

Artificial intelligence in writing courses: Attitudes of university instructors in Lebanon

Samira Nicolas

University of Balamand, Lebanon

While artificial intelligence technology has been employed in different aspects of education for some time, the recent launch of generative AI tools, such as ChatGPT, has made a larger number of people aware of the advanced capabilities of these types of AI programs. Any time a new technology is introduced, the potential benefits it may have for use in the education field rely heavily on instructors' attitudes regarding those benefits and the ease, or lack thereof, with which they may be able to embrace a certain technology. Therefore, this study sought to explore the attitudes of Lebanese university writing instructors regarding the use of AI in their courses. Data were collected through a survey that was administered in the summer of 2023, with responses from 67 English writing instructors. Results revealed that overall, instructors have a neutral attitude about the use of AI in the teaching of writing, but are interested in its potential to facilitate the grading of writing assignments.

Introduction

With Open AI's *ChatGPT* bursting onto the scene at the end of 2022, educators who were not as aware of how AI was already being used by students and educational institutions, suddenly became acutely alert to the capabilities of AI, specifically generative AI programs. *Turnitin*, the well-known plagiarism detection software, launched its AI detection feature at the beginning of April 2023 to help instructors identify student submitted work that had likely been generated by a chatbot that uses natural language processing, such as ChatGPT. For instructors and institutions that rely on Turnitin to aid in maintaining academic integrity, this new feature forced faculty and institutions to engage in conversations about how and when AI could be used in teaching and learning. As with the adoption and implementation of any new teaching methodology or technology tool, its success is greatly determined by the attitude that an instructor holds regarding its efficacy and relevance.

The rapid pace at which AI technology is advancing runs somewhat counter to a field known for slow adoption of new technology and sluggish rate of change. The fact that the majority of schools across the world still have their classrooms set up in a format that adheres to the industrialised model of education is evidence that, as a field, education is lagging behind societal changes. Consequently, educational institutions find themselves at a crossroads now as to how to embrace AI in education, in a way that enhances information literacy, and to do so in a timely manner. AI has the ability to enhance student engagement, provide personalised learning experiences, and streamline administrative tasks, thus instructors' openness to incorporating AI, specifically generative AI tools, into their teaching practices is vital for its successful integration into the teaching-learning process.

In the specific context of English language instruction, the integration of artificial intelligence (AI) tools in writing courses has attracted the attention of teachers as well as students. Students have already been using programs such as *Grammarly* and *Quillbot* which employ artificial intelligence to detect grammar mistakes and generate meaningful paraphrases. With the emergence of generative AI programs, scholars and educators see a potential avenue for enhancing students' writing skills and promoting personalised learning experiences. Key to incorporating AI effectively in the teaching of writing will be the attitudes instructors have towards it. These attitudes will vary across different cultural and educational contexts.

The study this paper presents aims to contribute to the growing body of research on the use of AI in writing instruction by investigating university English instructors' attitudes regarding the incorporation of AI tools in writing courses in Lebanon. The study focuses on understanding their perspectives, concerns, and expectations towards AI, considering the unique educational landscape and cultural factors that shape English language instruction at institutes of higher learning in Lebanon. By examining instructors' attitudes towards AI in this specific context, valuable insights can be gained to inform the effective integration of AI tools and support the advancement of writing instruction in English language education in Lebanon. There is, at present, only a small amount of research regarding issues of AI use both in terms of the topic itself as well as the context of Lebanon. A 2023 editorial in the journal *Issues in Educational Research* acknowledged an increased academic interest in AI, specifically ChatGPT, although the journal had not to date published any submissions that reported on ChatGPT (Atkinson, 2023).

Literature review

Overview of AI in education

The goal of developing artificial intelligence software for education has been to enhance the learning experience and is not a relatively recent practice. Williamson and Eynon (2020) pointed out that the inaugural issue of the *International Journal of Artificial Intelligence in Education* was published in 1989, and the International AI in Education Society (IAIED) was established in 1993, indicating that "AI in education" has been a recognised field of education since at least the 1980s. In fact, intelligent tutoring systems (ITS) have existed since the 1960s and 1970s (Alkhatlan & Kalita, 2018; Selwyn, 2019). It was proposed that ITS would drastically speed up and enhance the learning process (McArthur et al., 1995). McArthur et al. (1995) spoke of how AI would threaten the teaching and learning practices of the time as the technology would allow for "individualized tutoring" and "inquiry or project-based learning" which would usurp the traditional classroom (p.72). For over 40 years, intelligent tutoring systems have been developing in commercial settings as well as AI in education research laboratories (du Boulay, 2019).

Starting in the mid 2000s, there became a growing interest in the collection of 'big data' in education which could aid in learning analytics. Through learning analytics, it was argued that adaptive systems could be developed that would lead to more personalised learning (Williamson, 2017). It is that same proposition of individualised learning that is used to

support and market AI educational technology today (Boninger et al., 2020). Recognised as curators of individualised learning, intelligent tutoring systems (ITS) are the most widely employed application of AI in education. An ITS provides a series of lessons, exercises, and tests customised for each learner. It is able to provide customisation through recording hundreds of data points while the student interacts with a given activity. These data points are analysed to choose the subsequent lesson, exercise, and quiz, creating a personalised path through the content to be studied.

In addition to ITS, there are a number of other ways AI is being integrated into education, including through educational apps that incorporate artificial intelligence, game-based learning which uses virtual and augmented reality (VR and AR), and online assessment proctoring tools. For instance, there are multiple AI-assisted language translation apps, both free and for charge, such as *Reverso*, which assist users in improving their linguistic skills and developing their vocabulary as well as providing translation, and *SayHi* which is a translation app that supports over 100 languages. Digital game-based learning has recently started including AI technology to allow for gameplay to be adapted to the individual player/student (LaPierre, 2021). For several years, AI-assisted virtual reality has been leveraged for simulation-based instruction such as for the training of neurosurgical residents (McGuire & Alaraj, 2018). Google, which of course has a significant footprint in education with its *Google Classroom* and *Google Workspace* applications, has created numerous VR and AR expeditions that can be used for educational purposes (Holmes & Tuomi, 2022). In an exploration of traditional proctoring versus online proctoring, Nguyen (2023) observed that online assessment has no different impact on student learning motivation compared to traditional assessment, and cited *AIProctor* as an artificial intelligence online proctoring tool employed by some institutions.

