

## Generating a Student-Informed Teaching and Learning Conceptual Framework for GenAI in Business Schools: A Case Study

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### Abstract

With the rise of GenAI, business schools must prepare students for a future workforce integrated with this technology. This paper details a case study from a UK business school that introduced GenAI into its curriculum for first-year undergraduates. Through a mixed-methods survey of 149 students, the study gathered feedback on newly implemented AI-focused learning activities. The findings reveal that students are highly engaged and recognise the necessity of developing GenAI skills for their future careers. Key areas of interest include the real-world business applications of AI, ethical considerations, and future technological advancements. A significant concern for students is the desire to use GenAI in their academic work without unintentionally committing academic misconduct. Based on student feedback and existing research, this study presents a new conceptual framework for integrating GenAI education throughout business degree programmes. It offers practical guidance for educators, including a scaffolded approach to learning activities and assessments across all undergraduate levels. This research contributes an innovative model for applied GenAI learning in business education, adding to the growing body of literature on student AI literacy.

### Editors

Section: Special Issue  
Senior Editor: Dr Cassandra Colvin  
Associate Editor: Associate Professor  
Erin Roehrer

### Publication

Submission: 20 June 2025  
Revised: 6 January 2026  
Accepted: 25 February 2026  
Online First: 1 March 2026

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### Practitioner Notes

1. Business schools should actively integrate GenAI education into core curricula to meet student demand and prepare them for future employment.
2. When designing GenAI learning activities, focus on real-world business applications and the ethical implications of the technology.
3. Develop clear institutional guidelines on the appropriate use of GenAI tools for academic work to alleviate student concerns about inadvertent misconduct.
4. Our proposed framework can guide the structured integration of GenAI learning and assessment across all undergraduate degree levels.
5. Educators should recognise that students are engaged and eager to learn about AI, presenting an opportunity to foster critical digital literacy.

### Keywords

AI, Higher Education, Employability, AI literacy, Framework

### Citation:

Drummond, M., & Dale, G. (2026). Generating a student-informed teaching and learning conceptual framework for GenAI in business schools: a case study. *Journal of University Teaching and Learning Practice*, 23(6). <https://doi.org/10.53761/6jvtax83>

## Introduction

Bill Gates predicts with GenAI that “Entire industries will reorient around it. Businesses will distinguish themselves by how well they use it” (Gates, 2023). McKinsey (2024) claims that 72% of businesses have adopted GenAI in at least one business function. Whilst GenAI has been developing for decades, recent rapid evolutions in Large Language Models (LLM) have thrust the technology into the spotlight. Its impact on the future labour market is predicted to be disruptive (Brown, 2023).

This high-speed evolution, combined with labour market impact, presents both challenges and opportunities for Higher Education Institutions catering for a potential paradigm shift (O’Dea, 2024). GenAI has the potential to transform teaching and learning. It further raises questions about pedagogy, student employability, academic integrity, and the pressing need to prepare learners for a world of work in which GenAI use seems to be a certainty. AI literacy is considered a fundamental skill for the future, both in professional and personal life (Ng et al., 2021). Teaching AI literacy also allows for the development of associated skills. The case study discussed in this paper enabled the development of critical analysis, active learning, and digitally proficient skills, which are considered key for the future of work (WEF, 2023).

The research problem centres on addressing the evolving challenges of pedagogy, student employability, and academic integrity within undergraduate business education, driven by the imperative to equip learners for a workforce where GenAI utilisation is inevitable. This necessitates the development of effective strategies to integrate GenAI into curricula, ensuring students gain relevant skills and ethical awareness to thrive in an AI-enabled professional landscape.

**Research Question 1.** How can educators embed GenAI into undergraduate business management programmes of study that equips students with an understanding of GenAI and develop their employability prospects?

To address the Research Question, this paper provides an overview of a case study undertaken in a UK Business School into the introduction of GenAI into teaching and learning. Students provided feedback on these activities, to align with a formative assessment approach to construct theory (Black and William, 2009). Drawing on this experience, the emerging literature on AI literacy and feedback from students, a conceptual framework is proposed for the introduction and development of student GenAI awareness and competence in business education. For clarity, this paper will use GenAI as a term that is inclusive of GenAI. In addition, this study adopted the use of ChatGPT in the classroom as the chosen GenAI platform.

By directly involving students in AI-enhanced teaching and learning activities and collecting their feedback, the research moves beyond theoretical discussion to offer tangible insights into the educational impact of AI. This hands-on approach is innovative in its formative assessment strategy, which uses student feedback to construct theory and inform curriculum development.

The study also responds to calls within Higher Education to adapt pedagogy and assessment methods considering the disruptive influence of GenAI on the labour market and academic practices. The proposed conceptual framework for AI literacy is grounded in emerging literature, student experiences, and ethical considerations, offering a structured pathway for developing GenAI awareness and competence in business education. This is particularly important as AI

literacy is increasingly recognised as a fundamental skill for future employability, critical thinking, and digital proficiency. By focusing on both the technical and ethical dimensions of AI, the study provides actionable guidance for educators seeking to prepare students for an AI-enabled professional landscape.

## **Literature**

AI's role in education arguably began as a constructionist framework, emphasising learning through active creation with technological tools (Papert, 1980). This evolved into the concept of digital literacy, with Gilster (1997) seeing the concept as the ability to critically navigate digital information, up to and including skills such as coding and data analysis (Bawden, 2001). As GenAI permeated everyday life, scholars began redefining literacy to include AI-specific competencies. Long and Magerko (2020) define AI literacy as the ability to understand the skills that allow people to interact with GenAI systems, assess them critically, and ethically use them. This builds on earlier frameworks such as Voogt et al.,'s (2013) 21st-century digital competencies.

