicating a disabled or female in a specific role. Above all though, AI was used because it dramatically sped up the workflow of storyboarding.

AI tool(s) used:

https://www.microsoft.com/en-gb/microsoft-365/business/copilot-for-microsoft-365?ef_id=_k_EAlaIQobChMlo9X5hrnVhQMvmZhQBh3MswxDEAAYASAAEgKJm_D_BwE_k_&OCID=AIDcmmorqeo08r_SEM__k_EAlaIQobChMlo9X5hrnVhQMvmZhQBh3MswxDEAAYASAAEgKJm_D_BwE_k_&gad_source=1&clid=EAlaIQobChMlo9X5hrnVhQMvmZhQBh3MswxDEAAYASAAEgKJm_D_BwE

Explanation of the process followed:

The creators of the prototype courses for Block were all interviewed using the same interview protocol. The questions asked them what users would see, hear or experience at various stages of their engagement with the module, and what would motivate them to move on to the next stage of engagement. Once these narratives of the user experience were available each stage was used to create a set of prompts for generative AI images. Each prompt typically started with the task, 'create a drawing of' and then the subject of the image. Early prompts for images of students had to be amended with the word, 'diverse'. Each prompt created four possible results which were saved and cropped to remove the prompt description. These images were then inserted into a Microsoft PowerPoint storyboard for the Block project.

Key learnings and recommendations for others:

There were a few key lessons for a first-time user of generative AI for storyboarding.

As mentioned previously, when describing groups of students the prompt 'a diverse group of university students' was helpful, as group labels like students can refer to school students in some contexts. For example, when prompting an image about LEGO® play, a method of design visualisation, the inclusion of LEGO®, led to the images being of much younger children rather than university aged students. When, prompting images of professional roles, it was necessary to vary descriptive prompts and be quite specific, for example, including prompts such as 'young female Chinese science lecturer' rather than science lecturer which was more likely to

produce an image of a middle-aged white male. Lastly, text is often incorrectly rendered, so when describing the topics of what students are engaging with, it was often helpful to mention what media, such as poster, or computer screen, they were looking at. This often created a surface on which an overlay of text could be added for the story boarding, rather than necessitating more demanding image editing using photoshop software.

Relevant literature resources

- Gangadharan, A. (2024). AI image generators often give racist and sexist results: Can they be fixed? <https://www.nature.com/articles/d41586-024-00674-9#:~:text=Other%20researchers%20have%20>
- Grabill, J., Gretter, S., & Skogsberg, E. (2022). Design for change in higher education. John Hopkins University Press.
- Lopez, I., Hammersley, J., & Nerantzi, C. (2023). Uncovering people centred design in the context of curriculum and learning design in higher education. In: C. Nerantzi, Hammersley, J., & I. Lopez(2023). Exploring people centred design in the context of curriculum and learning design in higher education. Special Issue. International Journal of Management and Applied Research, 10(2), 81-92. <https://doi.org/10.18646/2056.102.23-007>
- Nerantzi, C., & Chatzidamianos, G. (2020) Moving to block teaching during the COVID-19 pandemic. International Journal of Management and Applied Research, 7(4), 482-495. <https://doi.org/10.18646/2056.74.20-034>
- Nerantzi, C., Abegglen, S., Karatsiori, M., & Martinez-Arboleda, A. (Eds.) (2023). 101 creative ideas to use AI in Education. A crowdsourced collection curated by #creativeHE. Graphic Design by Bushra Hashim. <https://doi.org/10.5281/zenodo.8072949>
- Turc, J. (2023). Supercharging storyboarding with generative AI. <https://medium.com/@turc.raluca/supercharging-storyboarding-with-generative-ai-c7bcfd002db1>

Exploring subject-field literature

using AI and 'conventional techniques'

ALBERT STREVER, INNOVATION & ENTREPRENEURSHIP COORDINATOR, SENIOR LECTURER

STELLENBOSCH UNIVERSITY

SOUTH AFRICA

MARET DU TOIT

ELIZABETH MOLL-WILLARD

STELLENBOSCH UNIVERSITY

SOUTH AFRICA

Description of your learning resource or course:

The AI output was required of students as part of an assignment related to discovering literature resources to conduct a literature review on a subject-specific topic. This is part of our Grapevine and Wine Sciences module dealing with literature review techniques, innovation and entrepreneurship etc.

This assignment is part of the assessment of the course and is done as group work.

The approach assists students in gaining exposure to a variety of AI-powered tools for topic discovery, literature searching, summarising articles, and identifying author networks.

Students will also develop an understanding of both the advantages and limitations of AI

in the topic discovery and literature review process, fostering critical thinking about the technology's role in academic research.

The students also gain hands-on experience in utilising AI to aid in writing their assignments, improving their efficiency in conducting literature reviews.

Through the process, students will be prompted to reflect on the use of AI, considering its benefits and potential issues such as biases, privacy concerns, and the ethical implications of automation in research. This exposure will encourage discussions around the ethical and responsible use of AI, promoting awareness of good practices and ethical guidelines.

Context in which the learning resource was created:

Undergraduate, Grapevine and Wine Sciences 278

AI tool(s) used:

We use a combination of ChatGPT, perplexity, Elicit and ResearchRabbit to show students how to explore their topic chosen, find references and discover bibliometric networks from what they found in a structured manner.

Explanation of the process followed:

The steps involved in this project are outlined below:

1. Students are given a choice of four subject-relevant and industry-relevant topics (in this case related to grape and wine industries) with the option to also submit their own.
2. We determine the topic of choice for the year to work on further.
3. This topic is then used as an example of keyword searching in conventional library training sessions, but also students are shown how to interrogate it using:
 - ChatGPT for topic discovery and asking for relevant keywords
 - Elicit and Perplexity to discover relevant literature
 - ResearchRabbit to discover other authors' work as well as prominent authors in a subject field.
4. We then divide the class into two large groups, with sub-groups assigned inside each large group. For the two large groups:

- One group first worked on using AI to write a literature review on the topic using a local journal template we provide with instructions – they may not use library resources or literature databases with conventional keyword searching.
- The other group works on only using conventional library search techniques, they may not use AI in any part of the assignment.
- Both groups then complete Part A of the assignment.
- They then repeat the exercise on the same topic but swap around for Part B (the group that used AI for Part A, now repeats the exercise not using AI).
- 5. We provide students with a set of questions cited below, to answer after doing both parts. An example is given of one of the groups answers from 2023.

Key learnings and recommendations for others:

The goals of incorporating AI into a conventional literature study/review assignment was to expose students to: A. The tools available for topic discovery, literature searching/discovery and also for summarising articles and discovering author networks B. The benefits, but also pitfalls of using AI in the topic discovery and literature review process. C. Experience in using AI to assist in writing their assignment D. Reflecting about the use of AI, its benefits and potential issues related to its use, also exposing students to the ethics and good practice around its use.

Several valuable insights emerged from this approach.

The project highlighted the importance of the literature review phase in academic research, demystifying the workings of libraries and showcasing the wealth of resources available to students. This understanding is crucial for students to navigate academic research effectively.

The acquired proficiency in utilising AI tools, such as ChatGPT and others, also in combination towards a specific goal, was valuable to generate research questions from the themes (i.e. through the brainstorm function of Elicit), and also stimulated further exploration, enhancing research efficiency.

A comparison between traditional research methods and AI tools underscored the benefits and limitations of each approach. It emphasised the significance of adopting a balanced approach that combines traditional research methodologies with cutting-edge technology to maximize research output quality and efficiency.

On a practical level, we can highly recommend the practice of mixing and comparing the traditional or prevalent methods with the emerging technological method. Although there are many tools out there that can do similar things, guiding students using a few of them through the process is valuable. They can then explore further from there on.

We encouraged students to play and therefore actively engage with AI tools through hands-on activities. Providing opportunities for practical application enables students to develop proficiency and familiarity with AI technologies.

At the same time, we asked students to be critical and scrutinise the results from their

prompts. This stimulates critical thinking skills and encourage discussions on ethical considerations and good practices surrounding AI usage.

It is important to point out the rapid evolution of the tools and approaches, and therefore to emphasise the importance of continuous learning and adaptation to these emerging technologies.

I add the questions and one group's answers here - maybe for inclusion instead of an image/ file attachment:

General questions to answer on the literature review experiences:

1. How long did the respective approaches take the group to complete (try to keep some record of how long you collectively work on each approach).
2. In your view, which approach yielded the most useful review with respect to a reader in the grape & wine industries? Highlight some shortfalls of each approach in your view.
3. Would a combination of the approaches yield a more effective process or better result in your view? Please discuss and provide reasons for your answer.
4. Reflect on anything in general you as an individual or you as a group learned from these experiences.

Answers one group provided:

1. Using AI methods, the report collectively took less than 6 hours to write and compile. This is a fraction of the time that the conventional research method is predicted to take. Within the AI tools we used, Elicit

really was the most useful as it shortens the lengthy process of reading through every article to get an idea of what it conveys. That is where most of the time is spent during research as finding articles and writing about them take considerably less time. The shortfalls of ChatGPT is that it can at times provide you with bogus links and articles and it only provides information up to a specific date. It is really useful in terms of pushing through creative barriers and helping to organize the flow of a piece of writing. ResearchRabbit falls short because you must enter articles that you have already found, which makes the use of other tools necessary.

2. In terms of AI tools compared to alternative conventional tools, the AI tools are predicted to be more useful. This is simply because of the difference in time taken for the separate methods. AI tools help to make research immensely faster and helps to filter through mountains of information easily. The conventional methods have the shortfall of taking massive amounts of time, at times requiring a team to reach deadlines as well as the fact that it is limited to what the individual already knows about a topic. This is because you can only find the articles that relate to keywords you enter. If you use ChatGPT to generate these keywords your search area becomes so much broader.
3. In terms of AI tools, the best result would be to use a combination of tools. An example: Using ChatGPT to find keywords and organize the flow of the writing, using Elicit to find scientific papers related to those keywords and ResearchRabbit to

expand on different writings by looking at how they are cited. This will be much more effective than only using one of these tools alone as you may not know where to start when only using ResearchRabbit and ChatGPT may provide you with useless links or made-up articles. In terms of combining conventional research methods and AI methods, this could make research the most effective. AI tools like ChatGPT can still provide keywords and research questions to make your search easier, but to check that papers found through those keywords and research questions are peer-reviewed and good to use, conventional methods can be used. The Stellenbosch University Library search tool is an excellent way to see if an article is legitimate and useful. Using ResearchRabbit may allow you to find more articles which can again be found and checked using the conventional methods. This would make the whole research process more effective and provide the user with better results.