AI in writing

As highlighted in the introduction, the release of GPT-3 and GPT-4 from Open AI can be credited with alerting a significant number of instructors, particularly writing instructors, to the impressive capabilities of this generative AI technology. ChatGPT and other chatbots that use a transformer AI program are sometimes referred to as *Automatic Essay Writing* (AEW) tools (Holmes & Tuomi, 2022). An AEW automatically generates text in response to a user provided prompt. Among the strengths of ChatGPT as a writing tool are its capability to generate texts on any topic, in almost any language, and its contextual querying feature which allows it to “remember” previous user input and generate updated results based on those previous interactions (Malinka et al., 2023). With obvious implications for educational contexts, such as the worry that students now had an easy way to generate essays and homework, researchers set out to evaluate the quality of work that ChatGPT could produce. Dehouche (2021) demonstrated that ChatGPT can generate an academic paper that evaded a current plagiarism detector, and similarly Cotton et al. (2023) determined that a credible paper could in fact be written by ChatGPT. In a study that explored the ways ChatGPT could be leveraged in communication, business writing, and composition courses, Alafnan et al. (2023) concluded that ChatGPT is a beneficial tool for students and instructors as it provides accurate answers to theory-based questions in the three investigated domains. They pointed out that ChatGPT can function

as a more efficient search tool than a typical search engine, as it can provide coherent answers based on parameters set by the user. There are weaknesses with depending on ChatGPT output as many authors have highlighted. ChatGPT responses can appear like ‘templates’ (Alafnan et al., 2023), for instance. Even the developers of ChatGPT are transparent about its limitations, as they explained that “large pre-trained language models are not grounded in other domains of experience, such as video or real-world physical interaction, and thus lack a large amount of context about the world” (Brown, et al., 2020, p.34).

In addition to ChatGPT, there are other AI powered tools that facilitate the process of writing, for academic purposes or otherwise. Zhao (2023) investigated the AI writing assistant *Wordtune*, to assess its facility in developing English writing skills, specifically for EFL writers. It was concluded that the features *Wordtune* provides, such as suggesting synonyms, removing incorrect words, allowing for more concise or wordy text, and crafting prose in a given tone, work to enhance the English writing skills of EFL writers (Zhao, 2023). Zhao (2023) recommended that teachers incorporate the tool in their teaching through setting up online writing activities.

Another AI powered tool that is used in the instruction of writing is a program developed by the Science of Learning and Educational Technology (SoLET) Lab at Arizona State University and funded by the US Department of Education. It is called the *Writing Pal* (W-Pal).

The *Writing Pal* (W-Pal) is an intelligent tutoring system (ITS) designed to improve students’ writing proficiency via a unique combination of strategy instruction, game-based practice, essay writing practice, and automated formative feedback (Roscoe et al., 2014, p.39).

W-Pal targets high school learners but may also be beneficial for advanced middle schoolers as well as English language learners. Roscoe et al. (2014) investigated the perceptions and performance gains of tenth grade students who used W-Pal and revealed marked improvement in their writing proficiency as well as student reports that the tool was helpful and informative. (Roscoe et al., 2014, p.39).

One final example of an AI powered writing tool is *Grammarly*. The majority of this study’s participants reported that they are aware of *Grammarly*. Launched in 2009, and available in both a free and premium version, its AI features allow for automated writing evaluation, automated essay scoring, and automated written corrective feedback. In a study that explored the effect of *Grammarly* on the research writing skills of ESL graduate students, Nazari et al. (2021) found the tool effective “in improving self-efficacy, engagement, and academic emotion” (p. 6) compared with an intervention that did not employ *Grammarly*.

In addition to generating text, many AI powered tools also provide evaluation, and can therefore aid instructors in providing feedback to student writers. Tools called *Automated Writing Evaluation* (AWE) programs were developed before the creation of transformer powered AI programs such as ChatGPT. In fact, development of AWEs began in the 1960s and experienced renewed interest in the 1980s after experiencing an initial lack of

enthusiasm (Page, 2003; Warschauer & Ware, 2006). One example of an AWE program that has been used in United States public schools since the 1990s is *MY Access!*. It employs artificial intelligence to analyse input essays compared to a set of previously input, human scored sample essays, and then provides a score on a scale of 1 to 6 (Warschauer & Ware, 2006). The program also provides generic feedback based on the grade level and the generated score.

The creators of these AWEs market them as supplements to writing instruction that can support instructors in guiding students through the writing process as these tools provide scaffolding of suggestions and explanations across multiple drafts (Cotos, 2011). The writing tool W-Pal referred to previously, also provides AWE features. Roscoe et al. (2014) highlighted an important distinction in the type of feedback W-Pal provides versus that of other AWE tools which is its focus on formative feedback and overall strategy rather than feedback that focuses on language mechanics. AWE tools started being integrated into the curriculum at a time when the promotion of individualised instruction was gaining traction (Burstein et al., 2003), thus bringing to fruition McArthur et al.'s (1995) prediction referred to above.

Instructor attitudes and beliefs regarding AI

The use of technology by instructors has been revealed to be a complicated and multifaceted subject, but research is clear that if teachers lack the drive and desire to incorporate technology in their instruction, then the technology tool(s) in question will eventually be ineffective. For a technology tool to be successfully implemented in teaching, the teacher must have a positive attitude about that technology and its benefits (Fernandez-Batanero et al., 2021). Many studies have revealed that in spite of significant focus over the past few decades on educational technology and its effective integration, many teachers still have a negative view of it and are hesitant to use it (Istemic et al., 2021; Kaban & Ergul, 2020). Barriers to instructors' acceptance of technology integration include issues such as additional preparation that is needed to set up a teaching activity with a certain tool as well as the time needed for training, and the worry that many teachers have that the technology will fail somehow during the activity thus requiring even more time on their part to prepare a plan B (Sánchez-Prieto et al., 2017).

As with other educational technology, the attitudes teachers have towards adopting AI technologies will have a significant effect on the degree to which these tools are used to support teaching (Becker et al., 2017). Sharples (2022) pointed out that the new transformer AI technology is merely the most recent in a long history of emerging technology that students appropriate for their learning. He cited calculators and mobile phones as examples of tools students have embraced for facilitating their learning, while teachers and institutions go through what he terms "a predictable sequence of ignore, resist, then belatedly accommodate" (Sharples, 2022, p.1123). Sharples (2022) argued that a focus on relying on software to detect student work that was written by AI is a futile exercise, and this attitude of resistance to incorporating AI into the teaching learning process is unproductive for education.