Shifting further, Ng et al., (2021) argue that AI literacy must encompass not only technical skills but also ethical reasoning, mirroring broader calls for critical AI literacy (Touretzky et al., 2019) which this paper's conceptual framework attempts to address. The rapid advancement of Large Language Models (LLMs) has heightened awareness and adoption of AI; ChatGPT, launched late 2022 is now estimated to be the fifth most visited website in the world, (O'Donnell and Crownhart, 2025),

### **Impact of GenAI on jobs and employability**

The Institute for Public Policy Research (IPPR) estimate that up to 8 million UK jobs are potentially at risk from GenAI adoption, with back office, entry-level and part-time jobs most at risk (IPRR, 2024), therefore reducing the supply of typical graduate roles. The International Monetary Fund (IMF) estimates that 40% of global employment is exposed to GenAI (Cazzaniga et al., 2024). Analysis of the US labour market suggests that most occupations have some degree of exposure to LLMs, with approximately 19% of jobs having 50% exposure (Eloundou et al., 2023). However, GenAI is also likely to create new job opportunities (Ng et al., 2021). Traditional approaches to student assessment have overemphasised 'what' a student knows, neglecting the 'how' and 'why'; the former risks HEI obsolesce in the face of Generative GenAI (Bentley et al., 2023) as LLMs make this given that it can generate written content in seconds. Future employability skills are considered to include the capacity to apply GenAI and to learn quickly enough to adjust to changes in a dynamic environment (Rudolph et al., 2023). This is recognised by today's undergraduates (Jisc, 2023) and has been described as a matter requiring urgent attention from educators (Zhou and Schofield, 2024).

Although GenAI presents challenges for Higher Education, it may also support student academic success and increase participation (Sullivan et al., 2023). Furthermore, it can aid student research and writing skills (Lo, 2023) and help students gain important skills such as problem-solving and critical thinking (Kasneci et al., 2023). It could support the development of innovative teaching and assessment techniques (Cotton et al., 2023) enable personalised learning, and provide insight into student understanding (Bond et al., 2024).

## **Ethical considerations in an academic context**

Research has found that some undergraduate assignments are now indistinguishable from work produced by GenAI (Hassoulas et al., 2023). This leads to concerns about the potential impact on academic integrity (Eke, 2023), resulting in calls for a return to examinations as a model of assessment (Dobson, 2023). Consequently, academics question how necessary traditional assessments, such as essay writing, can be adapted to ensure that students still develop critical skills whilst maintaining academic integrity (Suleymenova et al, 2024). GenAI also raises further concerns about accuracy, reliability, and bias (Michel-Villarreal et al., 2023), and issues relating to equity (Rasul et al., 2023).

The potential of GenAI to generate poorly written, biased or inaccurate (hallucinated) content underlines the importance of providing appropriate education and guidance to students. Rudolph et al., (2023) suggest that curricula should include the judicious use of GenAI and consider its benefits and limitations. Incorporating GenAI into teaching and learning, however, may be hampered by the lack of GenAI capability among educators (Toksha et al., 2022). Students are already using GenAI in their studies for a range of purposes such as idea generation, personal organisation and communication (Attewell, 2024), as well as preparing or improving assessment output (Singh et al., 2023). However, whilst students are engaging with GenAI in their studies, many admit that they lack understanding about the appropriate use of academic conduct and integrity (Chen et al., 2024).

## **AI literacy**

Ng et al., (2021) propose that AI literacy encompasses three elements adapted from Bloom's taxonomy: knowing and understanding AI, using and applying AI, and evaluating and creating AI. Universities need to support students in developing AI literacy to fully equip them for a future of work, that will inevitably involve AI, by incorporating it into pedagogy (Eke, 2023). When considering other approaches to embedding AI literacy, O'Dea et al., (2024) highlight a skills approach. Often used within curriculum design, GenAI competency is categorised into 'technical skills' such as coding, whereas 'soft skills' encompass more non-technical skills, yet these are necessary to build GenAI competency. Bentley et al., (2023) highlight the importance of contextualising GenAI for students by connecting it to real-life issues as well as broader social and ethical dimensions of its use.

Necessary skills include awareness of ethical and social implications of GenAI (O'Dea et al., 2024), critical thinking and problem formulation (Acar, 2023) and general relational, analytical, social and personal skills (Brown, 2023). Students will also need to develop the ability to critically assess AI-generated content for accuracy and credibility (Meakin, 2024) as well as understand the limitations of such tools to avoid overreliance (Zhou et al., 2024). Enhancing AI literacy in undergraduate students presents challenges not only concerning ethical use and academic integrity but also educator competency and curriculum design. However, HEIs have previously been required to address similar challenges in recent years, incorporating online and mobile content, virtual teaching, and other technology advances into teaching and learning (Kukulsa-Hulme, 2012) and GenAI integration should be seen as an opportunity.

## **Overview of the provided teaching and learning**

Research into the use of GenAI in Higher Education is still emerging and, given AI's rapid progression, educators will need to experiment with new techniques and continue to adapt them as technology advances. For this case study, learning content was developed within a UK Business School informed by an existing conceptual framework (Ng et al., 2021) to introduce students to the topic in their first year of study. The learning content sought to ensure that students could understand AI, use and apply AI, and evaluate AI.

The purpose of the teaching and learning experiment was threefold; to raise general awareness about GenAI and its use in business, to educate students on the appropriate use of GenAI (including an introduction to ethical considerations as well as academic misconduct), and to provide initial practical skills with generative AI. The content comprised a lecture accompanied by a practical seminar. Learning was provided to first-year business students in their first semester and situated within a module on academic skills. This module aimed to equip students with skills to enable success at university, including academic writing, critical thinking and problem-solving. It also aimed to introduce students to digital systems that they are expected to engage with during their studies. Teaching and learning materials were developed assuming minimal or no prior knowledge of AI.

The lecture included an introduction to GenAI both in everyday life and in business, the history of GenAI development, dangers and risks of AI, including examples of ethical and practical issues, considerations on the impact of GenAI on jobs and an overview of AI. The lecture further included a brief demonstration of generative AI. Students were invited to set up accounts on ChatGPT and familiarise themselves with the system before the seminar. The lecture was supplemented with additional multimedia resources including an online quiz, reading and video content. Seminar activities focused on GenAI specifically. Taking a broadly constructivist approach to the seminar, students explored a variety of generative GenAI tools and engaged in experimentation with content creation to actively explore and build competence. Students worked in groups to assess content accuracy and reliability.