4. Throughout this first part of the research project, we have learnt how to use AI tools critically and how to engage with the results in a meaningful way. Not every result is useful or trustworthy and you must scrutinize them to end up with useful information. We learned how to integrate conventional research techniques (which we had no idea how to use before the library training) as well as how to integrate AI tools into this research. We are sure that part 2 will illustrate to us how to solely use conventional tools as well. With regard to the research we conducted, we also learnt a lot about the viticultural industry. Organic

Contributors

ABEGGLEN, SANDRA, University of Calgary, Canada

X: [@sandra_abegglen](#)

LinkedIn: [sandra-abegglen-b5107b13/](#)

AGOSTINI, DANIELE, University of Trento, Italy

LinkedIn: [daniele-a-3632b024/](#)

X: [@danielebrox](#)

ALIFIERAKIS, STEFANOS, University of Edinburgh, Scotland

LinkedIn: [stefanos-alifierakis-3653731a3/](#)

ASGHAR, FOZIA, Global Banking School,

ORCID: [0009-0008-4032-9878](#)

ASPENLIEDER, ERIN, McMaster University, Canada

ATENAS, JAVIERA, University of Suffolk

UK ORCID: [0000-0001-5006-529X](#)

BERTENSHAW, NICK, University of Portsmouth, UK

CALDWELL, NICHOLAS HM, University of Suffolk, UK

COSTA, CRISTINA, Durham University, UK

LinkedIn: [cristinacost/](#)

DEJ, KIM, McMaster University Canada

DU TOIT, MARET, Stellenbosch University, South Africa

DURRAINI, AAMNA, McMaster University, Canada

FLOROU, KATERINA, University of Athens, Greece

LinkedIn: [katerina-florou-8525a2250/](#)

GARCIA VALLEJO, MARI CRUZ, Freelance,

LinkedIn: [mari-cruz-garcia-vallejo/](#)

GARCÍA-PEÑALVO, FRANCISCO JOSÉ, Universidad de Salamanca, Spain

ORCID: [0000-0001-9987-5584](#)

GRIBBLE, LYNN, UNSW Sydney, Australia

HACK, SARAH, University of Surrey, UK

X: [@sarah_hack](#)

HAMMERSLEY, JOHN, University of Leeds, UK

ORCID: [0000-0003-0386-603X](#)

HOSSEINI, DUSTIN, University of Glasgow, University of Strathclyde, Scotland

HOUGHTON, JOE, UCD Smurfit Graduate School of Education, Ireland

LinkedIn: [joehoughton/](#)

ORCID: [0000-0002-5100-5069](#)

JACKSON, NICK, Scotch College, Australia

LinkedIn: [nickjac/](#)

X: [@largerama](#)

KARATSIORI, MARIANTHI (MARIANNA), University of Macedonia, Greece

ORCID: [0000-0001-5006-529X](#)

KESHISHI, NAYIRI, University of Surrey, UK

Website: <https://www.surrey.ac.uk/people/nayiri-keshishi>

KIEU, HIEU, Oxford Brookes University, Leeds Campus, UK

ORCID: [0000-0002-9407-0899](#)

KRETSCHMER, HEATHER, University of Göttingen, Germany

LAQUINTANO, TIM

LICKISS, MATTHEW, University of Leeds, UK

ORCID: [0000-0003-1064-1939](#)

LOMINE, LOYKIE, Ecole de Savignac, France

LinkedIn: [loykie/](#)

LUNA DE LA LUZ, VERÓNICA, UNAM, Mexico

MALONE, CATHY, University of Leeds, UK

MARTÍNEZ-ARBOLEDA, ANTONIO, University of Leeds, UK

LinkedIn: [antonio-martínez-arboleda-08b10440/](#)

ORCID: [0000-0002-4391-5417](#)

MATÍAS LÓPEZ, KAREN LIZETTE, UNAM, Mexico

MCGOWAN, BRIAN, Ulster University, UK

X: [@BriMcgowan](#)

MICHÁN, LAYLA, UNAM, Mexico

Mastodon: mstdn.social/@lma

MIDDLETON, HANNAH, London College of Fashion, UK

MILLS, MICHAEL, Montgomery College, US

LinkedIn: [drmichaelmills/](https://www.linkedin.com/in/drmichaelmills/)

X: [@adrmichaelmills](https://twitter.com/adrmichaelmills)

MILLS, ANNA, Cañada College, US

LinkedIn: [anna-mills-oer/](https://www.linkedin.com/in/anna-mills-oer/)

X: [@aEnglishOER](https://twitter.com/aEnglishOER)

Threads: <https://www.threads.net/@annarmills>, Bluesky: [annamillsoer.bsky.social](https://bsky.app/profile/annamillsoer.bsky.social)

MIRANDA, JHONATTAN, Investigador, Instituto para el Futuro de la Educación, Tecnológico de Monterrey, Mexico

X: [@jhon4ttan](https://twitter.com/@jhon4ttan)

LinkedIn: [jhonattan-miranda-a9611776/](https://www.linkedin.com/in/jhonattan-miranda-a9611776/)

ORCID: [0000-0002-4761-6027](https://orcid.org/0000-0002-4761-6027)

MOLL-WILLARD, ELIZABETH, Stellenbosch University, South Africa

MURPHY, JACQUELINE, University of Galway, Ireland

LinkedIn: [jackie-murphy-15162725/?originalSubdomain=ie](https://www.linkedin.com/in/jackie-murphy-15162725/?originalSubdomain=ie)

NAVARRO PERALES, JOAQUIN, Universidad Nacional Autónoma de México, Mexico

X: [@jnavarro_p](https://twitter.com/@jnavarro_p)

LinkedIn: [jnavarro-p/](https://www.linkedin.com/in/jnavarro-p/)

ORCID: [0000-0002-5428-3566](https://orcid.org/0000-0002-5428-3566)

Facebook: [joaquinnavarrop](https://www.facebook.com/joaquinnavarrop)

NERANTZI, CHRISSI, University of Leeds, UK

LinkedIn: [chrissinerantzi/](https://www.linkedin.com/in/chrissinerantzi/)

X: [@chrissinerantzi](https://twitter.com/@chrissinerantzi)

OCCHIPINTI, GIACOMO, London College of Fashion, UK

PADGETT, REBECCA, University of Leeds, UK

PAVLOPOULOU, MARIA, University of Leeds, UK

LinkedIn: [maria-pavlopoulou-73986ab0/](https://www.linkedin.com/in/maria-pavlopoulou-73986ab0/)

Instagram: [@maria_pav18](https://www.instagram.com/maria_pav18), [@heromathesis](https://www.instagram.com/heromathesis)

PICASSO, FEDERICA, University of Trento, Italy

LinkedIn: [federica-picasso-317762298](https://www.linkedin.com/in/federica-picasso-317762298)

ORCID: [0000-0002-8381-6456](https://orcid.org/0000-0002-8381-6456)

PICKARD-JONES, BEVERLEY, Bangor University, UK

ORCID: [0000-0001-9886-9035](https://orcid.org/0000-0001-9886-9035)

QUERIN, OSVALDO M., University of Leeds, UK

RABIN, EYAL, The Open University of Israel, Israel

ORCID: [0000-0002-3726-0645](https://orcid.org/0000-0002-3726-0645)

RAMAZANOV, FUAT, Ascenda School of Management, Canada

LinkedIn: [fuatr/](https://www.linkedin.com/in/fuatr/)

REZA, SELIM, Ministry of Finance, Bangladesh Investment Development Authority, Bangladesh

LinkedIn: [md-selim-reza-9652b736/](https://www.linkedin.com/in/md-selim-reza-9652b736/)

ROBINSON, MARK, London College of Fashion, UK

ROFE, SIMON J., University of Leeds, UK

ROMERO PÉRE, MINERVA MARÍA, UNAM, Mexico

Mastodon: mstdn.social/@amineromerop

SANTOS SOLÓRZANO, ROBERTO, UNAM, Mexico

SCHNITZLER, CARLY, John Hopkins University, US

SERBAT, ANNA, University of Trento, Italy

LinkedIn: [anna-serbati-09062b22](https://www.linkedin.com/in/anna-serbati-09062b22)

ORCID: [0000-0002-3528-2488](https://orcid.org/0000-0002-3528-2488)

SHARMA, AKITAV, Independent

LinkedIn: [akitav-sharma](https://www.linkedin.com/in/akitav-sharma)

X: [@akitavsharma](https://twitter.com/@akitavsharma)

SHORT, FAY, Bangor University, UK

STEINBERG, IAN, McMaster University, Canada

STREVER, ALBERT, Stellenbosch University, South Africa

LinkedIn: [albert-strever/](https://www.linkedin.com/in/albert-strever/)

TAYLOR, BEN LEE, McMaster University, Canada

THOMPSON, CHRIS, University of Leeds, UK

TUNSTALL, RICHARD, University of Leeds, UK

VAN DER, HORST WOUTER, Media College, Amsterdam, We Share Culture, Netherlands

VEE, ANNETTE

WALLACE-WILLIAMS, HAZEL, University of Surrey, UK

WARDROP, JANIS, UNSW Sydney, Australia

YOUSEF, DIMA, MBZUAI, United Arab Emirates

LinkedIn: [dimaalnsour](#)

YUSUF, NERMIN, The German University of Cairo, Egypt

ORCID: [0009-0000-7340-0038](#)

ZAVALA SIERRA, Irma Rocío, UNAM, Mexico



PART 03

What is GAI?

YONGJIA LU, POSTGRADUATE STUDENT

XI'AN JIAOTONG-LIVERPOOL UNIVERSITY

CHINA

Name of the course of study:

Program: Digital Education

Course: AI for Learning

Describe the learning output produced:

It is an introductory video on Generative AI (GAI) included in the AI for Learning course at Xi'an Jiaotong-Liverpool University, which holds a significant impact across the entire university. Its cumulative number of views has hit 8605 (cut-off date: 2023.11.27). Based on feedback gathered from the questionnaire, many learners perceived it to have a strong sense of technology. They appreciated the manner in which GAI was introduced.

It is worth mentioning that the aim of making this video is to assist learners in acquiring a fundamental comprehension of GAI and its operational mechanisms. In this video, I presented GAI in a relaxed tone accompanied by animations. By making it attractive, faculty and students in our university would be more willing to delve deeper into the realm of artificial intelligence.

AI tool(s) used:

I used ChatGPT in the process of video creation. It helped me to organize and modify the script for the whole video, which made the

content authentic and systematic. Additionally, I employed the TTSMaker for the audio generation that realized the function of texts to speeches.

Explain how AI played a significant role in shaping your educational output:

GAI such as ChatGPT can be extremely helpful as mentors for those seeking to acquire new knowledge and skills. Despite my initial lack of experience in video creation, I rapidly acquired proficiency in this skill through a process of continual learning facilitated by ChatGPT. It guided me on how to make a captivating video, from pre-production planning to post-production editing. Throughout this process, I received support from ChatGPT in the areas of video scripting, transition design, and refining of video elements.

In addition, to enhance the alignment of this video with the AI concept, The TTsMaker was employed to generate a speech utilizing the video script.

Context of AI output production:

Xi'an Jiaotong-Liverpool University is one of the first universities that offer GAI services to faculty, staff and students on campus. To further improve education with the application of technology, it has launched XIPU AI, a new

AI assistant and AI-powered chatbot. With the aim to enhance student proficiency in utilizing GAI and the XIPU AI assistant, the University's Educational Development Unit created a range of resources (in the course of AI for Learning) which contain various information about GAI. To be mentioned, these resources are created by a unique team, which was formed as part of an innovative student-as-partners initiative to address the impact of GAI on higher education. Its objective was to develop an interactive webpage that aids peers to gain a comprehensive understanding of Generative Artificial Intelligence (GAI). As a member of this wonderful team, my responsibility was to make an introductory video for our project. Based on this video, I converted its content into other formats, including slides, posters, and Storyline (a function in Articulate360). I initially joined this GAI, to complete part of an assessment for the EDS 435 course (Blended Learning in a Digital Age) where students were tasked with the creation of an online lesson utilizing the Storyline. In the assessment, I selected GAI as the topic. Then, the original video content underwent a process of revision and supplementation, ultimately leading to its integration into a comprehensive lesson.

Detail the process you followed when interacting with the AI tool(s):

1. As an amateur in video creation, I collected comprehensive guidelines regarding the process of video production from ChatGPT. This encompassed the establishment of a clear objective, formulation of a comprehensive plan for content creation, recording of various scenarios, incorporation of appropriate effects, and implementation of other crucial procedures.