Research context

The educational landscape of Lebanon has several unique features, key of which is the equal importance held by the three languages of Arabic, English, and French. Due to being under a French mandate after the end of World War I, a majority of Lebanon's private and public schools functioned within a French medium. A large portion of the population has also historically been keen to learn in English medium institutions which received their start in Lebanon through missionaries; the most well-known is the American University of Beirut, established by American Protestant missionaries in 1866. Private schools often follow different curricula, such as American, British, or French, reflecting Lebanon's historical ties and influences from different educational systems. While traditionally, French had been the dominant foreign language used in Lebanon's private schools, the number of private schools that offer English medium instruction and American/British curricula and programs has overtaken the number of private schools that operate in French. This surge in the number of English medium educational institutions, both K-12 and tertiary, signifies the population's embrace of English as the more dominant lingua franca after the official language of Arabic. A common decision parents in Lebanon make is to enrol their children in French medium K-12 school, but then encourage them to complete their university studies at an English medium university; highlighting an acknowledgment that it is more beneficial to possess advanced communication skills in English. This mentality has led to a demand for qualified English instructors at the country's English medium universities.

Lebanon's geographic location has meant that it has served as a cultural crossroads throughout its history, with its population being influenced by diverse cultures and religions; a feature which adds complexity to the educational system, thus shaping language instruction, pedagogical approaches, and the perspectives of instructors. Considering these factors, studying English instructors' attitudes towards AI in writing courses in Lebanon provides insights into how it can be effectively implemented within a multicultural and multilingual educational context. The results of the study offer opportunities to understand the specific challenges, expectations, and potential benefits that arise when integrating AI tools in English language education in Lebanon.

Research method

This study investigated the attitudes of Lebanese university English writing instructors toward the integration of AI tools in their courses. There are 41 universities in Lebanon, half of which are either completely English medium, or offer some programs in English. Twelve Lebanese universities achieved a ranking on the 2023 QS Arab Region University ranking list (QS Ltd, 2023); ten of the universities on that list are English medium or at least offer English language courses in which writing would be taught. Therefore, English instructors who teach at those ten institutions were invited to participate in the research. This random sampling of instructors from the ten major English medium universities, allows for the data to be considered representative of the wider population of Lebanese university English language instructors (de Vaus, 2012). A total of 67 instructors filled out the survey. An average of 20 language instructors teach at each of these institutions;

several of whom do so on a part-time basis. The part-time instructors often teach at multiple institutions. Therefore, this sample likely represents at least a third of the current English language instructors teaching at these institutions.

Data was collected through a survey consisting of 11 questions (3 demographic, 1 Likert scale, and 7 forced choice). The Likert scale statements assessed a participant's attitude toward the use of AI in teaching writing. The statements were generated based on a review of the literature that expresses the various benefits and challenges of the use of artificial intelligence in the instruction of writing. The other questions collected data about instructors' knowledge of and confidence in using AI for teaching writing, and their concerns and perceived benefits of it as a tool.

The research question that guided this study is: What are Lebanese university instructors' current attitudes and perceptions toward incorporating artificial intelligence tools in writing English language courses?

Results

As shown in figures 1 and 2, most of the participant instructors belong to either the Millennial generation or the Gen X generation (both 42%). More than half of the respondents are experienced teachers with over 20 years of teaching experience. A quarter of the participants have significant teaching experience, reporting between 11 and 20 years of experience.

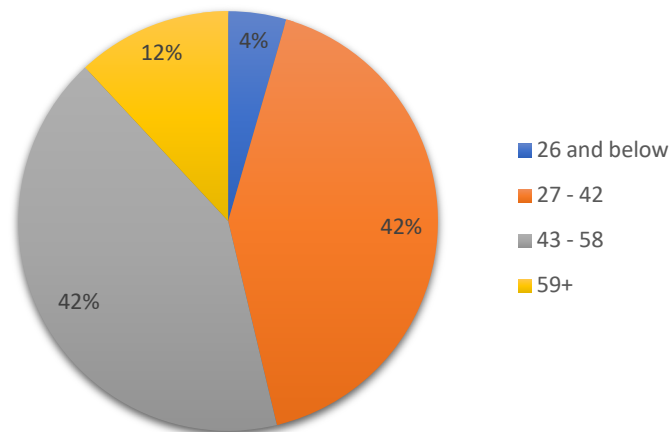


Figure 1: Age of participants

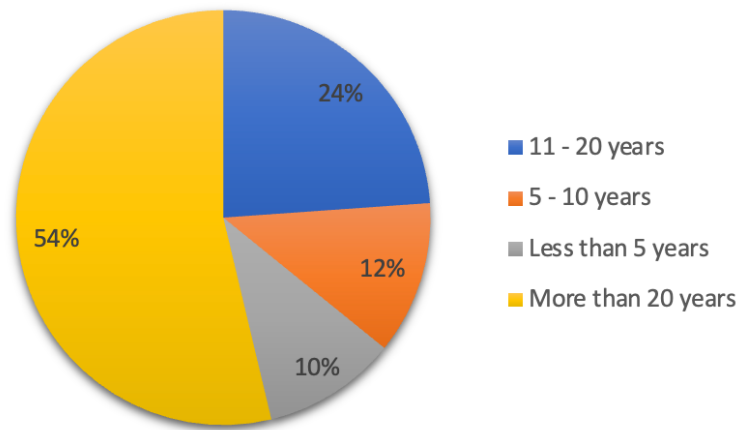


Figure 2: Participants' years of teaching experience

The data reveal that most Lebanese university instructors are aware of artificial intelligence writing tools and have some familiarity with the tools, with a third of the participants reporting that they are in fact very familiar (Figure 3). As illustrated in Figure 4, it appears that the awareness of AI writing generators is fairly recent for a majority of the participants (58%). This recent awareness is evidence of the effect of the emergence of ChatGPT at the beginning of 2023, as well as Turnitin's launch of its AI generated content detector in April of 2023. Most universities in Lebanon have subscriptions to Turnitin.