A constructivist approach was identified as the most suitable teaching method as this approach benefited the module's anticipated aims (Killic et al., 2003), notably with the focus on developing critical thinking and analysis skills coupled, with using digital tools in generative AI. Two of the module learning outcomes were deemed to fit the criteria of a constructionist approach; "demonstrate competence in academic, literacy and study skills" and "demonstrate digital literacy". The module team acknowledge the need for students to understand digital literacy, particularly in today's enriched AI-world. Therefore, the team utilised Chat GPT as a mechanism to develop digital literacy but also develop critical thinking and analysis using the tool to demonstrate academic competence.

The GenAI tools used in the classroom were not used to provide immediate feedback to students, despite some advocating its use to increase student engagement (Abbas et al., 2022). However, the role of the tutor as a mechanism for a supportive learning environment and for providing feedback allowed students to discuss their thoughts and gain feedback face to face, complimenting the constructivist approach (June et al., 2014). To facilitate the development of active learning skills, students were further provided with AI-generated content for previous essay questions and were invited to critically assess and mark the content according to the assignment's

marking schemes. Students were also invited to review a range of generated and non-generated content and aim to identify its origin. Finally, a facilitated discussion about GenAI and academic misconduct. Students were provided with examples to review and debate. To assess understanding of key concepts, a formative quiz was included in the teaching and learning materials.

Following the learning activities, student feedback was sought to increase engagement, build student perceptions and enhance content development (O'Dea et al., 2024) in this emerging area of learning. The survey sought to achieve the following: assess students' prior knowledge and use of GenAI before the provision of teaching and learning, explore student perceptions of AI's relevance to their education and careers including opportunities and concerns, identify what students determine are the priorities regarding GenAI and the curriculum, and obtain student feedback on the teaching and learning of GenAI undertaken. This data was used to inform future teaching strategies for the faculty to assist in providing a consistent delivery of the curriculum.

## **Method**

### **Research Design**

This study was undertaken at the business school of a UK university based in the Northwest of England. Participating students were in year one of studies undertaking an academic skills module during their first semester of the academic year. GenAI was used as a tool for upskilling students as the module has a Module Learning Outcome relating to developing competence and understanding of digital literacy. Students were then asked to evaluate their experiences.

### **Procedure**

Online surveys are a straightforward way to gather information from a large group of potential respondents (Braun et al., 2021) and allow for standardised data collection (Saunders et al., 2016). Both qualitative and quantitative data were sought with a mixed-method voluntary online survey including multiple choice and free-form text questions. However, the quantitative data was used for descriptive statistics only. The survey was designed to be deliberately short to maximise completion and informed consent was achieved through a verbal explanation of the study and an online consent form contained within the survey.

### **Participants**

Of the 524 students who were invited to participate, 28% completed the survey. Given this was an exploratory study and conceptual, the authors allowed for an 8% margin of error, 3% more than the 5% some suggest for a representative sample (Krejcie, 1970). Therefore, 28% can be deemed a representative sample of first-year students. All students were asked to participate just once in seminars and were not sent reminders; therefore, non-response bias analysis was not necessary. In addition to some demographic questions, students were supplied with a range of pre-populated answers to the question, based on the researchers' a priori expectations and assumptions. Likert scale questions were also used. Data was collected on students' prior familiarity with and use of GenAI before the learning activities, feedback on the teaching and learning, student perceptions of the importance of GenAI skills and self-assessed confidence

levels. Understanding student perceptions of GenAI can support student engagement and ensure the suitability and relevance of teaching and learning content (O'Dea et al., 2024).

## **Measures**

The survey was communicated in seminars via the provision of a QR code that linked to the survey. All students undertaking the module were invited to participate in the survey. The seventeen-question survey was initially employed to investigate the students' learning; however, broader perspectives also developed as a result. The questions used were non-validated but were informed by the AI literacy definition of Ng et al., (2021). Due to the demographic being surveyed and the want to maximise engagement, it was determined that the study opted for user-friendly questions that could be self-defined. A pilot survey was undertaken before dissemination to the target population. This allowed for a non-validated question set to be tested and amended later, a practice supported by Bujang et al., (2024). To provide students with the opportunity to expand on their answers, as well as to seek out rich data (Braun et al., 2021), qualitative questions were added to the survey. Such questions allow for capturing what is important to respondents in their language, providing a rich data set (Braun et al., 2021). Three questions were asked of respondents: "what concerns do you have about GenAI and your education / future career?", "think about what you have learned about GenAI so far. What opportunities or benefits can you identify for your education / future career?" and "finally, what else would you like to learn about GenAI during the remainder of your course?"

## **Analysis**

Open-ended qualitative questions were reflexively thematically analysed using Nvivo. Thematic analysis allows for the identification of themes within data (Braun & Clarke, 2006). It can be used to generate 'patterns of meaning' (Braun & Clarke, 2013) across a data set and use these patterns to interpret the phenomenon being researched (Boyatzis, 1998). To ensure rigour within the data analysis process, the stages of thematic analysis, identified by Braun and Clark (2021), were employed in this study. These stages included data familiarisation, coding and generating, developing and refining themes. The potential for bias within the thematic analysis process was mitigated by following Braun and Clark's (2006) fifteen-point checklist for good thematic analysis. An evaluation of the teaching and learning activity was undertaken using the participant data. This was designed to assess student feedback to further develop the content to meet student needs.