2. In adherence to the requirements outlined for my video project, I sought guidance from ChatGPT for a suitable approach to introducing generative artificial intelligence within a concise framework. It listed several ideas and I selected the three most significant aspects: what it is, how it works, and what it can do.
3. I gathered the information for the draft script from a variety of sources, including books, journals, websites, and more, based on the three themes mentioned above. But ChatGPT was the one that provided the most useful definitions for a number of concepts. When defining concepts like deep learning and neural networks, it could provide sufficient clarity by providing examples. As a result, it significantly enhanced the work.
4. In order to enhance the quality of the video presentation, I also watched a variety of high-quality video resources accessible online and acquired valuable insights from them. Following that, the animation was generated by Canva (a multimedia design software) in alignment with the selected subjects.
5. Upon the completion of the video production process, it became evident that opting for a human voiceover would diminish the overall perception of AI inside the video. Consequently, I employed TTSMaker, a free text-to-speech software, to transform my written content into auditory output.

Key learnings and recommendations:

In this project, AI tools including ChatGPT have played great important roles by providing substantial coaching and valuable advice in the video production process. It helped me greatly to modify the scripts based on chosen topics. In my opinion, ChatGPT serves as an excellent mentor for individuals who are new to the field. It demonstrates a notable capacity to promptly provide recommendations aimed at improving educational advancement. While presenting an answer, it performs even better than current search engines such as Google and Bing. ChatGPT excelled at explaining complex concepts by providing interpretations for advanced terms like neural networks and deep learning in a clear and logical manner.

However, there do exist some shortcomings of this powerful tool. At times it consistently generated excessively repetitive responses, and the terminology employed in these texts tends to be abstruse. When asking questions, I have to be mindful to situate my question, such as positioning ChatGPT as a high school teacher with the intention of producing a more comprehensible outcome. Moreover, the contents generated by ChatGPT are not always correct. It often attempts to provide a seemingly reasonable response to any query, which can contain some incorrect information. This tendency is particularly prevalent when it comes to academic papers, history, etc. Hence, we still have to be cautious while using GAI in education to ensure educational quality.

Links for more information:

The course (AI for Learning) webpage can be accessed via <https://core.xjtlu.edu.cn/course/view.php?id=3983>

with the following login details via the NON-XJTLU account login button:

Username: ai.student1

Password: AI.student1

Video: <https://video.xjtlu.edu.cn/Mediasite/Play/28abca149af54dc4b5557ea3f13539af1d>

Credits:

Charlie Reis, PGC403: Teaching in Transnational Contexts, Semester 1 (2022-2023).

Yiqun Sun (Olivia), AI for Learning, Xi'an Jiaotong-Liverpool University, Semester 2 (2022-2023).

Yexiang Wu, AI for Learning, Xi'an Jiaotong-Liverpool University, Semester 2 (2022-2023).

Qing Zhang (Sophie), EDS 435: Blended Learning in a Digital Age, Xi'an Jiaotong-Liverpool University, Semester 2 (2022-2023).

The concept of elf by an AI

MARIANA VARGAS HERRERA, DOCTORAL STUDENT

PALOMA SUÁREZ BRITO, ADVISOR

INSTITUTO DE INVESTIGACIONES FILOSÓFICAS DE LA UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO (UNAM) & INSTITUTE FOR THE FUTURE OF EDUCATION, TECNOLÓGICO DE MONTERREY

MEXICO

Name of the course of study:

Research Seminar

Describe the learning output produced:

AI seems to be capable to create very useful content for explaining abstract concepts. Specially in this case, the concept of self has an inner perspective, and that has always been a challenge for scientists and even artists to display, so having an extra, fast, and visual aid with AI is a plus that we think everybody should try.

AI tool(s) used:

ChatGPT and Canva Magic Studio

Explain how AI played a significant role in shaping your educational output:

We wanted to explain and characterize the concept of self in the context of meditation. AI helped to generate images that we believe can be useful to support traditional explanations about the self because, even if they are still a bit abstract, they give a visual aid that complements the general idea. The greatest advantage we consider is that using AI saves

a lot of time by generating a totally helpful image in only seconds.

Context of AI output production:

Part of my PhD research is about the concept of the notion of self or even losing the sense of self in the context of meditation. The self is a difficult concept to explain; we all seem to have a fair notion of what it involves, but to put it into words is a very difficult task. That is why we decided to try AI to help in the process of explaining it first so we can try to give a clear characterization of the sense of having and losing our sense of self in the context of meditation.

Detail the process you followed when interacting with the AI tool(s):

Well, first we tried using ChatGPT and Dall-e 3, but it kept giving us only descriptions and possible prompts but we could not generate an image in this platform, so we moved to Canva image AI generator.

When in Canva, we tried one of the suggestions that were given by ChatGPT based on a prompt that asked for an image made for a 7-year-old

to understand the concept of self. The prompt used was: create an image of of a happy child looking into a mirror. The child sees their own reflection, and around the mirror are drawings and symbols representing things that make them unique, such as hobbies, favorite colors, and family members. This produced great results, but as we mentioned earlier, nothing a human being couldn't do, imagine, or suggest. We then tried the following prompts:

1. Create an image of the concept of self.
2. Create an image of the concept of a relational frame (from relational frame theory by Steven Hayes) being generated in the mind of one person when she looks at a dog.
3. Create an image of a deictic relational frame (from relational frame theory by Steven Hayes) being generated in the mind of a person that is meditating.
4. Create an image of a person losing her sense of self when she meditates.
5. The concept of self.

After using these prompts, we decided to try a different approach to the subject. We tried to ask for how it would be to have not notion of self. Interestingly enough, the Canva Media generator pointed out that something in our prompt may result in content that doesn't meet their policies. When we looked up the policies, the kind of content they aim to prevent from creation were the following:

- Medical topics, such as medical advice and information.
- Self harm and mental health topics. We encourage contacting local mental health support services.

- Sexually explicit content.
- Political topics, including content about politicians and elections.

From our point of view, none of these topics really entailed what we were looking for, but we understand that it could have fallen under the selfharm and mental health topics. The prompts that didn't generate any content were the following:

6. Create an image of a person that experiences no sense of self.
7. Create an image of a person that doesn't have a sense of self.

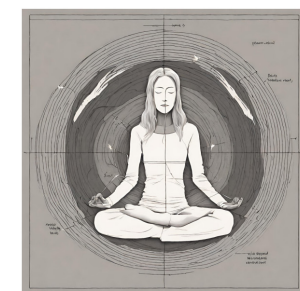
Key learnings and recommendations:

We believe that AI can help to enrich didactic and academic processes, especially if they are abstract. We believe it is an excellent resource to complement any educational project, especially because it saves a lot of time.

We recommend searching for specific tips for writing your prompts before using any AI tool because we have found it to be key in the quality of results.

Credits:

Paloma Suárez Brito, Institute for the Future of Education, Tecnológico de Monterrey, Research Seminar, third semester.



Prompt: create an image of a deictic relational frame(from relational frame theory by Steven Hayes) being generated in the mind of a person that is meditating

Advancing AIED through AI-powered support:

A Presentation

YUYING PEI, POSTGRADUATE STUDENT

UNIVERSITY OF LEEDS

UK

Describe the learning output produced:

A presentation about the dissertation titled: Exploring Kindergarten Teachers' Attitudes Towards Artificial Intelligence in Education in Shanghai, China: A Qualitative Investigation Using Semi-Structured Interviews, including the outline, how I prepared my idea, a brief introduction about literature review, data collection, data analysis, findings and discussion part.

AI tool(s) used:

ChatGPT

Explain how AI played a significant role in shaping your educational output:

In the development of my presentation of the dissertation, I actively integrated AI technology to enhance the quality and refinement of the content. ChatGPT served as a valuable manuscript assistant, aiding in creating and organising the presentation. Additionally, it functioned as a polishing tutor, contributing to the overall improvement of the manuscript. This collaborative use of AI tools was pivotal in shaping and optimizing the educational output content.

Context of AI output production:

I was invited to share my dissertation with the next postgraduate student cohort of the MA Education. I needed to prepare a 15-20 minutes presentation.

Detail the process you followed when interacting with the AI tool(s):

I started by writing my thoughts based on the given outline. After that, I worked with ChatGPT to review and improve the manuscript. Following this, I created slides based on the manuscript. However, during my practice sessions, I noticed that my presentation was longer than allowed. To address this, I used ChatGPT again to help me make the manuscript shorter.

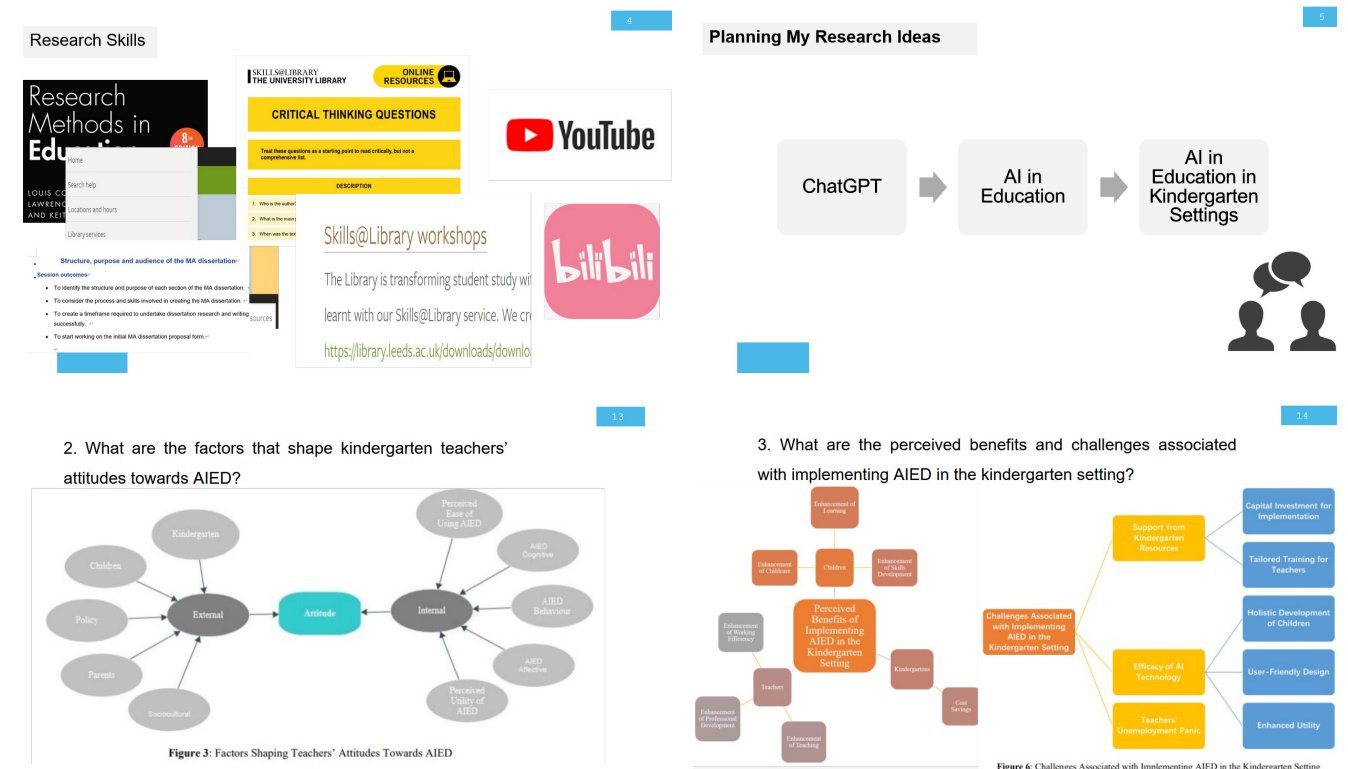
It's important to mention that I attempted to use AI tools like Motionit to create slides, but I had to abandon this effort due to the need for a membership purchase. This might be a common challenge for other students using similar AI tools. Despite this, with the collaborative assistance of ChatGPT, I successfully delivered my dissertation presentation.