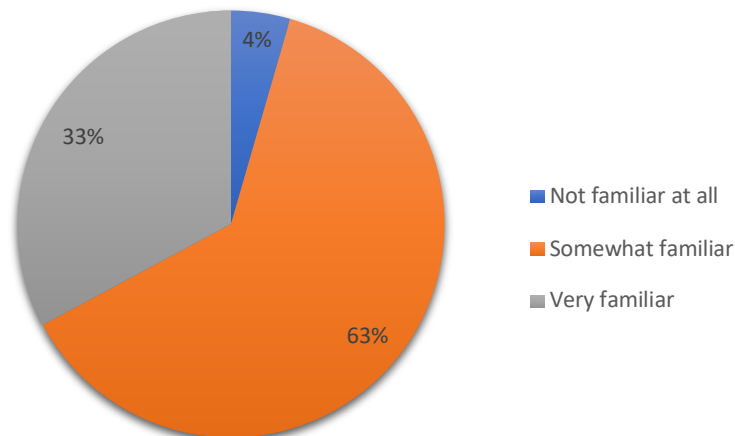


Figure 3: Participants' familiarity with AI tools

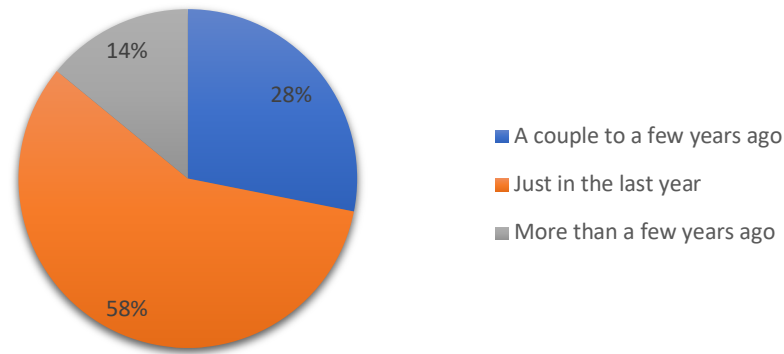


Figure 4: When participants became aware of AI writing generators

A 5 point Likert scale consisting of 10 statements was employed to measure the attitudes of respondents regarding the use of artificial intelligence in the teaching and learning of writing. Respondents indicated their level of agreement (Strongly disagree; Disagree; Neither; Agree; Strongly agree) with each of the 10 statements (Table 1). The first five statements express positive characteristics of or potential for artificial intelligence in writing. The second five statements express potential drawbacks of the use of AI in writing. Therefore, for the first five statements, the answer choices were coded 1 to 5, whereas for the second five statements, the choices were coded 5 to 1.

Table 1: Likert scale statements and scores

Likert scale statement	Mean score	Attitude/agreement
Artificial intelligence tools can enhance students' writing skills and improve their overall writing quality.	3.2	Neutral
Incorporating artificial intelligence tools in writing courses can provide students with valuable feedback and guidance.	3.5	Positive/Agree
Artificial intelligence tools can save instructors time by automating certain aspects of grading and providing instant feedback.	3.8	Positive/Agree
The use of artificial intelligence tools in writing courses can promote individualised instruction and cater to students' unique learning needs.	3.3	Neutral
Artificial intelligence tools have the potential to engage students more actively in the writing process and foster their creativity.	3	Neutral
The use of artificial intelligence tools in writing courses may undermine the role of instructors and their expertise in evaluating students' writing.	3	Neutral
Artificial intelligence tools may not be able to capture the nuances and complexities of students' writing effectively.	2	Negative/Agree
The reliance on artificial intelligence tools in writing courses may hinder students' ability to develop critical thinking and self-editing skills.	2.2	Negative/Agree
Artificial intelligence tools may introduce bias or limitations in the evaluation of students' writing, affecting the fairness of assessments.	2.6	Neutral
The integration of artificial intelligence tools in writing courses may require additional training and resources for instructors, leading to potential challenges in implementation.	2	Negative/Agree

The results reveal that for the majority of the statements, the instructors' attitudes show no strong positive or negative attitude; rather instructors express an ambiguity that leans toward the negative, when it comes to artificial intelligence tools and their role in writing courses. The mean score for the entire scale is 2.86 indicating an overall neutral attitude about the role of AI in writing courses. This lack of a clear stance could be a consequence of the novelty of AI in the practice and context of these Lebanese instructors. Many studies investigating instructors' attitudes toward integrating a new technology in their teaching reveal an initial hesitancy (Istemic et al., 2021; Kaban & Ergul, 2020). An overall neutral attitude, as opposed to an initial negative attitude, may allow for a quicker embracing of this technology if its benefits can be observed fairly easily and its incorporation does not prove too challenging for instructors.

Of the 5 positive Likert scale statements, only one, statement 3, resulted in a significant majority of respondents agreeing with the statement. As illustrated in Figure 5, 73% of the surveyed instructors believe that AI tools have the potential to automate grading and feedback of student writing, thus saving them time. It is noteworthy that this particular function of AI is what instructors seem interested in. It is well established that the process of grading and providing feedback on writing assignments is time consuming. The potential to significantly reduce the amount of time dedicated to marking papers and providing feedback would no doubt be attractive to writing instructors, especially in the context of Lebanon where class sizes are becoming exceedingly large.

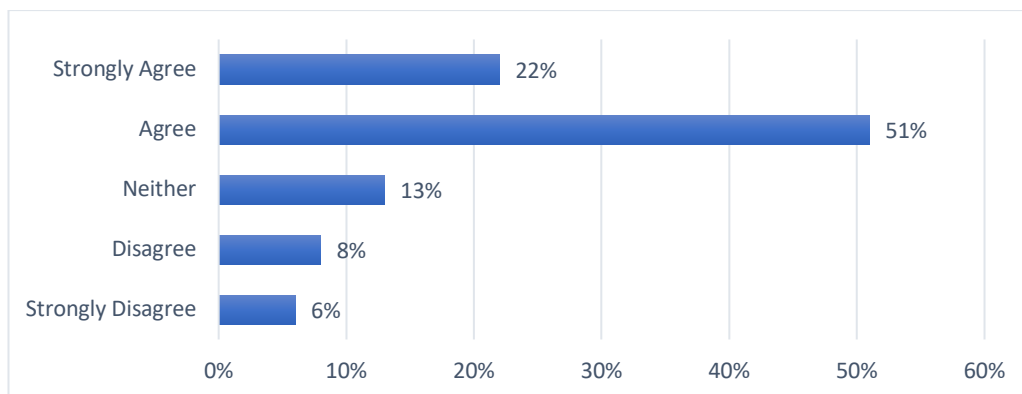


Figure 5: AI tools can save instructors time by automating certain aspects of grading and providing instant feedback

Respondents were asked to indicate the potential benefit of using artificial intelligence tools in writing courses that they find most appealing. Again, a majority of respondents selected the feature of automated grading and feedback (Figure 6). This is followed by almost a third reporting that they think the most appealing benefit is the opportunity to engage students more actively in the writing process. Student engagement is often cited as an area of concern, specifically in the teaching of writing, and specifically in ESL contexts such as Lebanon.