# **Results**

## **Descriptive Statistics**

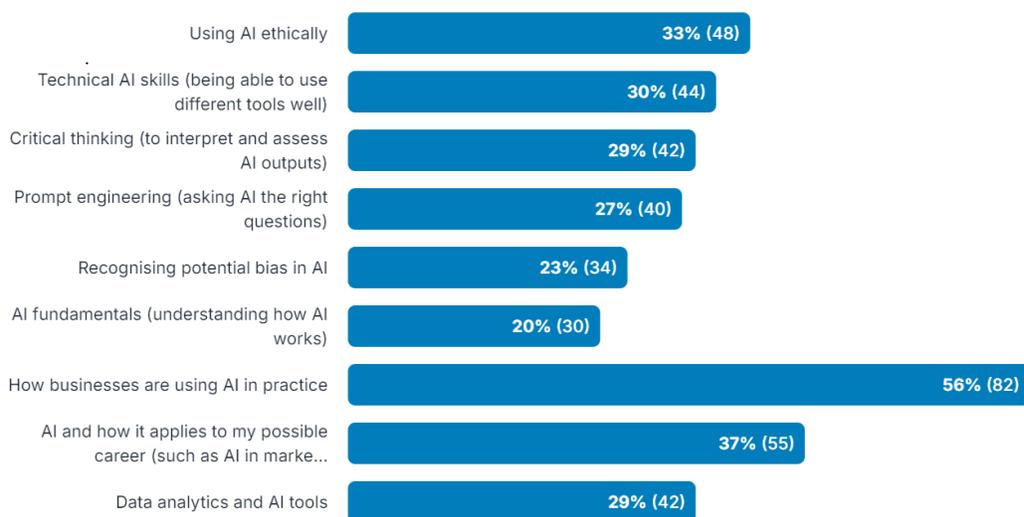
A total of 149 responses were received by students equating to a 28% participation rate. 70% of participants had confirmed that they had engaged with an GenAI application previously. 53% of participants identified as male, with 45% of participants identifying as female. 10% of participants considered themselves to have a disability or long-term health condition. Analysis of the findings suggests that most students (96%) recognise the importance of learning about GenAI within their studies, and a high number of respondents (71%) believe that they will continue to use GenAI in both academic and future professional life.

Before the provision of the learning, 42% of students referred to themselves as either very familiar or familiar with AI, with only 14% unfamiliar or very unfamiliar. Many of the students (70%) had used some form of GenAI tool before partaking in the module. This suggests a reasonable level of understanding and competence within the cohort. Students confirmed that they had previously used GenAI for generating ideas, research, improving academic writing and generating answers to academic work.

When reflecting on the learning, students identified the provision of information on academic misconduct as the most useful element. However, after the learning activity, just over half of respondents felt that they fully understood how to use GenAI in their studies in a way that met university standards on academic conduct. This suggests the need to further the importance of providing sufficient attention to this topic in teaching and learning provision. Students were asked to consider what they would like to learn more about during the remainder of their academic studies. The answers to this question can be found below:

### Figure 1

*Responses to the question: 'What would you like to learn more about AI? Select all that apply'*



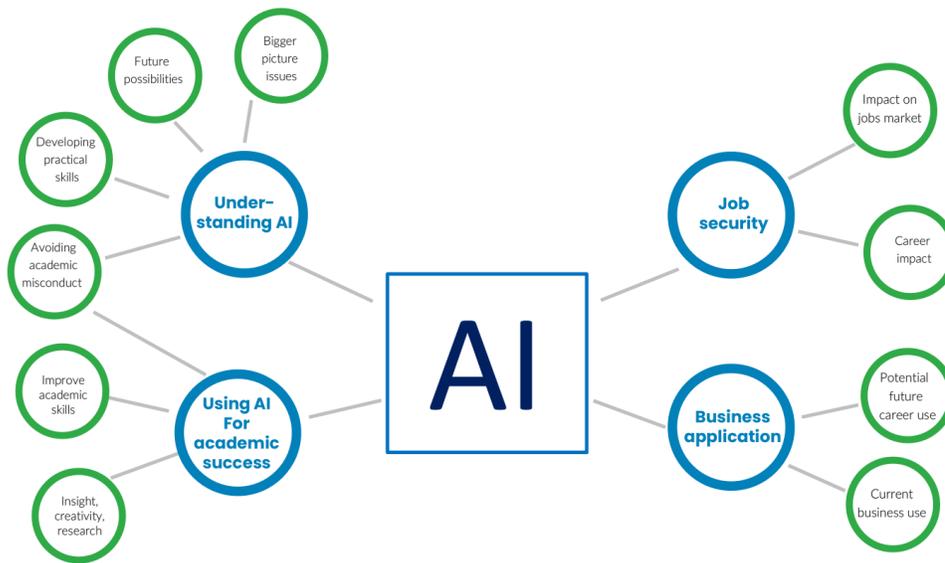
As highlighted by the responses, students are keen to learn about a range of AI-related topics but have a particular interest in business applications, use in students' future career paths, and ethical use. Further questions stressed that students are keen to build their broad GenAI capabilities as well as gain more information on ethical use and the ability to critically assess GenAI outputs. Considering the demographic of participants, they are studying with a purpose of graduating into a profession, so determining how industry applies AI, is unsurprising.

### Qualitative Findings

Four broad themes were identified from the qualitative research data. These themes are summarised in Figure two, below:

### Figure 2

*Themes and Sub-themes from qualitative analysis*



## Understanding GenAI

Students demonstrated a desire to learn about GenAI and develop their understanding. A crossover can be observed with the subsequent theme of 'Using GenAI for academic success.' This aligns with the literature which suggests students are cognisant of the need to build AI-related skills (Chen et al., 2024).

This desire appears to go beyond personal use and academic success. Some comments indicate a desire to know more about wider issues such as its potential in the future, broader societal implications and the risks of AI; for example, "I would like to learn about the future of AI, what is next to come, what to expect of it and how to handle new AI". Some students demonstrate fears about GenAI too, recognising that they cannot always tell when something is generated or original content, and note the risk to studies if they over-rely on generative GenAI content or assume its accuracy. This fear may not be limited to job security but is also based on academic integrity. Should a student use GenAI against the module's guidance, what would this mean for their educational and career prospects? Students are also interested in the mechanics of GenAI and how it works by developing greater capabilities around areas such as coding or prompt engineering. Also linked to the subsequent theme is a recognition that a better understanding of GenAI aids ethical use, specifically using GenAI ethically within academia, and by academic standards; for example, "how [we can] use in assignments without risking the legitimacy of our work."