Key learnings and recommendations:

1. ChatGPT serves as a robust assistant for the editing and modification of presentations.
2. Nevertheless, throughout the entire creative process, individual thoughts hold significant importance, and manual review is essential. One should not solely rely on the outputs of artificial intelligence.
3. For proven and highly effective artificial intelligence tools, it is recommended that higher education institutions consider implementing a unified fee structure to support students in utilizing these tools for creative generation within the educational process.

Credits:

Syafiq Mat Noor advised me what to include in the presentation. He is the current, Programme Lead of the MA Education programme at the University of Leeds.



Relevant literature resources

Yau, K. W., Chai, C. S., Chiu, T. K., Meng, H., King, I., & Yam, Y. (2023). A phenomenographic approach on teacher conceptions of teaching Artificial Intelligence (AI) in K-12 schools. *Education and Information Technologies*, 28(1), 1041-1064.

AI amplifies perspectives:

Giving voices to different sides in an academic debate

MARIA PAVLOPOULOU, POSTGRADUATE STUDENT

UNIVERSITY OF LEEDS

UK

Name of the course of study:

MA in Digital Education

Describe the learning output produced:

Delving into an academic debate by pointing out the key ideas of both sides.

AI tool(s) used:

ChatGPT, AiVOOV and NeuroAI (both Canva extensions)

Explain how AI played a significant role in shaping your educational output:

For this project I have leveraged ChatGPT as an AI conversation tool, asking it to delve with me into a debate. Afterwards, in my attempt to vividly present the arguments generated and my critical reflections on them, I engaged with NeuroAI and AiVOOV in order to create video and audio files and turn this debate into an actual discussion between fictional personas/advocates.

Context of AI output production:

I was assigned for a specific task for my course module 'Education in a Digital Society' to present a debate between contiguous and distance education, asking ChatGPT-3.5 to discuss this topic with us. Thus, I decided to present this debate as a real discussion between two personas and create a moderator to lead the conversation.

Detail the process you followed when interacting with the AI tool(s):

For this weekly post-seminar task related to different modes of learning, we were assigned to present a debate between contiguous and distance education, asking ChatGPT-3.5 to discuss this topic with us. However, we were invited to focus on critically analysing the arguments provided by the AI tool and questioning whether this comparison is a fair and valid one or not. Using Canva as my main tool, I created a video presentation, which I enriched with video and audio files generated with NeuroAI and AiVOOV, Canva extensions. NeuroAI facilitated the creation of

a personalized AI avatar for the discussion's moderator, while AiVOOV generated oral speech for each of the two advocates, Sarah supporting Contiguous Education and Mark advocating for Distance Education.

Key learnings and recommendations:

This multimedia presentation pointed out the benefits of the use of these AI tools, providing me with the opportunity to create a more vivid presentation of the contrasting arguments, in a way simple text never could. The interesting intonation of the three speakers highlighted not only the key-ideas of their speech but also the differences between the positive and negative ideas of each mode of learning.

A variety of options regarding the tone, the accent, and the appearance of the persona (in the case of the NeuroAI) is offered through these AI tools. These features enabled me to personalize my presentation and create a customized conversation, while easily editing

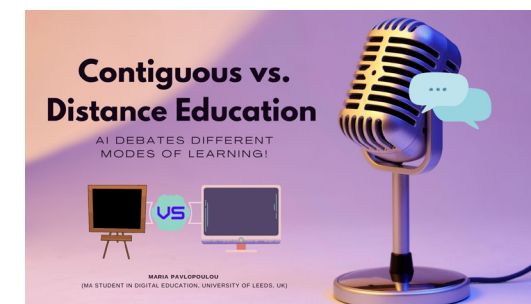
the script. Moreover, I am confident that this experimentation with video and audio Generative Artificial Intelligence gave me the chance to actively learn through creating and deepen my understanding of the topic.

Links for more information:

<https://media-and-learning.eu/subject/artificial-intelligence/ai-amplifies-perspectives-giving-voices-to-different-sides-in-an-academic-debate/>

Credits:

I would like to kindly acknowledge the valuable guidance of Chrissi Nerantzi, my tutor in the University of Leeds, as well as of Sandra Abbeglen, since our collaboration for an AI event for the Media and Learning Association (<https://media-and-learning.eu/event/seminar-on-artificial-intelligence-in-higher-education/>) has offered me helpful feedback and enabled me to finalize my idea.



Relevant literature resources

Han, D.-E. (2020). The effects of voice-based AI Chatbots on Korean EFL middle school students' speaking competence and affective domains. *Asia-Pacific Journal of Convergent Research Interchange*, 6(7), 71–80. <http://dx.doi.org/10.47116/apjcri.2020.07.07>

Hao, K. (2021). AI voice actors sound more human than ever-and they're ready to hire. <https://www.technologyreview.com/2021/07/09/1028140/ai-voice-actors-sound-human/>

Pavlopoulou, M. (2024). AI amplifies perspectives: Giving voices to different sides in an academic debate. *Media & Learning*. <https://media-and-learning.eu/subject/artificial-intelligence/ai-amplifies-perspectives-giving-voices-to-different-sides-in-an-academic-debate/>

Sanchez-Gonzalez, M., & Terrell, M. (2023). Flipped classroom with artificial intelligence: Educational effectiveness of combining voice-over presentations and AI. <http://dx.doi.org/ai.Cureus.10.7759/cureus.48354>

AI-generated photos:

An alternative introduction to an assignment topic

MARIA PAVLOPOULOU, POSTGRADUATE STUDENT

UNIVERSITY OF LEEDS

UK

Name of the course of study:

MA in Digital Education

Describe the learning output produced:

Visually introducing the topic of an academic assignment, to summarize it and catch the reader's attention.

Description of your learning resource or course:

For this project I have leveraged three photo GAI tools, to generate two photos that would constitute the introduction of an assignment. More precisely, I used Nightcafe to generate the first picture and then edited it through Runway AI, whereas the second one was completely generated through Runway AI.

Context in which the learning resource was created:

I was assigned for my final tasks in my course module 'Education in a Digital Society' (MA in Digital Education, University of Leeds – UK) to address two learning outcomes (Appraise current debates relating to digital technology AND Critically reflect on technology as a social

construction). The title of my assignment was: A debate about the socio-educational impact of the Emergency Remote Teaching (ERT): A 'gift' or a 'bomb' for Greek Educators?. So, I decided to generate through AI two photos for the introduction of this assignment, to vividly portray and summarize the different aspects of the topic.

AI tool(s) used:

Nightcafe, Runway AI

Explanation of the process followed:

Attempting to realize my idea, I reached the above-mentioned Photo GAI tools. Since I had a very specific concept in my mind (a gift as the main element in the first picture and a bomb in the second one), I offered two detailed prompts. However, I had to edit them due to the difficulty of AI to portray what I had envisioned. A major fault in the second picture (i.e. the background of an old building, which was irrelevant to the topic) were then corrected, since I decided to edit the AI-Generated photo using another app (Runway AI). The two prompts used for the final photos are listed below:

- **Image 1:** In the centre of the picture is a huge shining PRESENT / GIFT with a ribbon -shining, emergency remote teaching as a 'gift' for educators, we are inside a colourful school full of computers, all around teachers and students collaborate and communicate, mobiles and laptops in hands).
- **Image 2:** In the centre of this picture is a huge black BOMB and FIRE all over, emergency remote teaching as a 'bomb' for educator', we are in a dark school full of computers, teachers and students are running all over frustrated and in agony with computers and mobiles in their hands.

Key learnings and recommendations for others:

This special use of Photo GAI tools offered me the valuable opportunity to multimodality of my assignments, which is a prerequisite for

my tasks as an MA student in the University of Leeds. I really enjoyed the process of generating these photos, that are the product of the collaboration between AI and the human factor (me). The practical problems that I faced are a proof that we should never heavily rely on Artificial Intelligence as students. Nevertheless, the potential of these tools is significant, so my appetite has opened to further experiment with them!

Links for more information:

Link to my assignment task:

<https://v3.pebblepad.co.uk/spa/#/public/cbwW6hGzg5qRr8bHc8WfG8sbZM>



Relevant literature resources

A debate about the socio-educational impact of the emergency rremote teaching (ERT): A 'gift' or a 'bomb' for Greek educators? PebblePad. <https://v3.pebblepad.co.uk/spa/#/public/cbwW6hGzg5qRr8bHc8WfG8sbZM>

Asking ChatGPT for help to understand concepts I read about in academic literature

ODYSSEAS FRANK, UNDERGRADUATE STUDENT

NORWICH UNIVERSITY OF THE ARTS

UK

Name of the course of study:

Program: BA (Hons.) Game Art Design

Module: Global Contexts, Year 2, undergraduate

Describe the learning output produced:

I used the conversations I had with ChatGPT to better understand what I was reading. This then informed my writing which I did on my own. The final output is an essay which I will submit as part of my assessment. At the end of it, I decided to acknowledge how I used ChatGPT by stating the following.

I would like to acknowledge that occasionally during the drafting process of this essay I consulted the free version of ChatGPT in order to help me understand some of the concepts I came across in my readings, and to help me articulate my thinking in my essay with greater clarity. As I came across an open call by the #creativeHE community for contributions from students on how they are using GAI,

I submitted this example in January 2024 to be considered to show how I have used ChatGPT as a study companion for this essay which may be of interest to others too.

AI tool(s) used:

ChatGPT

Explain how AI played a significant role in shaping your educational output:

When I started reading some of the academic literature, I found it difficult to understand everything, especially some concepts. This was during the Christmas holidays. So I could progress the essay, I decided to try ChatGPT. I heard others had used it and wanted to see if the GAI tool could help me better understand some of what I was reading. I specifically did not ask ChatGPT to write any part of the essay for me as my aim was to understand what I was reading and to write the essay myself. I asked ChatGPT if they could help me, I inserted short extracts from my readings, and sought help

to understand these passages. It was my first time using ChatGPT and could see that it was useful as extra help, in a similar way we consult an encyclopaedia for example, but ChatGPT's help was swifter and more focussed.

Context of AI output production:

My interaction with ChatGPT as part of the drafting of the essay I mentioned earlier for my assignment linked to the global contexts unit in my second year of undergraduate study.

Detail the process you followed when interacting with the AI tool(s):

After reading, and re-reading, a section of an academic paper, sometimes I would find that I just couldn't fully understand what was written but felt that there was something important there that I wanted to grasp so I could add it to my essay. I turned to ChatGPT for help as I had heard about it. As a student I was wary as I don't want to be accused of plagiarizing the work of others and in general, so I have been avoiding using it. However, I felt that ChatGPT could be a study companion in a way, and help me with some of my reading, something like a very knowledgeable peer maybe? Despite my initial reluctance because of concerns surrounding about plagiarism and knowing that students are sometimes wrongly accused of using GAI, I felt that it was ok to try using it in the capacity I did and my plan anyway was not to hide it but be open and transparent about it. I didn't ask ChatGPT to write anything for me and I didn't use any of the answers ChatGPT gave me directly to my questions. I found that it was very easy, almost conversational, to speak with ChatGPT, like talking to a tutor or one of my peers on my course.

Key learnings and recommendations:

Give ChatGPT a go as I did. GAI doesn't mean you should use it to generate the essay for you, if you have been asked to write an essay that is. But again, if the essay you are asked to write can be written by AI, it makes me question why I would have to write it.

Like I did, I think it has amazing use as a study companion. I think it can help you better understand things you struggle with when reading academic literature, as not all of it is easy reading. It has helped me resolve some of the complexity and better digest specific terms and concepts I read about in academic literature.

Now if you don't want to use ChatGPT, there are other similar tools available. An important aspect to analyse is the monetization aspect of the AI however. Having used the free version of ChatGPT myself, if some students are able to get an advantage over me by using the paid tier of the tool, that seems unfair to me and could pose an issue, creating a paywall to access tools/knowledge. This can potentially lead to the division of education into classes splitting learners into groups of those who use the free tool and those who pay for a better version. There could be the potential for universities to solve this problem by investing in creating their own competing AI tools that students are able to access for free. This could countermand the possibility of division of knowledge by wealth.