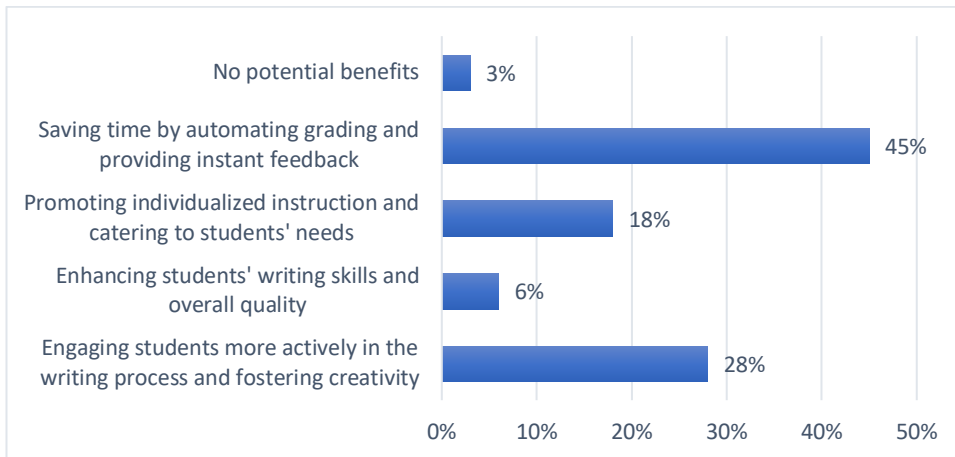


Figure 6: Participants' opinions on most appealing benefit of AI in writing courses

When it comes to the confidence that instructors possess to integrate AI tools in their teaching of writing, there is not a uniform feeling. Respondents were asked to rate their confidence on a scale of 1 to 5, and an equal number of respondents are not confident at all as are very confident (Figure 7). The majority of instructors do report possessing some confidence in their ability to effectively integrate AI tools in their teaching. This result could be a consequence of the resources available at the institution(s) where an instructor teaches. Some Lebanese universities possess more up-to-date technology resources than others, and this could contribute to the confidence an instructor has in using that technology in their teaching.

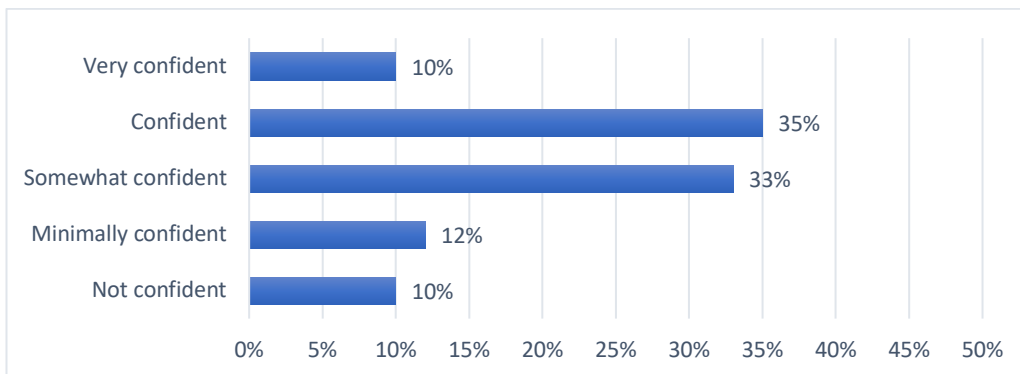


Figure 7: Level of confidence in ability to effectively integrate and utilise AI tools in writing courses

Similar to the lack of a uniform feeling regarding confidence, the reported likelihood of the participants incorporating AI tools in their writing courses next year also does not show a strong trend one way or the other. Figure 8 depicts how the participants responded to how likely they are to incorporate AI tools in their teaching for the upcoming academic year. Over half of the participants do report that it is somewhat likely

or likely that they will try to incorporate these tools somehow, indicating a motivation on the part of these instructors to leverage the capabilities of AI tools for their teaching.

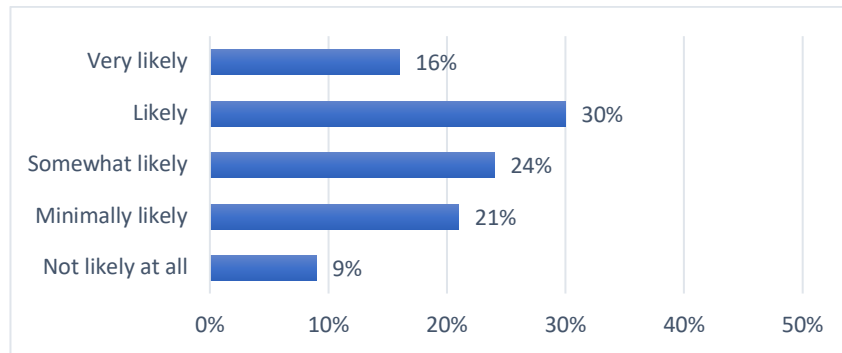


Figure 8: How likely instructors are to incorporate AI tools in their writing courses next academic year

At the end of the survey, participants were asked to indicate what concerns they have about incorporating AI tools in their writing courses. They could check all that apply from the given list of concerns. Figure 9 shows that a third or more of instructors worry that using AI tools might hinder the development of critical thinking and self-editing skills, be unable to effectively capture the nuances and complexities of students' writing, and result in a high potential for students to submit AI generated work as their own. In fact, the last concern was selected the most by the study participants. The majority of the study participants reported that they recently became aware of the capabilities of AI to generate content, most likely due to the launch of ChatGPT as discussed above. Therefore, it is to be expected that their primary concern would be that students will turn to these tools to produce their assignments the "easy way."