## Using GenAI for academic success

As noted in the previous theme, students have a desire to deepen their understanding of GenAI in general. The desire for enhanced skills is often framed by students as integrating GenAI within their course and their studies. As the literature highlights, students are already integrating GenAI into their studies (Attewell, 2024; Singh et al., 2023), it is therefore understandable that they wish to know how to do this to best effect. Students are concerned about the potential accidental misuse of GenAI and triggering academic misconduct processes "some concerns I have with

GenAI is how to use it correctly/ethically so I don't accidentally [commit] academic misconduct.” This suggests a requirement for a more nuanced understanding of the line between acceptable and unacceptable GenAI use in academic work. Students indicate they lack clarity regarding expectations, especially where there are differences between assessment types and individual module-level guidance. This suggests that Higher Education Institutions need to provide such clarity through policies or assignment briefs.

Students also want to know how to use GenAI to the best effect, to improve academic skills. The example of using GenAI to generate ideas was common. Students identify the potential of GenAI to be improving academic writing, summarising content, revision support, improving grammar and spelling and structuring assignments. One comment surmised “[I want to know] how it can be used efficiently and as easily as possible to get the best results.” Interestingly, students also raised concerns that they may become over-reliant on the use of AI, and the implications of this for their learning and development. Evident within comments is also a concern for fairness. Students recognise its potential for cheating and how difficult it might become to detect misuse in academic work. They question what this might mean for their course “[I want to understand] how it can be used negatively to help students attempt to cheat.”

Some of the areas of use indicated by some students noted above, such as summarising work, spelling and grammar, structuring assignments and improving academic writing, have previously been the responsibility of academic staff or specialist support teams. This survey indicates that some students are instead utilising GenAI for these purposes “I can use it for spell [correcting].” This presents several potential challenges for Higher Education Institutions including broader questions about why students would prefer to use an GenAI tool for this purpose as well as the suitability. Furthermore, Higher Education Institutions may need to consider specific guidance on this point, including defining acceptable use or prescribing specific tools.

### **Job security**

Students are concerned about the impact of GenAI on job security. The concerns expressed are twofold; concern for the potential effects on jobs and job markets in general (what jobs might cease to exist), and what it might mean for their potential desired career paths and ability to secure work post-graduation. For some students, this raises broader questions about the value of the degrees for which they are studying “there will no longer be a place for me in the industries I want to work in, and my degree will not mean anything.” Related to this theme is a more specific concern exhibited by some students, in respect of whether they will be able to keep up with the technology as it evolves and gain the necessary skills to ensure continued employment.

### **Business application**

Students are keen to understand how businesses are using GenAI today across several disciplines. They are interested to see ‘real life’ applications. Students are especially keen to learn more about how they might be using GenAI in their future jobs and careers. Areas of interest raised by students included the influence of GenAI on marketing, data analytics, and finance. Associated with this finding is recognition from students of the potential of GenAI to support their employability, especially in the job-seeking process and in future career success; “AI can prepare me for any future placement within the business industry.” Students should be informed about recent malpractice in business consultancy involving AI, such as Deloitte’s use of fabricated

references in a government report (Kissin, 2025). Incidents like this highlight current industry challenges and stress the importance of ethical GenAI use in business.

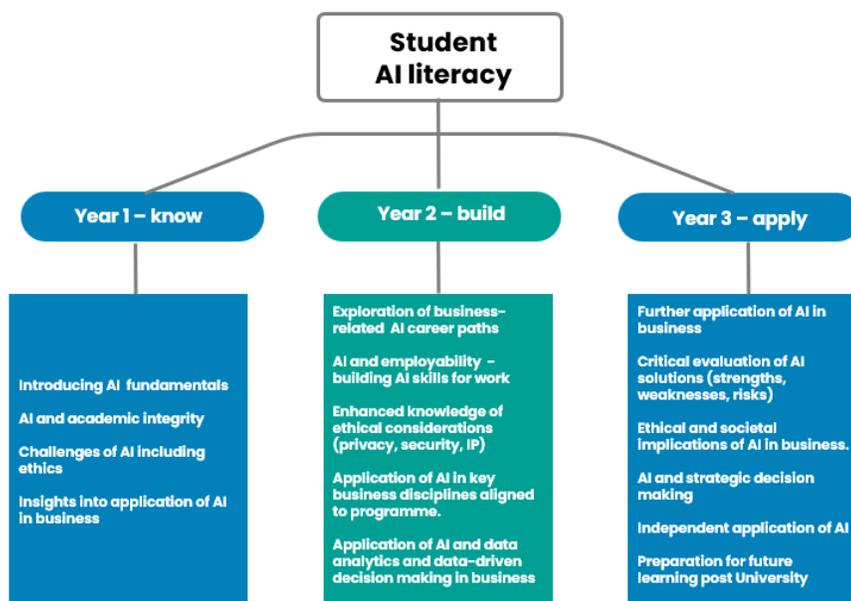
Overall, students displayed high levels of engagement with the teaching and learning activity, demonstrating a desire for continued and focused opportunities for additional learning. Most students recognised the importance of learning about GenAI for their future career success, whilst also raising concerns about broader GenAI implications on long-term employability. Students noted their concern about the potential use of GenAI to infringe upon the university's academic misconduct policy. Whilst this may highlight that students are ethically mindful of GenAI use, it does indicate that there is a lack of clarity on GenAI use in the institution's academic misconduct policy. These findings suggest broad alignment with the AI literacy framework of Ng et al., (2021); students have a desire to understand, apply and evaluate AI, supporting their inclusion in the proposed framework for teaching and learning in business education.