IA generativa para el entrenamiento de habilidades en Psicología Clínica

ELVIA DANIELA CRUZ CORONA, LABORATORIO DE CIBERPSICOLOGÍA, FACULTAD DE PSICOLOGÍA,

UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO, UNAM

PALOMA SUÁREZ BRITO, INSTITUTO PARA EL FUTURO DE LA EDUCACIÓN (IFE)

TECNOLÓGICO DE MONTERREY

MEXICO

Name of the course of study:

Desarrollo de habilidades para la práctica clínica en psicología con el uso de inteligencia artificial generativa.

Describe the learning output produced:

Al finalizar el módulo los estudiantes:

- lograron aumentar su conocimiento sobre los procesos de análisis de casos clínicos.
- propusieron diferentes soluciones posibles para la resolución de casos clínicos.
- fueron capaces de discriminar información falsa de información fidedigna o válida y de integrar información de diferentes fuentes a través del aprendizaje basado en casos y el trabajo colaborativo.
- mejoraron sus habilidades digitales en el uso de herramientas tecnológicas

- adquirieron conocimiento relevante para su formación y práctica profesional en el área de la psicología clínica.
- adquirieron capacidades para la elaboración del informe final del caso clínico con la utilización de tecnología e IA generativa.

AI tool(s) used:

Los resultados educativos del módulo Desarrollo de habilidades para la práctica clínica en psicología con el uso de inteligencia artificial generativa son:

1. Desarrollo de habilidades de análisis crítico de las respuestas proporcionadas por ChatGPT-3.5, al introducir como prompt un caso clínico.
2. Identificación de diferencias teórico-prácticas entre las respuestas proporcionadas por ChatGPT-3.5 y lo

descrito en la literatura, artículos de investigación, guías clínicas, entre otros, respecto a la solución de casos clínicos.

3. Integración de información especializada para la solución de casos clínicos, a partir de los resultados de ChatGPT-3.5 y la literatura previa.

Explain how AI played a significant role in shaping your educational output:

Con la finalidad de que los estudiantes de la asignatura de Psicología clínica lleguen a la resolución favorable de casos clínicos, se sugiere integrar el uso de ChatGPT-3.5 a la plataforma de LMS correspondiente a dicha asignatura para desarrollar habilidades de análisis crítico, identificar diferencias teórico-prácticas e integrar información especializada. Esto se considera útil y necesario en la práctica clínica en psicología y, a la vez, mejora la asimilación de conocimiento e incrementa la motivación durante un curso práctico de la Licenciatura en Psicología.

Context of AI output production:

El contexto en el que se desarrolló esta propuesta es el de un módulo complementario a la asignatura de Psicología clínica de la Licenciatura en Psicología, de la Universidad Nacional Autónoma de México, UNAM. La finalidad del módulo es el entrenamiento en habilidades de resolución de problemáticas, psicodiagnóstico clínico e identificación de variables o elementos presentes en un caso clínico durante la formación profesional en psicología. El módulo se consideró de tipo extracurricular, en línea, abierto y síncrono.

Detail the process you followed when interacting with the AI tool(s):

1. Paso 1: Diseño de contenidos del Módulo Desarrollo de habilidades para la práctica clínica en psicología con el uso de inteligencia artificial generativa, considerando los temas: Psicología Clínica, Resolución de casos clínicos en Psicología e Introducción al uso de la inteligencia artificial generativa. Cada uno de los temas se desarrolló de manera teórica con ejemplos.
2. Paso 2: Integración del módulo educativo a la plataforma LMS en uso por los estudiantes.
3. Paso 3: Actividades dirigidas enfocadas a la resolución de casos clínicos mediante la consulta de materiales propios de la asignatura y la utilización de ChatGPT-3.5 como herramienta de apoyo.
4. Paso 4: Integración y análisis de la información teórica y la obtenida por la IA a través de un informe final individual de la actividad, así como una actividad colaborativa de debate a manera de cierre del módulo.

Durante el módulo, es preciso que un docente supervise la actividad para orientación y resolución de dudas de los estudiantes durante el análisis y propuesta de soluciones de los casos clínicos.

Ejemplo de la secuencia de la actividad dirigida dentro del módulo educativo:

- a. Docente:
Presentación de caso clínico
- b. Estudiantes:
Propuesta de solución basada en la literatura

- c. Docente y estudiantes:
Uso de ChatGPT-3.5 (prompts con diferentes casos clínicos predefinidos)
- d. Estudiante:
Análisis de respuestas de la IA generativa,
Elaboración de informe final
- e. Docente y estudiantes:
Actividad de debate y retroalimentación

Key learnings and recommendations:

La integración de los procesos tradicionales de enseñanza-aprendizaje junto con los procesos emergentes de enseñanza que vinculan el uso de tecnologías innovadoras como la Inteligencia Artificial ChatGPT-3.5, facilitó que los estudiantes desmitificaran el uso inadecuado del Chat GPT –3.5 y lo integraran como una herramienta de apoyo que puede ser utilizada, bajo orientación, por parte de los docentes dentro del contexto educativo y en paralelo con la consulta de fuentes de información válidas, confiables y fidedignas. Con el uso de la herramienta de IA generativa se desarrollaron habilidades de pensamiento crítico para la evitación de sesgos informativos o plagio de información.

La recomendación para los docentes interesados en integrar la IA en sus esquemas de enseñanza es no temer al uso de tecnología innovadora, documentarse al respecto y conocer la información generada por ChatGPT-3.5 para mejorar las técnicas de consulta a las diferentes Inteligencias Artificiales.

Así mismo, a través de las actividades planteadas en el módulo Desarrollo de habilidades para la práctica clínica en psicología con el uso de inteligencia artificial

generativa se motiva a los estudiantes para seguir aprendiendo y a utilizar las herramientas tecnológicas con mayor seguridad y criterio al momento de seleccionar información.

Links for more information:

Aprendamos psicología. (2021, Diciembre 14). Cuál es el Código Ético de la Psicología? [Video]. Youtube. <https://youtu.be/7f4UZ4c8bbc?feature=shared>

Aprendemos Juntos 2030. (2020, Octubre 7). Cómo la inteligencia artificial ayudará a los profesores. Kai-Fu Lee, experto en IA [Video]. Youtube. <https://youtu.be/9N1iYDHRZ14?feature=shared>

Codina, L. (2024). Evaluación de inteligencias artificiales generativas en trabajos académicos y profesionales: una taxonomía básica. <https://www.lluiscodina.com/evaluacion-inteligencias-artificiales/>

EduTEKA. (2023, Febrero 14). La UNESCO y la Inteligencia Artificial: Desafíos y Oportunidades [Video]. Youtube. <https://youtu.be/RVbis69x0DM?feature=shared>

International Institute for Higher Education in Latin America and the Caribbean (2023). ChatGPT and artificial intelligence in higher education: quick start guide. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000385146/PDF/385146eng.pdf.multi>

Juan David Camargo Reyes. (2023, Febrero 25). Psicología Clínica (I.A): Protocolo Bata Colgada [Video]. Youtube. <https://youtu.be/cYVM52NIAtk?feature=shared>

UNAM Global TV. (2022, Enero 12). Presentan la UNAM y UNESCO Recomendación sobre Ética en Inteligencia Artificial [Video]. Youtube. <https://youtu.be/z0hhCVz9JG8?feature=shared>

Universidad Nacional Autónoma de México. (2023). Recomendaciones para el uso de la inteligencia artificial generativa en la docencia. UNAM. <https://cuaieed.unam.mx/descargas/recomendaciones-uso-iagen-docencia-unam-2023.pdf>

Credits:

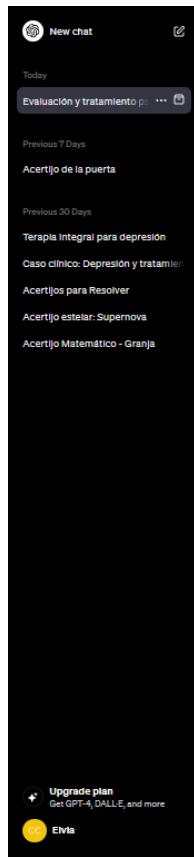
Video de caso clínico UNITEC

https://myunitecedu-my.sharepoint.com/:v/g/personal/paloma_suarez_my_unitec_edu_mx/EVA0PEWvLHdPi7Tjk3K8plIBcVwNLw84DUrJG9wWjvZ3yw?e=JKErBh

Dra. Paloma Suárez Brito
Universidad Tecnológica de México, UNITEC
Nivel educativo: Posgrado Maestría en Psicología , Materia: Evolución y nuevas tendencias en psicología, Primer semestre

Como citar el recurso educativo:

Suárez, P. (2021, Septiembre 13). CASO VIDEO EVOLUCION [Video]. OneDrive. https://myunitecedu-my.sharepoint.com/:v/g/personal/paloma_suarez_my_unitec_edu_mx/EVA0PEWvLHdPi7Tjk3K8plIBcVwNLw84DUrJG9wWjvZ3yw?e=JKErBh



ChatGPT 3.5

You
Brinda una solución para el siguiente caso que esté dirigida a estudiantes de la licenciatura de psicología y que forman parte de un curso para el entrenamiento de habilidades prácticas profesionales en psicología clínica:
"Paciente de género femenino, tiene 19 años de edad, es sana, su arreglo personal y aspecto físico corresponden a una persona de su condición y edad cronológica. Es una estudiante de primer año de la licenciatura en pedagogía de una universidad pública. Refiere estar inconforme con su condición de estudiante y no le gusta su carrera. Indica que eligió su carrera "para no perder el lugar en la universidad y la oportunidad de ser una licenciada". Asimismo, reporta que nunca se le ha dificultado obtener buenas calificaciones e incluso aprobó en dos ocasiones el examen de admisión al bachillerato de la universidad más demandada del país, menciona que tiene pensamientos donde considera que vivir no vale la pena, que sería mejor no existir o que no sirve para nada. Enfatiza que nunca atentaría contra su vida, sin embargo, menciona que esos pensamientos están presentes todos los días desde los últimos tres meses. Finalmente, reporta que no tiene interés en tener relaciones de noviazgo con nadie (ni hombres ni mujeres), sin embargo, sí ha tenido relaciones de noviazgo en el pasado."

ChatGPT
Para los estudiantes de psicología clínica, este caso requiere una aproximación cuidadosa y centrada en el bienestar de la paciente. Aquí hay una estrategia posible:

1. **Construcción de rapport y establecimiento de confianza:** Inicia la sesión creando un ambiente de confianza y empatía. Escucha activamente sin juicios para comprender la situación desde su perspectiva.
2. **Evaluación exhaustiva y comprensión de los pensamientos suicidas:** Explora más a fondo la naturaleza y la intensidad de sus pensamientos sobre la valía de la vida y su propia existencia. Evalúa la presencia de un plan concreto y la frecuencia de estos pensamientos.
3. **Exploración de la insatisfacción con la carrera:** Investiga las razones detrás de su elección de carrera y las expectativas que tenía. Examina cómo la insatisfacción académica está afectando su bienestar emocional.
4. **Trabajo en la autoestima y la autovaloración:** Ayúdala a desafiar y reconstruir sus creencias autodestructivas. Fomenta una visión más realista y saludable de sí misma, resaltando sus habilidades y logros.
5. **Abordaje de la falta de interés en relacionarse:** Explora la naturaleza de su desinterés por las relaciones. Asegúrate de que no haya experiencias pasadas traumáticas o

Message ChatGPT...

ChatGPT can make mistakes. Consider checking important information.