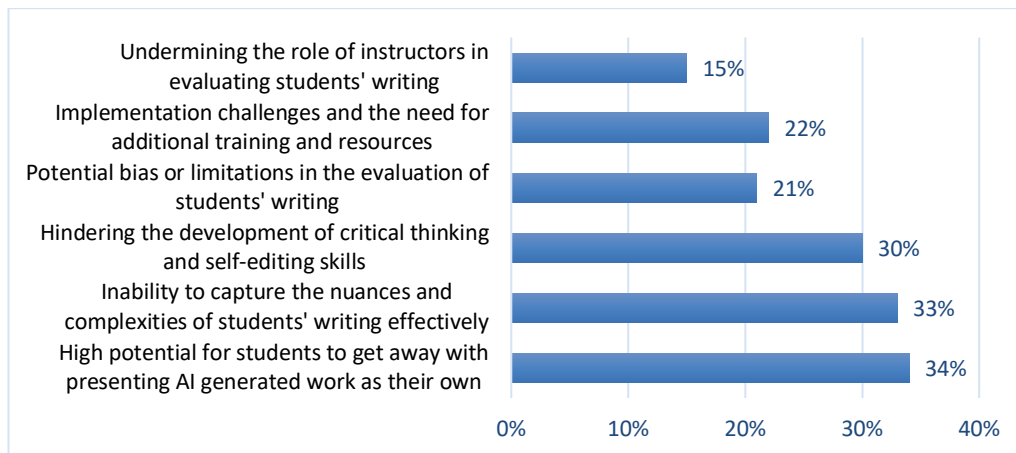


Figure 9: Participants' concerns about incorporating AI in writing courses

Discussion

The findings of this study show that regardless of teaching experience and age, English writing instructors in Lebanon do not have strong negative or positive feelings about the use of AI tools in their teaching. Most of them have only become aware of AI content generators in the past year, yet many of them do report confidence in their ability to incorporate them and express that it is likely they will try to do so in their upcoming classes. Research shows that an individual will be motivated to engage in a behaviour when they perceive that they will achieve high performance due to their effort (Parijat & Bagga, 2014). This attitude should be capitalised on by institutions by encouraging active discussions about the role AI can and should play in education in general, but specifically in writing courses. In terms of what benefits the instructors in this study believe AI tools can provide for the teaching of writing, it is clear there is a hope that these tools can help reduce the significant time spent on grading papers. The implication of this is therefore that educational technology companies stand to benefit from focusing on and developing AI software that specifically targets writing assessment.

Holmes and Tuomi (2022) pointed out that commercially available AI applications for providing feedback on students' writing do exist; they are called *automatic formative assessment* (AFA) applications. They highlight, however, that there are not a lot of these applications, and this software has not yet shown to possess equivalent capabilities in terms of accuracy of analysis and interpretation as what a teacher can provide. It appears therefore, that this is an area that requires more research and development as the creation of AI tools that could provide detailed feedback on student writing would free up instructors, allowing them to focus more time and energy on other aspects of the teaching of writing such as developing individualised teaching material, planning interactive lessons, facilitating more peer review activities, and scheduling one on one conferences with students who need additional tutoring.

After the potential to aid in providing feedback on student writing, the second most appealing benefit of using AI tools in writing, selected by almost a third of the study participants, is engaging students more actively in the writing process and fostering creativity. This selection could indicate that writing instructors are eager to find innovative ways to motivate their students to practise their writing skills. In Lebanon, English is a second language for a majority of university students, and instructors find it challenging to engage students in their writing courses and convince them of the importance of developing their writing skills (Ghosn-Chelala & Al-Chibani, 2018). While this particular potential benefit of the use of AI in the teaching of writing was highlighted by almost a third of participants, the mean score for the Likert scale statement expressing this aspect of AI ("Artificial intelligence tools have the potential to engage students more actively in the writing process and foster their creativity") is only 3, which indicates a solid neutral position regarding this statement. This would imply that, at this point, instructors appreciate that this could be a potential benefit from the incorporation of AI tools in the teaching of writing, but are not aware of how exactly to implement them such that students become more engaged. Again, this is an area where the institutions need to

engage with instructors to develop teaching methods and strategies that effectively utilise AI to deliver the course objectives. Institutions, specifically higher education as that is the focus of this article, need to invest in resources, software and professional development, to aid their instructors in learning how to leverage AI to create assignments and teaching material that actively engage students in the development of their writing skills.

The majority of students pursuing degrees at universities in Lebanon, are studying in their second language. University English programs are therefore designed in the context of either EFL (English as a foreign language) or ESL (English as a second language). While it is not within the scope of this article to explore and suggest specific ways that AI software can be of benefit in an EFL context, it is important to highlight that the literature reveals a range of advantages to specifically incorporating AI chatbots in the teaching and learning of English. Users of generative AI programs, such as ChatGPT, often become engaged and motivated to continue interacting with the tool which would allow English language learners to perform substantial practice with English writing (Petrovic & Jovanovic, 2021). This supports the results of this study which reveal that instructors in Lebanese universities are hopeful and believe that AI has the potential to engage students more actively in the writing process. In fact, in a review of the literature, Klimova and Seraj (2023) found that all the relevant studies included in their review revealed that learners' English language skills were positively impacted by their interaction with chatbots. The positive potential of these tools needs to be leveraged in university classrooms in Lebanon. The fact that several generative AI tools, such as ChatGPT, are free or have free versions should be capitalised on in the context of Lebanon where, for many universities, budgets for learning resources are low given the country's economic collapse of 2020.

Instructors' main concern with AI tools being used in the context of writing courses is the potential for students to use AI generators to simply do their work for them, and teachers would be unable to detect this form of cheating. Eaton et al. (2021) corroborate this concern as they highlight the fact that antiplagiarism tools do not easily detect AI generated texts. However, a positive implication of instructors' wariness about this particular downside of AI tools, is that alternative assessment methods that are not as vulnerable to cheating can be explored. Through developing prompts that encourage reflection and critical thinking, as well as other potential evaluation techniques, instructors might be able to better measure students' writing skills and students might be more encouraged to invest effort in the development of their writing skills.

Another potential avenue for assessment could be more emphasis on peer review activities which might reveal instances of a deficiency in learning of those students who may have relied too much on AI generative tools. Certainly in the context of Lebanon, where most institutions operate in an ESL context, students often find their writing tasks challenging and have resorted to "traditional" methods of cheating on their writing assignments. Now with tools like ChatGPT, these ESL students have a "cheap" method for generating writing assignments. Alharbi (2023) pointed out that since ESL students are aware of these AI tools and are already using them, it is the responsibility of educators to find ways for students to use these tools ethically. Instructors, therefore, need to make themselves aware of the capabilities of these tools and how they can offer writing

assistance when used appropriately (Alharbi, 2023). The Likert scale data from this study reveals that participants believe the integration of AI tools in writing courses will require training and resources, and this is a potential challenge in the context of Lebanon. Within English departments, but also at the institution level, discussions need to be had about how the use of AI tools will be approached, and opportunities for instructors to learn how to use and also guide their students in the use of generative AI, need to be provided.