### Proposed conceptual framework for teaching and learning

Drawing on these research findings, conceptual papers, and emerging literature, the authors propose a conceptual framework for GenAI teaching in learning in business schools. This framework extends the literacy framework developed by Ng et al., (2021), by applying its elements of AI literacy specifically to business education and aligning levels of the framework with the years of study. Furthermore, it provides detailed examples of subjects and teaching and learning activities that could take place within the levels of the framework. The framework draws on key findings from the study and the literature. Incorporated into the framework is the provision of practical skills that will enhance academic success and employability (thereby reducing risk to careers and employment), appropriate and ethical use of AI, and business application of AI. Figure three illustrates the proposed framework for teaching and learning for AI, summarising proposed content aligned to a year of study (see Table 1 and Figure 3).

**Figure 3**

*Framework for teaching and learning for AI*



**Table 1**

*Framework for teaching and learning for GenAI (author's diagram)*

	<b>Summary</b>	<b>Activities</b>	<b>Learning outcomes</b>	<b>Assessment</b>
<b>Year One - Learn</b>	<ul style="list-style-type: none"> <li>Introducing AI – key definitions and concepts</li> <li>Introduction to common generative AI tools</li> <li>AI and machine learning fundamentals</li> <li>Introduction to AI and academic integrity</li> <li>AI and ethics</li> <li>Insights into the application of AI in business</li> </ul>	<ul style="list-style-type: none"> <li>Introduction to key AI concepts, defining terms and typical use.</li> <li>Demonstration of an AI-powered business tool in action (e.g., a customer service chatbot).</li> <li>A case study where AI is used in academic settings, including appropriate (e.g., to improve grammar) and inappropriate use. Students consider and discuss ethical implications.</li> <li>Demonstration of generative AI tools such as MS CoPilot and ChatGPT, exploring prompts and outcomes.</li> <li>As a group task, create a guide for responsibly using AI for research or business assignments.</li> </ul>	<ul style="list-style-type: none"> <li>Understand and explain basic AI concepts.</li> <li>Articulate the difference between AI and Generative AI.</li> <li>Build competency with generative AI.</li> <li>Explain the concept of academic integrity and how this applies to AI use.</li> <li>Recognise how AI may be used in a business context.</li> <li>Evaluate critically the role of AI in academic integrity.</li> </ul>	<ul style="list-style-type: none"> <li>Formative quiz on academic misconduct to evaluate understanding.</li> <li>Assess content generated by AI for quality, accuracy, and reliability.</li> </ul>
<b>Year Two - Build</b>	<ul style="list-style-type: none"> <li>Exploration of AI career paths</li> <li>AI and employability</li> <li>Enhanced knowledge of ethical considerations</li> <li>Application of AI in key business disciplines</li> <li>Application of AI for data analytics and data-driven decision-making</li> </ul>	<ul style="list-style-type: none"> <li>Students research an AI-driven business tool and analyse its use, benefits, and potential ethical considerations. Present findings.</li> <li>Guest Lectures from industry professionals who work with AI in business (e.g., from marketing, finance, HR) to give talks on their experiences with AI.</li> <li>Provision of real-world case studies of businesses that implemented AI solutions for reading, analysis, and discussion.</li> <li>Use of AI for idea-storming and business idea generation—experimentation with prompt engineering.</li> <li>Compare and contrast AI-generated and human-generated content in relevant</li> </ul>	<ul style="list-style-type: none"> <li>Understand how AI can perpetuate inequality or be used for unethical purposes in business.</li> <li>Recognise common AI applications in business (e.g., AI in marketing, HR, finance, supply chain).</li> <li>Analyse AI solutions and assess and explain strengths, limitations, and risks.</li> <li>Understanding the use of AI for idea generation. Critical evaluation of ideas generated.</li> <li>Evaluate the strengths and weaknesses of AI-</li> </ul>	<ul style="list-style-type: none"> <li>Write a personal reflection on what ethical AI usage means in the business world. Generate an AI version of the same work and compare.</li> <li>Using AI, the creation of AI-generated business ideas, with a critical evaluation of each, using non-AI research to support the assessment.</li> <li>Production of a comparative content analysis report highlighting differences, potential risks, and areas where AI can or cannot replace human creativity.</li> </ul>

Year Three - Apply

- Further application of AI in business
  - Critical evaluation of AI solutions (strengths, weaknesses, risks)
  - Ethical and societal implications of AI in business
  - Independent application of AI
  - Preparation for future learning
- business disciplines (e.g., marketing or PR). Evaluate tone, quality, and potential outcomes.
- Research and discuss the potential impact of AI on jobs and careers.
  - Use AI tools to simulate job interviews and undertake job applications.
  - Research the societal and ethical implications of AI adoption in different business sectors.
  - Case studies of AI use are accompanied by classroom debate and discussion about their potential ethical implications. For example, driverless cars, and AI are used in recruitment.
  - Further provision of case studies/guest lectures in relevant business disciplines.
- generated content in business communication.
- Appraise different AI tools and approaches.
  - Articulate the arguments for and against AI use in different business contexts, defending a personal point of view.
  - Evaluate own learning and skills for an AI-driven workplace.
- Production of a personal development plan to develop AI-related skills.
  - Reflections on AI learning and skills development – a personal or group presentation.
  - Analyse a business problem and propose an AI-driven solution, considering both potential benefits, challenges, and ethical challenges. Deliver a report and presentation.
  - Design lectures and learning materials on an AI-related subject that could be delivered to other students.
  - Develop a strategic plan for a fictional business or a real company using AI to improve business outcomes (e.g., AI to enhance customer satisfaction, and AI in operational efficiency). They must use AI-generated insights to inform long-term business strategies.
  - Students undertake live projects with a real or business facing a strategic challenge, proposing how they can use AI in their business, undertaking research and presenting findings.
  - Undertake an industry trends analysis, identifying how AI may continue to disrupt specific industries.