Relevant literature resources

Baena-Rojas, J. J., Castillo-Martínez, I. M., Méndez-Garduño, J. I., Suárez-Brito, P., & López-Caudana, O. E. (2023). Information Communication Technologies, Artificial Intelligence, and Social Robotics: a Complex-Thinking Vector in Higher Education? *Journal of Social Studies Education Research*, 14(2), 21-50. https://www.researchgate.net/publication/371686749_Information_Communication_Technologies_Artificial_Intelligence_and_Social_Robotics_a_Complex-Thinking_Vector_in_Higher_Education

Baile, J. I. (2024). Patient with depression created by freely accessible artificial intelligence for the teaching of Psychology. Preliminary study of its validity. *Revista Tecnología, Ciencia y Educación*, 27, 7-42. <https://www.tecnologia-ciencia-educacion.com/index.php/TCE/article/view/19069/20869>

Dempere, J., Allam, H., & Modugu, K. (2023). The impact of ChatGPT on higher education. *Frontiers in Education*. https://www.researchgate.net/publication/374415358_El_impacto_de_ChatGPT_en_la_educacion_superior

Li, Z., Cai, X., Kuznetsova, M., & Kurilova, A. (2022). Assessment of scientific thinking and creativity in an electronic educational environment. *International Journal of Science Education*, 44(3), 463-486. <https://doi.org/10.1080/09500693.2022.2032863>

AI guide to advertising

NATTHASIT SUKSANGPLENG, POSTGRADUATE STUDENT

EMILIANO PAZ FLORES, POSTGRADUATE STUDENT

LONDON COLLEGE OF COMMUNICATION, UNIVERSITY OF THE ARTS LONDON

UK

Name of the course of study:

MA Advertising

groundbreaking research in the pulsating world of brand communication.

Describe the learning output produced:

Explore the dynamic interplay of theory and practice in the fast-evolving landscape of advertising, mastering the art of critical analysis and strategic review to navigate the complexities of global marketing communications with confidence and creativity. Unearth the intricate relationship between marketing and media, and sharpen your professional acumen to design groundbreaking research in the pulsating world of brand communication.

Used AI in our educational project to:

1. Explore the dynamic interplay of theory and practice in the fast-evolving landscape of advertising, mastering the art of critical analysis and strategic review to navigate the complexities of global marketing communications with confidence and creativity.
2. Unearth the intricate relationship between marketing and media, and sharpen your professional acumen to design

AI tool(s) used:

AI tools utilization:

- Leveraged Google's Bard for comprehensive research assistance.
- Employed ChatGPT for succinct text summarization and text-to-speech conversion, providing a voiceover for our virtual influencer.
- Utilised DALL-E for imaginative image generation, bringing articles to visual life.
- Integrated Speech to Text feature in Premiere Pro for video editing and subtitle generation.

Explain how AI played a significant role in shaping your educational output:

AI was the cornerstone of our educational project, enriching content accessibility and engagement. Google's Bard enhanced our research, ChatGPT simplified complex concepts and provided voiceovers, DALL-E created engaging visuals, and Premiere Pro's

Speech to Text feature improved our video content's inclusivity and clarity.

Context of AI output production:

During our course on Advertising and Communication Industries, we created an AI and Advertising Guide specifically designed for agencies and brands, employing AI throughout each phase of our project to showcase its essential role in contemporary advertising.

Detail the process you followed when interacting with the AI tool(s):

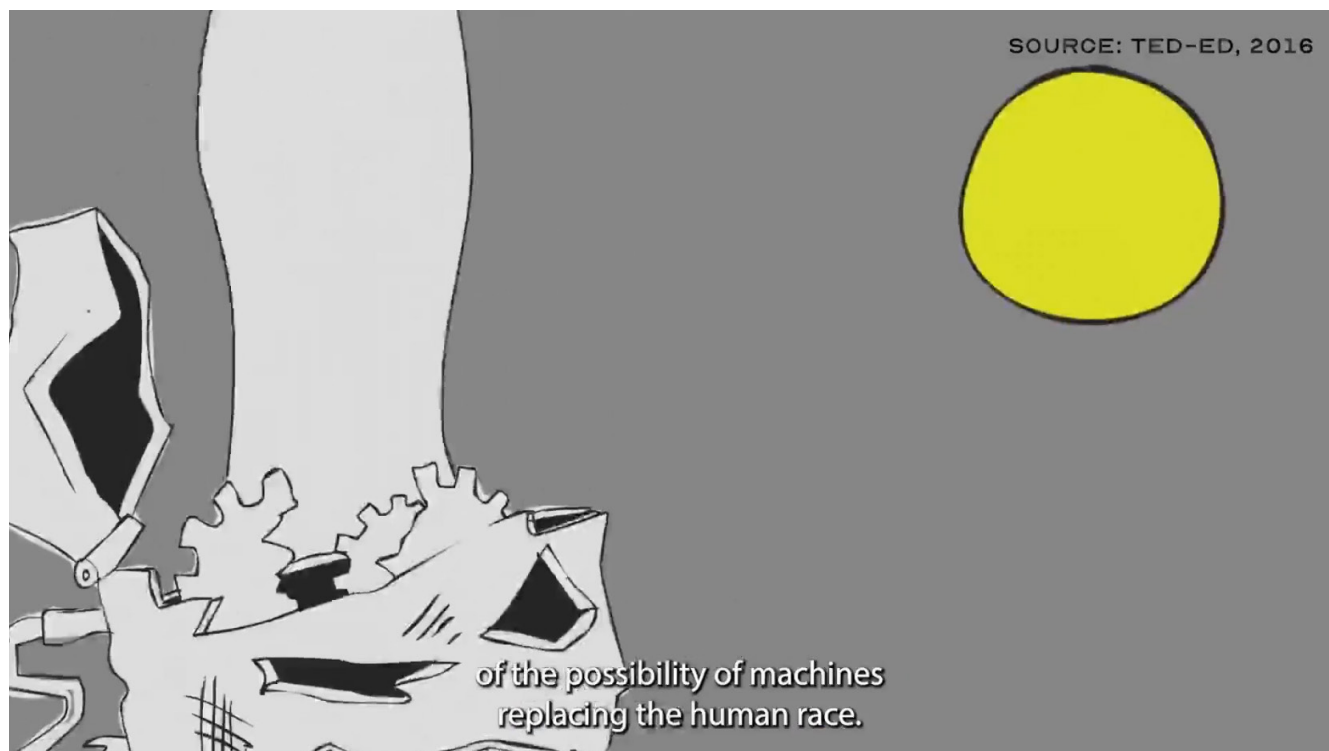
For the segment of the guide discussing The Impact of AI on Advertising, Google's Bard provided the latest studies and data. ChatGPT then condensed this information into a clear, engaging script. We recording the voice for Ailyn, our virtual presentator from ChatGPT speech feature. DALL-E created visuals showing AI interacting with consumers, and finally, Premiere Pro's AI assisted Speech to Text ensured our video content was accessible, with subtitles aligning with the spoken word.

Links for more information:

<https://ai-mpact.cargo.site/>

Credits:

Unit Leader: Yiğit Soncul. Unit Guide: Advertising and Communication Industries, MA Advertising, Year: 23/24, London College of Communication, University of the Arts London.



Relevant literature resources

- Aamoth, D. (2014). Interview with Eugene Goostman, the fake kid who passed the turing test. *Time Magazine*.
- Burrell, J. (2016). How the machine 'thinks': Understanding opacity in machine learning algorithms. *Big Data & Society*, 3(1), 1-12.
- Haenlein, M., & Kaplan, A. (2019). A brief history of artificial intelligence: On the past, present, and future of artificial intelligence. *California Management Review*, 61(4), 5-14.
- Haugeland, J. (1989). *Artificial intelligence: The very idea*. MIT Press.
- Huang, M.-H., & Rust, R. T. (2018). Artificial intelligence in service. *Journal of Service Research*, 21(2), 155-172.
- Nilsson, N. J. (2009). *The quest for artificial intelligence*. Cambridge University Press.
- Rodgers, S. (2021). Themed issue introduction: Promises and perils of artificial intelligence and advertising. *Journal of Advertising*, 50(1), 1-10. <https://doi.org/10.1080/00913367.2020.1868233>
- Rozenfeld, M. (2016). The next step for artificial intelligence is machines that get smarter on their own. *The Institute*. <http://theinstitute.ieee.org/technology-topics/artificial-intelligence/the-next-step-for-artificial-intelligence-is-machines-that-get-smarter-on-their-own>
- S.C.S (2020). Simplifying the difference: Machine learning vs deep learning. <https://www.scs.org.sg/articles/machine-learning-vs-deep-learning>
- Solon, O. (2016). World's largest hedge fund to replace managers with artificial intelligence. *The Guardian*.
- Stanford (2007). What is AI? / Basic questions. <http://jmc.stanford.edu/artificial-intelligence/what-is-ai/index.html>
- Tredinnick, L. (2017). Artificial intelligence and professional roles. *Business Information Review*, 34(1), 37-41.
- Qin, X., & Jiang, Z. (2019). The impact of AI on the advertising process: The Chinese experience. *Journal of Advertising*, 48(4), 338-346. <https://doi.org/10.1080/00913367.2019.1652122>

Educating elderly people in basic skills for using a tablet and Viber

ANASTASIA ALMPANAKI, UNDERGRADUATE STUDENT

UNIVERSITY OF MACEDONIA

GREECE

Name of the course of study:

Adult Education for Vulnerable Social Groups

Describe the learning output produced:

This work relates to the organization of a seminar aimed at educating elderly people on the use of a tablet and the Viber application.

AI tool(s) used:

The work was based on AI technology, specifically on the ChatGPT software.

Explain how AI played a significant role in shaping your educational output:

Firstly, I updated the software regarding the hypothetical seminar I am planning to conduct: The topic, the number of participants, the ages of the participants, their level of knowledge in technology, the duration of the seminar, and what I would like to teach them.

I asked specific questions to the software and received significant info. I selected the most important ones and included them in my work.

The questions concerned the organization of the seminar over 10 hours (5 days 2 hours/day), the activities to be included in the seminar, the positives of the program, the benefits that the participants will gain, evaluation methods, and the obstacles faced by the elderly in their attempt to use technology. The ChatGPT organized the seminar's program for me and provided various answers to my questions.

Context of AI output production:

AI was used for the creation of a semester project as part of the course Adult Education for Vulnerable Social Groups in the context of the third semester - Department Educational and Social Policy, University of Macedonia, Greece.

Detail the process you followed when interacting with the AI tool(s):

The professor asked me to create a hypothetical scenario training adults from a vulnerable social group. Additionally, she requested me to include the four axes: needs

assessment, planning, support/empowerment of participants and evaluation.

Afterwards, I chose a social group and the topic of my work: Educating elderly people in Basic Skills for Using a Tablet.

The software suggested including social networking training in the seminar, so I selected Viber for that purpose. The hypothetical needs of the city (Thessaloniki) to start the seminar, the purpose of the program, the venue, the adult's education theory, the participants, the trainer, the sponsors, and the program's duration were all info selected by me or ideas from previous similar works done by other undergraduate students.

Then, I asked specific questions to the software and received significant info. I selected the most important ones and included them in my work. The questions concerned the organization of the seminar over 10 hours (5 days 2 hours/day), the activities to be included in the seminar, the benefits of the program, the knowledge that the participants will gain, evaluation methods, and the obstacles faced by the elderly in their attempt to use technology.

Key learnings and recommendations:

The program was very useful for my work. It provided many info allowing me to choose

the most important details to include in my project. The conversation was conducted in English and everything I asked for was understood in simple terms. The program considered the previous information that I provided making it helpful as I didn't need to repeat anything. However, it is important to ask clearly questions to obtain exactly the answer you are asking for, as there could be misunderstandings.