Conclusion

Regardless of age and teaching experience, English writing instructors in Lebanon currently have an overall neutral stance toward the use of AI tools in their courses, but do express a willingness to explore these tools specifically for providing feedback and thus reducing time devoted to grading assignments. Instructors also expressed interest in the potential for AI tools to better engage students in the writing process and nurture their creativity. This study also reinforces concerns that students will resort to AI generators to complete their assignments. This is a worry that is echoed in the literature, as this particular use of AI could be detrimental to the development of students' information literacy.

It is therefore recommended that future studies specifically explore the impact of AI in ESL contexts like Lebanon, where it is known that students have turned to AI for assistance. Studies could focus on what types of assignments tend to result in more students seeking AI "help." Knowing what characteristics or aspects of an assignment seem to encourage students to resort to AI help can allow instructors to work on redesigning assignment prompts as well as modifying the actual implementation of the assignment.

The incorporation of AI tools in the teaching of writing requires educators to adapt their teaching methods as a consequence of the disruption caused by artificial intelligence. In addition to a re-evaluation of teaching methods on the part of instructors, institutions must provide the necessary support, both through policy and physical resources, for teachers to effectively integrate AI into the teaching of writing and guide students on its ethical use. Research therefore needs to focus on the kind of support Lebanese institutions of higher education are currently providing or planning to provide to their instructors when it comes to using AI in writing instruction. Several of the universities at which participants in this study teach, house writing centres that provide writing assistance to students of all majors. University writing centres would therefore need to be part of future research that investigates both students' use of AI to improve their writing and ways in which tutors and instructors can use those tools to teach and assess students' writing development.

References

- AlAfnan, M. A., Dishari, S., Jovic, M. & Lomidze, K. (2023). ChatGPT as an educational tool: Opportunities, challenges, and recommendations for communication, business writing, and composition courses. *Journal of Artificial Intelligence and Technology*, 3(2), 60-68. <https://ojs.istp-press.com/jait/article/view/184>
- Alharbi, W. (2023) AI in the foreign language classroom: A pedagogical overview of automated writing assistance tools. *Education Research International*, 2023(1), article 4253331. <https://doi.org/10.1155/2023/4253331>
- Alkhatlan, A. & Kalita, J. (2018). Intelligent tutoring systems: A comprehensive historical survey with recent developments. *arXiv*: <http://arxiv.org/abs/1812.09628>
- Atkinson, R. (2023). Editorial 33(1): Revisiting the "need to publish ..."; (ii) ChatGPT and academic journal publishing. *Issues in Educational Research*, 33(1), ii-vi. <http://www.iier.org.au/iier33/editorial33-1.html>
- Becker, S. A., Brown, M., Dahlstrom, E., Davis, A., DePaul, K., Diaz, V. & Pomerantz, J. (2018). *NMC Horizon Report: 2018 Higher Education Edition*. Louisville: Educause. <https://cit.bnu.edu.cn/docs/2018-09/20180918163624337480.pdf>
- Boninger, F., Molnar, A. & Saldaña, C. (2020). *Big claims, little evidence, lots of money: The reality behind the Summit Learning Program and the push to adopt digital personalized learning platforms*. Boulder, CO: National Education Policy Center. <https://nepc.colorado.edu/publication/summit-2020>
- Brown, T., Mann, B., Ryder, N., Subbiah, M., Kaplan, J. D., Dhariwal, P. et al. (2020). Language models are few-shot learners. *Advances in Neural Information Processing Systems*, 33, 1877-1901. <https://proceedings.neurips.cc/paper/2020/hash/1457c0d6bfc4967418bfb8ac142f64a-Abstract.html>
- Burstein, J., Marcu, D. & Knight, K. (2003). Finding the WRITE stuff: Automatic identification of discourse structure in essays. *IEEE Intelligent Systems*, 18(1), 32-39. <https://ieeexplore.ieee.org/abstract/document/1179191/>
- Butterfuss, R., Roscoe, R. D., Allen, L. K., McCarthy, K. S. & McNamara, D. S. (2022). Strategy uptake in Writing Pal: Adaptive feedback and instruction. *Journal of Educational Computing Research*, 60(3), 696-721. <https://journals.sagepub.com/doi/full/10.1177/073563312111045304>
- Cotos, E. (2011). Potential of automated writing evaluation feedback. *Calico Journal*, 28(2), 420-459. <https://www.jstor.org/stable/calicojournal.28.2.420>
- Cotton, D., Cotton, P. & Shipway, J. R. (2023). Chatting and cheating. Ensuring academic integrity in the era of ChatGPT. <https://doi.org/10.35542/osf.io/mrz8h>
- De Vaus, D. (2002). *Surveys in social research*. 5th ed. Routledge, London. [6th ed.] <https://www.taylorfrancis.com/books/mono/10.4324/9780203519196/surveys-social-research-david-de-vaus-david-de-vaus>
- Dehouche, N. (2021). Plagiarism in the age of massive Generative Pre-trained Transformers (GPT-3). *Ethics in Science and Environmental Politics*, 21, 17-23. <https://doi.org/10.3354/esep00195>