Year One content focuses on introducing students to the broad fundamentals of GenAI and associated basic concepts, with an initial focus on an introductory business context. Content is designed to provide a foundation for broader learning and an introduction to relevant ethical issues. There is a focus on academic integrity when using generative AI. The proposed content for Year Two combines practical, career-focused activities with deeper ethical discussions and real-world GenAI applications, designed to provide students with practical skills as well as an understanding of how GenAI may influence their future careers. Exposure to businesses using GenAI is an important part of this level. As students' progress into their final year, learning will include more advanced concepts, consider the strategic application of AI, and incorporate independent analysis. It seeks to prepare students for future learning as GenAI technologies continue to evolve. Activities incorporate deeper reflection, critical thinking and analysis, whilst retaining a focus on real-world business applications. Appendix A provides examples, aligned to each year of study, of practical application in the classroom, with accompanying formative and summative assessment opportunities for each.

## **Discussion**

If the proposed conceptual framework were to be adopted in business schools, there are several implications for teaching and learning practice. The findings of this study indicate that students are engaged with the topic of AI. They are keen to explore its wider implications and understand its use in business, and its potential future use. They wish to maximise its use, integrating it into their studies to support their academic success. This demands that business educators are competent and confident users of GenAI themselves and understand the use of GenAI in practice. As Zhou and Scholfield (2024) argue, a module leader-led approach will be more agile than a top-down organisation-wide strategy. However, some academic staff will undoubtedly have limited understanding or awareness, and Higher Education Institutions will need to provide sufficient time and resources to support their competence (O'Dea et al., 2024) if they are to provide meaningful learning experiences to students. GenAI integration within teaching and learning can be enabled by educators who can champion GenAI to students and peers (Zhou and Schofield, 2024). When incorporating new technologies into teaching and learning, educators will need to act as 'professional role models' requiring them to be competent users on a personal level (Kukelska-Hulme, 2012).

Not all educators, however, will be sufficiently ready to incorporate GenAI into teaching and learning. Some may be reluctant to do so, or move away from traditional forms of assessment, potentially due to the time and effort required to do so (Suleymenova et al., 2024) or due to concerns about teaching digital technology to a cohort attributed to being digitally native (Kirschner and De Bruyckere, 2017). Nevertheless, it provides educators with an opportunity to work with organisations to develop strategies for knowledge dissemination of GenAI use in industry to help prepare students for future employment as digitally proficient (WEF, 2023).

Higher Education Institutions can support educator GenAI competence by seeking to understand the practical challenges faced by staff in using such tools by recognising and addressing staff fears (Ng et al., 2023). Ng et al., (2022) propose a set of GenAI competencies for educators, including application use, creating content for teaching and learning, and using technology to connect students. Higher Education Institutions should consider formal interventions to support readiness for applied GenAI teaching in business schools. Without such provision, the feasibility of implementing the conceptual framework, and the ability to skill students in AI literacy more generally, will be reduced.

Students will also need, via their institutions, clear direction on the acceptable and unacceptable use of GenAI in their studies. Broad policies may not be effective; therefore, students will require detailed guidance on how GenAI can be used responsibly and ethically within different contexts of their studies (Cotton et al., 2023). This may need to be provided on an assignment-by-assignment basis. Such guidance can include practical examples relevant to each discipline or assignment outlining where AI-assisted research, writing, or analysis is acceptable and where it is not. However, it is worth highlighting that first-year students were surveyed after they had participated in a lecture and seminar where academic misconduct was addressed. Despite this, the results indicated that students still had concerns about academic misconduct which could be interpreted as students either requiring more guidance, or that staff could review how this knowledge is disseminated. When integrating GenAI into teaching and learning, it is necessary to demonstrate the benefits and limitations of AI, so that students might critically assess its credibility. Critical thinking skills will enable students to analyse and evaluate GenAI content and avoid overreliance on it within their studies.

Finally, business schools will need to build the necessary relationships with businesses using GenAI to bring that practical, real-life insight desired by students, into the classroom. It is acknowledged that this may be time-intensive for universities and may necessitate new connections. Alumni networks, existing partnerships, established networking events, and the personal networks of academic staff and social media, can all be leveraged to identify opportunities for partnership to enhance curricula (Rudolph et al., 2023). Established relationships may also be able to deliver collaborative opportunities or experiences for students in the form of internships or projects whilst also being able to influence the future development of the curriculum. Such opportunities will allow students to build critical skills for their future employability.

This conceptual framework, whilst advocates industry relationships for dissemination, it does align well with already identified HE sector responses. Despite this study being derived from a UK business school, there is generalisability in its framework to compliment practical guidance already established globally. The Tertiary Education Quality and Standards Agency (TEQSA, 2024), provides educators with strategies in Higher Education for the emerging practice of AI. When considering the People aspect of TEQSA (2024), this study's conceptual framework draws parallels with its aims. The module in the UK business school aims to equip students with opportunities to develop their digital literacy skills, to enhance their skillset but also to aid preparation for industry.

The framework also outlines considerations for assessment regarding AI-inclusive use. The incremental approach defined in the framework caters for students in an introductory capacity in "Know" (Year One) to "Build" (Year Two) and "Apply" (Year Three), thus creating a scaffold approach to the curriculum. This also compliments TEQSA's principle in their Practice guidance in their acknowledgement of scaffolding. Both the "Build" and "Apply" components of the conceptual framework has a focus on industry and applied demonstration of GenAI use. Students gain exposure to how GenAI is used in the industry dedicated to their subject discipline. This is done through an existing GenAI Steering Group at school-level who engage with industry to provide this insight. This practice aligns well with TEQSA's view regarding professional accreditation bodies and industry.

The conceptual framework presented in this paper originates from research conducted within a UK business school and hence focuses specifically on business education. The demand for AI literacy, as well as potential impacts upon the labour market, however, are not limited to

business students. Accordingly, this framework could be adapted and tested for interdisciplinary use by scholars from relevant disciplines. This could be achieved by retaining the core, non-discipline-specific elements of the framework, and adapting business-related elements to align with the requirements and challenges of other disciplines. This would enable educators to integrate GenAI teaching into their respective educational contexts.