Links for more information:

https://docs.google.com/document/d/1szi9XmIhp4RFQ8TAF6Qt_qb_PG07Hk0H/edit?usp=drive_link&oid=111629457305602989063&rtpof=true&sd=true

Credits:

Marianna Karatsiori - course title: Adult Education for Vulnerable Social Groups, name of the university: University of Macedonia, semester: third.

 DALL-E



Using AI in Single Best Answer (SBA) question generation

ISAAC NG, STUDENT

MANDEEP GILL SAGOO, STAFF LEAD

OSCAR HO, STUDENT

KING'S COLLEGE LONDON

UK

Name of the course of study:

Undergraduate

Medicine MBBS, undergraduate

Describe the learning output produced:

A custom GPT was built to generate single best answer (SBA) questions for preclinical medical education based on uploaded resources.

AI tool(s) used:

Custom GPT

Explain how AI played a significant role in shaping your educational output:

The custom GPT requires users to first upload their learning materials, such as personal notes or lecture notes. The AI then generates SBA questions based on the uploaded resources. In guiding the AI to produce high-quality questions, we adhered to established guidelines for composing SBA questions, ensuring that the AI's output meets rigorous standards.

The quality of questions generated by the AI mirrors those written by humans, yet it significantly elevates efficiency in terms of cost. Unlike existing online question banks, it also offers a personalised set of questions tailored to the user's curriculum, as the questions are generated based on the uploaded material from users.

Context of AI output production:

The application is mainly for educational purposes for preclinical medical students, facilitating their revision and learning. The questions are customized to learning materials uploaded by users, ensuring that the questions are highly relevant and specific to their curriculum needs.

Detail the process you followed when interacting with the AI tool(s):

Human screening is required to ensure the quality of the questions. Users first upload their resources to the custom GPT which subsequently generates a set of SBA

questions. These questions are then screened manually.

Key learnings and recommendations:

The incorporation of AI into education offers numerous benefits and possibilities. Overall, our initiative to incorporate AI into SBA question generation has been successful and the quality of questions generated has been comparable to human-generated ones. This greatly reduces the time and cost of generating SBA questions

We are expanding our initiative and building a web-based application (qvault.ai) that integrates our question-generation AI with a progress-tracking feature, allowing users to track their learning progress over various topics. Additionally, it provides a user feedback mechanism for users to rate individual questions, which allows continuous improvement of the question generation algorithms. We believe it could have a wide impact on preclinical medical education while having possible applications to other faculties and different levels of study.

Links for more information:

<https://drive.google.com/open?id=1oLMF3lntBuUboIdcGlvRZQi0twW1V-Ci>

Utilising ChatGPT and Bubbl in My Directed Study Project

ZACHARY FAROUK CHAI, DOCTORAL STUDENT

UNIVERSITY OF LEEDS

UK

Name of the course of study:

Doctor of Education (EdD), Directed Study in Education

Describe the learning output produced:

This module aims to guide Doctor of Education (EdD) students to plan, design and implement their independent study skills by writing a piece of work on their topic of interest.

AI tool(s) used:

Bubbl and ChatGPT

Explain how AI played a significant role in shaping your educational output:

I used Bubbl to organise my points and thoughts. Bubbl is a helpful AI which actually works like a mind mapping or brainstorming tool. When I did my reading on Mobile-assisted Language Learning (MALL), I organised different terminologies, fundamentals and examples using Bubbl, making my ideas visually connected and I could see the relationships between these concepts. Furthermore, I used ChatGPT to brainstorm

ideas related to my topic of interest. Aside from reading different articles on MALL, ChatGPT seemed to help me by aggregating inputs or information from various sources. I would organise the information generated by ChatGPT on Bubbl to identify the relationships between insights that I gained from my reading as well as information generated by ChatGPT.

Furthermore, throughout conducting my directed study, I encountered specific queries and needed some clarification especially regarding theoretical framework that might potentially ground the integration of MALL in second language learning. I found ChatGPT was able to answer a complex question like What are the educational theories that support MALL in the context of second language teaching and learning and how these theories support the implementation of MALL?. ChatGPT has a vast knowledge base to understand and respond to my questions.

Another significant impact of using ChatGPT throughout my directed study was enhancing my critical thinking. ChatGPT is considered an advanced GAI to provide tests that resemble

human writing based on the contexts given by a person using it (van Dis et al., 2023). When ChatGPT provided responses and answered my questions, it led me to think about MALL from different perspectives. The conversation I had with ChatGPT engaged me in deeper learning to enhance my critical thinking skills.

Context of AI output production:

The context of the ChatGPT output was developed mainly to answer my inquiries on the topic MALL. The responses given by ChatGPT were used to tailor and clarify my ideas and thoughts after reading articles related to MALL.

I would say it was more like a personalised response given to answer my questions. The responses given were rather practical, creative and effective to assist my direct study. AI has the ability to converse with its users smartly and multilingually, opening for innovative and exciting inputs to writing (Barrot, 2023).

Detail the process you followed when interacting with the AI tool(s):

These are the steps that I did using these two AIs in doing my directed study:

1. I started using ChatGPT by asking some questions related to ideas on MALL that would be beneficial for me as a doctoral student.
2. I screened information that I got from ChatGPT. I compared the information with other sources like books and research papers.
3. I used Bubbl to create a mind map for all the information and insights I gained from my reading and ChatGPT. The mind map

was more like a structure which contained points like introduction, key concepts, contents and concluding remarks.

4. I also used to draft my write-up. The draft generated by ChatGPT was used as a base for me to refine.
5. After writing, I discussed my arguments with ChatGPT. Sometimes, I purposely ask ChatGPT to counterpoint my points.
6. I reviewed my write-up using Bubbl and ChatGPT by referring to the mind map, checking coherence and flow. I also used ChatGPT for editing such as checking for clarity and grammatical errors.

Key learnings and recommendations:

Integrating AI in my directed study was really beneficial. Firstly, using ChatGPT and Bubbl sped up the process of gaining information. ChatGPT gave me quick access to various data and perspectives on MALL. I also learned the importance of critically evaluating information provided by ChatGPT. By comparing the information with other reliable sources, I could ensure the accuracy and reliability of the responses given. In terms of using Bubbl, it helped to organise and structure my ideas more effectively. Instead of using the traditional way of outlining my essay, I was able to visually map out all points and see the relationships between ideas. More importantly, using AI has taught me to balance between AI assistance and my personal inputs. While ChatGPT provided lots of a solid foundation, I learned that it was my thought and evaluation that added depth and originality to my write-up. To sum up, ChatGPT and Bubble are effective in improving my writing productivity and generating well-organised, informative and logical writings (Zhai, 2022).

My recommendations for all students, particularly those planning to use AI in a directed study module:

1. Use AI as a starting point to give initial ideas.
2. Be smart and critical in evaluating information generated by AI by comparing with other sources and making connections with our own experiences.
3. Use AI to organise ideas efficiently.
4. Be open-minded to new perspectives or ideas that we may not have considered.

Credits:

I would like to express my deepest gratitude to Prof. Chrissi Nerantzi from the School of Education, University of Leeds who was my directed study supervisor for her invaluable guidance and mentorship.

Relevant literature resources

Zhai, X. (2022). ChatGPT user experience: Implications for education. SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.4312418>

Barrot, J. S. (2023). Using ChatGPT for second language writing: Pitfalls and potentials. *Assessing Writing*, 57, 100745. <https://doi.org/10.1016/j.asw.2023.100745>

van Dis, E. A. M., Bollen, J., Zuidema, W., Van Rooij, R., & Bockting, C. L. (2023). ChatGPT: Five priorities for research. *Nature*, 614(7947), 224–226. <https://doi.org/10.1038/d41586-023-00288-7>

The use of AI in language learning: Italian and French in Greek schools

VASILIKI (VICKY) KOFOU, POTENTIAL DOCTORAL RESEARCH PROJECT

NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS

GREECE

Name of the course of study:

Italian Language and Literature Department,
Use of Digital Tools in Language Teaching

Describe the learning output produced:

In my research project, I am looking for answers on the transformative process that the Artificial Intelligence tools could bring to a language class. The main focus is centered on Italian and French language as second foreign languages in the Greek secondary school and how the use of an app with AI characteristics could develop the lesson and offer to teachers and students new strategies and methods on language classes. This project aims to explore how AI engage learners' development of language skills and the potential benefits of AI for students who face learning difficulties and a negative attitude towards the second foreign language classes.

AI tool(s) used:

An AI language platform such as: the Memrise app and chatbots.

Explain how AI played a significant role in shaping your educational output:

AI tools in language learning and more specifically in the second foreign languages learning such as: the Italian and the French language in the Greek secondary school came as an idea through the daily experience and interaction with students of that age as their teacher and dealing with the huge impact of state-of-the art technology in our lives. ICALL programs as they are largely known immerse learners in challenging and complex scenarios enhancing their understanding of the subject matter and fostering developed and personalized learning experiences.

The utilization of AI in language learning is grounded in fundamental concepts, including machine learning (ML), Natural Language Processing (NLP), and deep learning which could help any student acquire a great deal of knowledge in the languages' field. AI tools offer a tremendous potential in education and in languages' classes as we need to keep up

with the changing requirements and lifestyles of the students so as to make our lesson relevant and interesting to them.

Context of AI output production:

My AI output was developed through a general interest on the Artificial Intelligence tools that are used today in many research projects of various scientific fields in regards with the development of a new world where technology would play a significant role in changing and elaborating human lives. The field of education is needed to keep up with the changing requirements and lifestyles of the students. It is a critical point to acknowledge their needs and the great impact that AI could play in their future as professionals, scientists, researchers and human beings as well.

AI has a great potential in education and it has an enormous data base to provide digitalized and completely personalized learning to each learner. Educators could save time and money engaging with the new available digital tools such as: apps, chatbots and online platforms and make a significant progress to transform the old way of learning a foreign language through different techniques that do not require the human presence or intervention. As a teacher myself, I have been in a very difficult position through the years to help my students' progress, assess their test or exam results

and implement new learning strategies in the language classes and still try to keep their interest alive during the lesson. For this reason, I tried to think new ways to revive my language lessons through the use of the new technology achievements.

Detail the process you followed when interacting with the AI tool(s):

Human screening is required to ensure the quality of the questions. Users first upload their resources to the custom GPT, which subsequently generates a set of SBA questions. These questions are then screened manually.

Links for more information:

<file:///C:/Users/user/Downloads/24609-ArticleText-79002-1-10-20240116.pdf>

Relevant literature resources

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Creating a multimodal presentation on problem-based learning using GenAI tools

PHUONG LE PHAM, POSTGRADUATE STUDENT

MARIA PAVLOPOULOU, POSTGRADUATE STUDENT

XIAOXIA HUANG, POSTGRADUATE STUDENT

XIAOZHE ZHANG, POSTGRADUATE STUDENT

JIAMENG DU, POSTGRADUATE STUDENT

UNIVERSITY OF LEEDS

UK

Name of the course of study:

Course: MA in Digital Education

Module: Digital Education in Practice

Describe the learning output produced:

Producing a multimodal presentation of a topic and delving into it at the same time.

AI tool(s) used:

Gamma AI, Nightcafe, Leiapix, Character AI

Explain how AI played a significant role in shaping your educational output:

Using Gamma AI as our main GenAI tool, we asked it to generate a presentation based on a specific scenario on the topic of Problem-Based Learning. More specifically,

we provided our notes on the topic and Gamma AI generated a presentation of them. Afterwards, we began editing it by adding AI-generated photos to it, which were created with the use of Gamma AI. From the beginning, we decided to edit the presentation generated, because its information seemed rather generic and, in some cases, inaccurate. Besides, the point of the task was to present our authentic thoughts on the problem given. We have made lots of research, so we had interesting ideas to share.