- Du Boulay, B. (2019). Escape from the Skinner Box: The case for contemporary intelligent learning environments. *British Journal of Educational Technology*, 50(6), 2902-2919. <https://bera-journals.onlinelibrary.wiley.com/doi/abs/10.1111/bjet.12860>
- Eaton S. E., Mindzak, M. & Morrison, R. (2021). Artificial intelligence, algorithmic writing & educational ethics. Presented at Canadian Society for the Study of Education (CSSE) [Société Canadienne pour l'étude de l'éducation], Edmonton, Canada. <https://doi.org/10.11575/PRISM/38967>
- Fernández-Batanero, J. M., Román-Graván, P., Reyes-Rebollo, M. M. & Montenegro-Rueda, M. (2021). Impact of educational technology on teacher stress and anxiety: A literature review. *International Journal Environmental Research and Public Health*, 18(2), article 548. <https://doi.org/10.3390/ijerph18020548>
- Ghosn-Chelala, M. & Al-Chibani, W. (2018). Screencasting: Supportive feedback for EFL remedial writing students. *International Journal of Information and Learning Technology*, 35(3), 146-159. <https://doi.org/10.1108/IJILT-08-2017-0075>
- Holmes, W. & Tuomi, I. (2022). State of the art and practice in AI in education. *European Journal of Education*. 57(4), 542–570. <https://doi.org/10.1111/ejed.12533>
- Istemic, A., Bratko, I. & Rosanda, V. (2021). Pre-service teachers' concerns about social robots in the classroom: A model for development. *Education and Self Development*, 16, 60-87. <https://www.elibrary.ru/item.asp?id=46234861>
- Kaban, A. L. & Ergul, I. B. (2020). Teachers' attitudes towards the use of tablets in six EFL classrooms. In *Examining the roles of teachers and students in mastering new technologies* (pp. 284-298). IGI Global. <https://www.igi-global.com/chapter/teachers-attitudes-towards-the-use-of-tablets-in-six-efl-classrooms/251321>
- Klímová, B. & Ibna Seraj, P. M. (2023). The use of chatbots in university EFL settings: Research trends and pedagogical implications. *Frontiers in Psychology*, 14, article 1131506. <https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2023.1131506/full>
- LaPierre, J. (2021). *Educational games and AI*. Blogtext. Filament Games, 18 January. <https://www.filamentgames.com/blog/educational-games-and-ai/>
- Malinka, K., Peresini, M., Firc, A., Hujnák, O. & Janus, F. (2023). On the educational impact of ChatGPT: Is artificial intelligence ready to obtain a university degree? *ITiCSE 2023 Conference Proceedings*, 47-53. <https://dl.acm.org/doi/abs/10.1145/3587102.3588827>
- McArthur, D., Lewis, M. & Bishary, M. (2005). The roles of artificial intelligence in education: Current progress and future prospects. *Journal of Educational Technology*, 1(4), 42-80. <https://www.learntechlib.org/p/161310/>
- McGuire, L. S. & Alaraj, A. (2018). Competency assessment in virtual reality-based simulation in neurosurgical training. In A. Alaraj (Ed.), *Comprehensive healthcare simulation: Neurosurgery*. (pp. 153-157). https://link.springer.com/chapter/10.1007/978-3-319-75583-0_12
- Nazari, N., Shabbir, M. S. & Setiawan, R. (2021). Application of artificial intelligence powered digital writing assistant in higher education: Randomized controlled trial. *Helijon*, 7(5), article e07014. [https://www.cell.com/helijon/fulltext/S2405-8440\(21\)01117-8](https://www.cell.com/helijon/fulltext/S2405-8440(21)01117-8)

- Nguyen, H. T. T. (2023). Unproctored assignment-based online assessment in higher education: Stakeholder evaluation of issues. *Issues in Educational Research*, 33(1), 207-226. <http://www.iier.org.au/iier33/nguyen.pdf>
- Page, E. B. 2003: Project essay grade: PEG. In M. D. Shermis & J. C. Burstein (Eds.), *Automated essay scoring: A cross-disciplinary perspective*. Lawrence Erlbaum (pp. 43-54). <https://www.taylorfrancis.com/books/mono/10.4324/9781410606860/automated-essay-scoring-mark-shermis-jill-burstein>
- Parijat, P., & Bagga, S. (2014). Victor Vroom's expectancy theory of motivation—An evaluation. *International Research Journal of Business and Management*, 7(9), 1-8
- Petrović, J. & Jovanović, M. (2021). The role of chatbots in foreign language learning: The present situation and the future outlook. In E. Pap (Ed.), *Artificial intelligence: Theory and applications*. Springer, Cham. https://doi.org/10.1007/978-3-030-72711-6_17
- QS Ltd (2023). *QS Arab Region University Rankings 2023*. <https://www.qschina.cn/en/university-rankings/arab-region-university-rankings/2023>
- Roscoe, R. D., Allen, L. K., Weston, J. L., Crossley, S. A. & McNamara, D. S. (2014). The Writing Pal intelligent tutoring system: Usability testing and development. *Computers and Composition*, 34, 39-59. <https://doi.org/10.1016/j.compcom.2014.09.002>
- Selwyn, N. (2019). What's the problem with learning analytics? *Journal of Learning Analytics*, 6(3), 11-19. <https://doi.org/10.18608/jla.2019.63.3>
- Sharples, M. (2022). Automated essay writing: An AIED opinion. *International Journal of Artificial Intelligence in Education*, 32(4), 1119-1126. <https://link.springer.com/article/10.1007/s40593-022-00300-7>
- Taguma, M., Feron, E. & Lim, M. H. (2018). *Future of education and skills 2030: Conceptual learning framework*. Organisation for Economic Co-operation and Development. [https://one.oecd.org/document/EDU/EDPC\(2018\)45/ANN6/en/pdf](https://one.oecd.org/document/EDU/EDPC(2018)45/ANN6/en/pdf)
- Wang, Y., Liu, C. & Tu, Y. F. (2021). Factors affecting the adoption of AI-based applications in higher education: An analysis of teachers' perspectives using structural equation modeling. *Educational Technology & Society*, 24(3), 116-129. <https://www.jstor.org/stable/27032860>
- Warschauer, M. & Ware, P. (2006). Automated writing evaluation: Defining the classroom research agenda. *Language Teaching Research*, 10(2), 157-180. <https://journals.sagepub.com/doi/abs/10.1191/1362168806lr190oa>
- Williamson, B. & Eynon, R. (2020). Historical threads, missing links, and future directions in AI in education. *Learning, Media and Technology*, 45(3), 223-235. <https://www.tandfonline.com/doi/full/10.1080/17439884.2020.1798995>
- Williamson, B. (2017). *Big data in education: The digital future of learning, policy and practice*. London: Sage. <https://sk.sagepub.com/books/big-data-in-education>
- Zhao, X. (2023). Leveraging artificial intelligence (AI) technology for English writing: Introducing Wordtune as a digital writing assistant for EFL writers. *RELC Journal*, 54(3), 890-894. <https://journals.sagepub.com/doi/full/10.1177/00336882221094089>

Author's statements and declarations

Funding

The author declares that no funds, grants, or other support were received during the preparation of this manuscript.

Competing interests

There are no financial or non-financial interests that are directly or indirectly related to this research.

Author contributions

Samira Nicolas is the sole author and contributed everything to the paper.

Conflicts of interest

The corresponding author, who is also the sole author, states that there are no conflicts of interest.

Dr Samira Nicolas is an Assistant Professor in the Departments of Education and English at the University of Balamand, Lebanon. She has a BS and MS in Computer Science and a doctorate in Education; therefore her research interests are interdisciplinary. She enjoys exploring how technology can be used to enhance education.

ORCID: <https://orcid.org/0000-0002-3743-7615>

Email: samira.nicolas@fty.balamand.edu.lb

Please cite as: Nicolas, S. (2024). Artificial intelligence in writing courses: Attitudes of university instructors in Lebanon. *Issues in Educational Research*, 34(4), 1469-1487. <http://www.iier.org.au/iier34/nicolas.pdf>