### **Practical Implications**

The findings of this study offer actionable implications for business schools seeking to respond to the rapidly evolving role of GenAI in Higher Education and the labour market. Students will graduate into employment where GenAI integration is not optional but expected, and business schools are under increasing pressure to equip learners with relevant digital competencies. The study demonstrates that students not only recognise this imperative but actively desire structured, ethical, and practice-informed opportunities to develop their GenAI skills. Consequently, Higher Education Institutions can use this research to inform curriculum design that progressively builds students' confidence and competence with GenAI tools through scaffolded learning activities across all undergraduate years.

The study underscores the need for universities to strengthen policy guidance around acceptable GenAI use. Students expressed persistent concerns about unintentionally violating academic integrity rules in their studies. This reinforces the importance of clear, contextualised, assessment-specific guidance, alongside consistent staff messaging on ethical use. The study also highlights a practical need for investment in educator training. As GenAI reshapes pedagogical expectations, business schools must ensure that staff possess the confidence, competence, and pedagogical strategies required to lead learning in this domain. Finally, the strong student interest in real-world business applications suggests that industry engagement be expanded to help students understand how GenAI is already transforming professional practice and to strengthen their employability prospects.

### **Theoretical Implications**

This study contributes to the growing discourse on AI literacy by extending existing conceptualisations into a business education context. While AI literacy frameworks such as Ng et al., (2021) provide useful foundations, they require adaptation to address the specific pedagogical, ethical, and employability challenges emerging within business schools. This research advances theory by demonstrating that AI literacy development is best understood not as a single skills-based intervention but as a longitudinal, scaffolded process that evolves across the undergraduate journey. The year-by-year conceptual framework proposed, therefore, contributes to theory by articulating how understanding, applying, and evaluating GenAI output can be sequenced, contextualised, and deepened over time within discipline-specific curricula.

The study also offers new theoretical insight into student perceptions of GenAI. The findings reveal a duality in student attitudes; optimism regarding career benefits and enhanced academic support, alongside concern about job displacement and academic misconduct. This tension illustrates a more complex psychological and pedagogical landscape than previously described in AI literacy education literature. Theoretically, this positions student engagement with GenAI as a negotiation between empowerment and vulnerability, highlighting the need for frameworks that explicitly address emotional, ethical, and developmental dimensions of AI literacy.

By evidencing the effectiveness of constructivist, hands-on learning within GenAI education, the study supports theoretical refinement in digital pedagogy. It shows that active experimentation, critical evaluation of GenAI outputs, and tutor-facilitated reflection, are key mechanisms through which students build trustworthy, transferable AI literacy. This provides a theoretical bridge between long-standing constructivist principles and the novel challenges introduced by GenAI, reinforcing the relevance of student-centred design in future AI-enabled education.

## **Conclusion**

This case study, informed by the conceptual framework of Ng et al., (2021) provided an opportunity for a specific UK business school to introduce GenAI in the classroom and seek student feedback. The student feedback highlighted a willingness for students to engage with GenAI within both their studies and future careers. They are conscious of its ethical use which confirms the need for institutions to provide clear guidance on GenAI and academic misconduct. This research and its findings allowed for the conceptual framework of Ng et al., (2021) to be further developed. The proposed conceptual framework, set out in this paper, outlines an approach for incorporating GenAI within teaching and learning in business degrees. In addition, it provides for the progression of learning and skill development through the degree timeline, allowing students to gradually develop AI literacy and prepare them for business careers that will encompass AI. This framework provides practical guidance to business educators concerning potential teaching and learning activities, as well as formative and summative assessment options that will support students in developing GenAI competencies whilst maintaining standards of academic integrity. This paper contributes to the emerging research on AI literacy and GenAI in HE by providing new insight into student perspectives on GenAI teaching and learning.

## **Acknowledgements**

The authors confirm that we have no actual or perceived conflicts of interest nor that we have not received any funding for this manuscript beyond resourcing for academic time at their respective university. The authors also confirm that GenAI tools were not used in the ideation, design, or write-up of this research as per Crawford et al., (2023). However, Open AI ChatGPT-4o was used to ensure the referencing list conformed to APA guidance. The authors confirm that we have met the ethical standards expected as per Purvis & Crawford (2024). Dr Michael Drummond and Dr Gemma Dale jointly contributed to the conception, design, execution, analysis, and writing of this study. No other individuals contributed to the authorship of this manuscript. Student involvement was limited to voluntary participation as research participants. All final referencing decisions and corrections were made manually by the authors.

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## Appendix B. Questionnaire

Questions	Format
1. Which programme are you studying?	Select List
2. What is your gender?	Select List
3. Do you consider yourself to have a disability or long-term health condition?	Select List
4. How important do you think it is for today's business students to learn about AI?	5 Point Scale
5. How familiar were you with AI before undertaking the module?	5 Point Scale
6. Had you used a generative AI tool (like ChatGPT or Co-Pilot) before the module?	Yes / No
7. If you had used generative AI before the lecture and workshop, what had you used it for (in relation to your studies)? Select all that apply.	Select List
8. How likely are you to use AI tools like ChatGPT in your academic or professional life after this course?	5 Point Scale
9. What was the most useful part of the content on AI	Select List
10. What do you think are the most important AI related skills that undergraduates need to learn. Select all that apply.	Select List
11. What would you like to learn more about in relation to AI? Select all that apply.	Select List
12. How much do you agree with the following statement: I understand how AI might impact the kind of jobs that are related to my degree:	5 Point Scale
13. How much do you agree with this statement: 'I understand how to use AI in my university work in a way that meets university requirements around acceptable academic conduct?'	5 Point Scale
14. Think about the lecture and the workshop. What concerns do you have about AI and your education / future career? Tell us in a few words.	Open End Question
15. Think about what you have learned about AI so far. What opportunities or benefits can you identify for your education / future career? Tell us in a few words.	Open End Question
16. What else would you like to learn about AI during the remainder of your course? Tell us in a few words.	Open End Question