The introduction of the presentation was based on a AI-generated photo (created using Nightcafe), which was then transformed into a short animation video (/GIF) using Leiapix. Another two characteristic photos were

generated through Nightcafe, portraying two historical facts of British history. Last but not least, since our scenario was relevant to the teaching of History, we used Character AI to discuss with historical figures and add our experiences to our presentation.

Context of AI output production:

This presentation was a task assigned to our team in the module 'Digital Education in Practice' of the course MA in Digital Education at the University of Leeds. This presentation was created within two weeks, when we went from our weekly flipped learning function to grouping two units and using Problem-Based Learning to approach two topics: Video and Audio in Education, Assessment and Feedback in the digital age. In the first out of two weeks we were given two scenarios to work on them in small groups on Problem-Based Learning. The scenarios were developed by the tutor and used GenAI to turn them into scenarios. As a group we finally chose the one relevant to a history teacher and his trouble with his old-fashioned methods. We approached this scenario using the FISh model (Nerantzi & Uhlin, 2012) and worked well as a team, mostly asynchronously using Microsoft Teams.

Detail the process you followed when interacting with the AI tool(s):

Gamma AI was used as the basic GenAI tool and it generated the draft presentation, which we later edited more and more. The rest of the GenAI tools were used to enhance the multimodality of the presentation, while the ideas and the suggestions we presented were the product of our teamwork.

After Gamma AI made the draft presentation outlining the main ideas, we used other GenAI

tools to add multimodal resources like photos and videos to make the presentation more engaging. These improvements not only made the presentation look better visually, but they also made it easier for other students to remember information. Our team then improved the material even more by adding real-life examples to better explain difficult ideas.

Key learnings and recommendations:

Overall, our experimentation with GenAI was enlightening, since it enabled us to work faster, facilitating the crafting of the presentation. Moreover, the multimodality of our work was fostered thanks to GenAI and we all felt more creative, while engaging with the AI tools. It was a funny experience, which we consider that taught us a lot about the topic. However, since Gamma AI ended up helping us making only a draft of the final presentation, we consider that its use may not be necessary in another similar case, as long as the team has more available time.

Recommendations:

- Make sure to acknowledge the use of AI and promote transparency.
- Make sure the contents AI generated are unbiased and accurate.
- Beware of inputting personal information as a prompt.

Contributors

ALMPANAKI, ANASTASIA, University of Macedonia, Greece

CHAI, ZACHARY FAROUK, University of Leeds, UK

CRUZ CORONA, ELVIA DANIELA, UNAM, Mexico

ResearchGate: <https://www.researchgate.net/profile/Elvia-Cruz-Corona>

DU, JIAMENG, University of Leeds, UK

FRANK, ODYSSEAS, Norwich University of the Arts, UK

Artstation: [OD3D](#)

HO, OSCAR, King's College London, UK

Instagram: [@qVault.ai](#)

HUANG, XIAOXIA, University of Leeds, UK

KOFOU, VASILIKI (VICKY), National and Kapodistrian University of Athens, Greece

LinkedIn: [vasiliki-kofou-4300a21ba/?originalSubdomain=gr](https://www.linkedin.com/in/vasiliki-kofou-4300a21ba/?originalSubdomain=gr)

LE PHAM, PHUONG, University of Leeds, UK

LU, YONGJIA, Xi'an Jiaotong-Liverpool University (XJTLU), China

NG, ISAAC, King's College London, UK

Instagram: [@qVault.ai](#)

PAVLOPOULOU, MARIA, University of Leeds, UK

LinkedIn: [maria-pavlopoulou-73986ab0/](https://www.linkedin.com/in/maria-pavlopoulou-73986ab0/)

Instagram: [@maria_pav18](#), [@heromathesis](#)

PAZ FLORES, EMILIANO, London College of Communication, University of the Arts London, UK

IG: [@Emilianopazf](#)

PEI, YUYING, University of Leeds, UK

SAGOO, MANDEEP GILL, King's College London, UK

Instagram: [@qVault.ai](#)

SUÁREZ BRITO, PALOMA, Tecnológico de Monterrey, Mexico

X: [@suarezbrito_phd](#)

ResearchGate: <https://www.researchgate.net/profile/Paloma-Suarez-Brito>

SUKSANGPLENG, NATTHASIT, London College of Communication, University of the Arts

London, UK

IG: [@knotnatthasit](#)

VARGAS HERRERA, MARIANA, Instituto de Investigaciones Filosóficas de la Universidad

Nacional Autónoma de México, UNAM, Mexico

ZHANG, XIAOZHE, University of Leeds, UK

Team Bios

SANDRA ABEGGLEN is a Researcher in the School of Architecture, Planning and Landscape (SAPL) at the University of Calgary, Canada with a strong interest in collaboration, co-creation and social justice. Her research focuses on online education, hybrid pedagogy, academic literacies, creative learning and teaching methods, inclusion, and identity. She is the Principal Investigator for Playful Hybrid Higher Education [<https://playhybrid.education>] and TALON, the Teaching and Learning Online Network [<https://taloncloud.ca/>].

LEONOR AGUERO VIVAS is a graphic designer who attended AUArts and is currently completing the MArch program at SAPL. With her experience in the design industry, she brings a unique fusion of creativity and strategic acumen to every project she undertakes. Beyond her professional pursuits, she is deeply committed to fostering collaboration and sharing her expertise with the design community, inspiring others to push the boundaries of innovation in the field. To explore some of her work, visit her design portfolio [lavleonoraguero.com].

CHRISSI NERANTZI (NTF, CATE, PFHEA) is a Professor in Creative and Open Education in the School of Education, a Senior Lead of the Knowledge Equity Network [<https://knowledgeequitynetwork.org/>] and the Academic Lead for Discover and Explore at the University of Leeds in the United Kingdom. Chrissi is the founder of the international #creativeHE community [<https://creativehecommunity.wordpress.com/>] and has initiated a range of further open professional development courses, networks and communities that have been sustained over the years.

ANTONIO MARTÍNEZ-ARBOLEDA is a Professor of Open and Digital Education in the School of Languages, Cultures, and Societies at the University of Leeds, in the United Kingdom. He is also the Academic Lead for Open Educational Practice of his institution and a Senior Lead of the Knowledge Equity Network [<https://knowledgeequitynetwork.org/>]. Antonio has led initiatives in Critical Pedagogies, Open Educational Resources, and Student Knowledge Co-creation, including Podcasting and Poetry Translation.

MARIANNA KARATSIORI is a lecturer/researcher at the University of Macedonia. Her main interests are teacher education, foreign language learning, digital pedagogies and Gen AI in education, educational policy guidance and reform. Marianthi coordinates European projects on improving inclusion for students with challenges and on enhancing educators' professional development. Her background also includes roles at the Ministry of Education and the Institute of Educational policy in Greece and UNESCO's International Bureau of Education.

JAVIERA ATENAS is a Senior Lecturer in Learning and Teaching Enhancement at the School of Social Sciences at the University of Suffolk. She has a long teaching and research career in open knowledge issues and has worked in Europe, Latin America and the Middle East advising governments, international organisations and universities in policy and curriculum development in open education, open science and open data.

CHRIS ROWELL (SFHEA) is a Digital Learning Producer at the University of the Arts, London, where he leads on staff development initiatives related to digital learning and teaches on the Post-graduate Certificate of Education. His research interests are on all things to do with digital education, such as, open education resources, sharing good practice and has recently co-edited a book on Critical Digital Pedagogy in HE [<https://www.aupress.ca/books/120310-critical-digital-pedagogy-in-higher-education/>]. He is also Events Officer for the Association of Learning Technologists (ALT) Anti-racism Learning Technology SIG [<https://www.alt.ac.uk/groups/special-interest-groups/anti-racism-and-learning-technology-sig>].

Testimonials

"This collection of AI stories and examples in education exemplifies citizen science at its finest. It captures the authentic voices of individuals who are actively testing and expanding their AI literacy, sharing their experiences to support and inspire others. Through their contributions, they collectively advance our understanding and application of AI in educational settings, showcasing the true spirit of community-driven learning and innovation. Your feedback is encouraged; this story is only beginning."

Dr. Margaret Korosec, Dean of Online and Digital Education,
University of Leeds, United Kingdom

"If you are looking for a human-centered approach to integrating GenAI into your classroom, this collection of activities offers a plethora of options for any educator. Search through the multitude of examples to find activities that focus on critical thinking, empathy, annotation, text analysis, deep and analytical thinking, and evidence of learning - to name just a few. As an Instructional Designer and Professor, I could use many of these activities to enrich my current course design and practice. The biggest strength of the book is in its collective knowledge-building design and combined wisdom which makes it inclusive and open for all to find "something" for their classroom."

Dr. Verena Roberts, Instructional Designer, Open Learning,
Thompson Rivers University (TRU), Canada

"This crowdsourcing approach is an excellent way to bring examples of research and practice in Gen AI to the fore. It is a valuable and timely resource for educators and students as we attempt to find our way, responsibly, into the inevitable, exciting and challenging Gen AI future."

Prof. Glenda Cox, UNESCO Chair in Open Education and Social Justice,
Centre for Innovation in Teaching and Learning, University of Cape Town, South Africa

"This book is a treasure-trove of interdisciplinary perspectives, ideas and resources offering the reader diverse, critical insights into the meaning of AI literacy. Curated as short, accessible case-studies and vignettes, this book will inspire educators to explore the intricate landscape of AI literacy, prompting us to consider what it means for our teaching and learning practices."

Ruth Powell, Head of Digital Learning Practice,
University of the Arts London, United Kingdom

"Sharing multiple perspectives related to GenAI literacy, this publication blends critical reflections and practical insights by professionals with creative experimentation of GenAI by students. It is an inspiring collection of articles that allows us to rethink and reimagine the potential of GenAI in education, while encouraging its meaningful, responsible, and ethical implementation."

Shironica P. Karunanayaka, EdD, Senior Professor in Educational Technology,
Faculty of Education, The Open University of Sri Lanka, Honorary Chair - Commonwealth of Learning (COL Chair, <https://www.col.org/news/appointment-of-new-col-chairs-announced/>)

"In this groundbreaking collection, academics and students alike delve into the multifaceted landscape of GenAI literacy with critical and creative lenses. This book provides a wealth of practical examples and reflections and fosters an environment of shared learning and innovation. By engaging with this compilation, readers are invited to reconsider and expand their understanding of AI in education, exploring its possibilities and addressing its challenges. This work stands as a testament to the power of collaborative inquiry and the shared pursuit of knowledge in navigating the complexities of our AI-driven future."

Prof. Nikolaos Fachantidis, Head of Department of Educational and Social Policy,
Director of LIRES Robotics Lab, University of Macedonia, Greece - <https://lires.uom.gr/>

"Towards AI Literacy: 101+ Creative and Critical Practices, Perspectives, and Purposes is an exceptionally timely book that offers a wide range of perspectives on artificial intelligence and generative AI in particular. Since the release of ChatGPT in November 2022, AI has had a significant impact on higher education, and this collection brilliantly captures the evolving landscape. The editors have done a commendable job in opening up the discussion about what AI literacy is and is not. They offer a wealth of suggestions for navigating this dynamic field as confident and competent explorers. The book excels in exploring the practical implications and possibilities of AI while addressing ethical and human concerns. It emphasises transparency, equity, ecosystem, and openness, highlighting the importance of these values in the ongoing discussion of AI literacy. The integration of digital wellbeing into GenAI literacy, particularly for students, is an important and thoughtful addition. "Towards AI Literacy" is for anyone who wants to understand and engage with the revolutionary changes that AI is bringing to education and beyond."

Ebba Ossiannilsson, Prof Dr, Sweden Ossiannilsson Quality in Open Online Learning Consultancy,
ICDE OER Advocacy Committee, Viktoria University of Wellington, New Zealand

