THE JOURNAL OF TEACHING ENGLISH FOR SPECIFIC AND ACADEMIC PURPOSES
Vol. 12, Nº 3, 2024, pp. 769–781

UDC: 004.8:159.953 https://doi.org/10.22190/JTESAP241016057S
Review research paper

ENGLISH TEACHERS' ETHICAL CONSIDERATIONS IN AI INTEGRATION: A NARRATIVE INQUIRY

Argie O. Suello[1], Rivika C. Alda[2]

[1]Berlitz, Philippines
[2]College of Teacher Education, Cebu Normal University, Philippines

ORCID iDs: Argie O. Suello https://orcid.org/0009-0004-6174-2320
Rivika C. Alda https://orcid.org/0000-0002-1546-9042

Abstract. *Artificial Intelligence (AI) has become more widespread and has posed some concerns in terms of how it is being used in education. This study explored the ethical considerations of English language teachers while integrating AI into their teaching practices. Using a narrative approach to qualitative inquiry, teachers' experiences in using AI technologies were deduced from the semi-structured interviews. Braun and Clarke's thematic analysis framework was utilized to generate significant themes. These experiences are creatively described as follows: The Edge: Navigating the Pedagogical Skies using AI, Turbulence Ahead: The Pitfalls of AI Overdependence, Mapping an Ethical Pathway in the Digital Skies, Teachers as AI Pilots: Mastering the Skies Together, and The Sky Ahead: Venturing the Future of AI. Moreover, AI has significantly impacted teachers' pedagogy, allowing them to personalize lessons, save time, and learn from various resources. On the contrary, concerns about copyright, creativity, biases, and loss of human touch emerged. The findings of this study provide insights on the integration of AI in English language classrooms especially in formulating guidelines of use while adhering to ethical principles.*

Key words: *AI integration, English teachers, English language teaching, Ethical considerations, Narrative inquiry*

1. INTRODUCTION

As technology advances, Artificial Intelligence (AI) integration in education has also been expanding, which prompts discussions on its ethical and teaching-learning implications. AI offers various resources for both students and teachers to conveniently gather, process, and analyze large data tailored to their specific needs. AI-powered tools have proliferated and have addressed a wide array of needs in various industries, most notably education. These tools include chatbots (ChatGPT, Perplexity, Chatsonic, etc.), writing aid tools (Quillbot, Grammarly, Speedwrite, etc.), content creation tools (Grin, Creator.co, Upfluence, etc.), and other language learning tools (Duolingo and Memrise).

Teachers in second language classrooms use AI-generated writing tools like ChatGPT to support students (Tseng &Warschauer, 2023). Teachers use other AI-powered tools

Submitted October 16th, 2024, accepted for publication November 30th, 2024
Corresponding author: Rivika C. Alda, Faculty, College of Teacher Education, Cebu Normal University, Philippines
E-mail: aldar@cnu.edu.ph

like Grammarly to fine-tune students' writing, Turnitin to check similarity and screen AI content, Quillbot to summarize and paraphrase texts. They also leverage the writing feedback via MS Word, Google Docs, etc. This not only promotes empowerment on AI use but also fosters digital literacy and critical thinking.

AI has unquestionably transformed the current educational landscape. However, pressing challenges like cheating have surfaced. According to an article from GMA Integrated News (2023), some students from UP-Diliman became the subject of an investigation after allegedly submitting academic requirements using AI. An AI detector was used to check the students' work. Thus, this has posed concerns among teachers, especially English language teachers who are in the forefront of using English language in the classroom and who deal with several writing outputs from students. Not only students but also teachers themselves use AI in their practices. Consequently, they are also faced with some ethical dilemmas on how to integrate AI in the classroom.

As Nassar and Kamal (2021) suggest, AI advancement has marked the beginning of new decision-making processes. This implies the necessity to develop appropriate policies, regulations, and guidelines to manage its use. Borenstein and Howard (2020) said that education can promote a professional mindset among future developers. Considering the educational facet, this suggests that teachers also need to adapt their teaching methods by fostering critical thinking and exploration with the advancements brought about by AI. Integration of AI in educational institutions could be advantageous but could also bring serious concerns (Remian, 2019).

While existing body of research tends to focus more on the general implication of AI integration into education, there has been no exploration on the nuanced perspectives of the English teachers as one of the front runners of language use. Gartner and Krašna (2023) showed that AI-based educational tools are increasingly employed. It is important to have comprehensive knowledge of AI concepts and ethical considerations to minimize the risk of future incidents due to misuse of AI. They also presented an ethical framework for AI, including privacy, autonomy, trust, and responsibility. However, if teachers are using AI, they still need to be careful about their own security as well as that of their students.

Baskara (2023) asserted that postulating questions regarding privacy, bias and shaping values is necessary in incorporating AI into education. This shows that there must be discussions among educators, school heads and other stakeholders on the protections against using AI. Slimi and Carbadillo (2022) suggested research by universities on ethical implications, policy implications as well as social consequences for successful and responsible application of artificial intelligence. They emphasized transparency and accountability in conducting studies. For this reason, schools can adopt artificial intelligence methods with less risks or concerns involved. AI affects both professional development and student outcomes, replacing some human interaction in the classroom (Rizvi, 2023). This means that the teachers must be effective and efficient by doing their assigned task without jeopardizing their relationship with learners.

Considering these concerns that have emanated from various studies, it is crucial to examine the English teachers' experience in integrating AI into their practices as well as looking at the ethical factors that are associated with its usage. It was also aimed at responding to responsible consumption and production, a component of United Nation's sustainable development goals. Thus, this narrative inquiry explored the experiences of English teachers as they integrate artificial intelligence (AI) technologies into their classroom practices and the ethical considerations adhered to while using them.

2. RESEARCH METHODOLOGY

2.1. Research Design

This qualitative study employed narrative inquiry to examine different perspectives and experiences related to English teachers' incorporation of AI within their pedagogical practices from a moral point of view. Consequently, Sonday et al. (2020) stated that a narrative framework is adopted for organizing and interpreting data to understand informants as humans through their experiences.

2.2. Research Informants

The informants were English teachers who have integrated tools (Artificial Intelligence) into their pedagogy. The criteria set were as follows: a) they must be English teachers with at least three years of teaching experience; b) teaching in either public or private schools at basic or higher levels; c) have incorporated at least 2-3 AI tools in their pedagogy. Table 1 below shows the summary of the informants' demographic profile.

Table 1 Research Informants' Demographic Profile

Research Informants	Sex	Educational Attainment	Years of Experience
Informant 1	F	MAED-Graduate	5
Informant 2	M	MAED-Graduate	7
Informant 3	M	MAED-Graduate	8
Informant 4	M	MAED-Graduate	5
Informant 5	F	MA-Ongoing	25
Informant 6	F	MAED-Graduate	15

Based on the criteria mentioned above, informants were carefully chosen using purposive sampling. Narrative interviews were done starting with at least 5 participants until data saturated. Data saturation happens when there is a replication of existing themes and no new insight or information is brought up (Hennink & Kaiser, 2021).

2.3. Research Instruments

The researchers, responsible for the collection, analysis, and interpretation of the data, were the study's main instrument. The researchers used a semi-structured interview guide, which was validated by an expert, to draw out the rich experiences of the informants as they integrated AI in their practices. The interview lasted for at least forty-five (45) minutes to an hour. It was done online via MS Teams. The researchers used the auto-transcription feature of MS Teams to conveniently transcribe all the interviews.

2.4. Data-gathering Procedure

Prior to the actual collection of data, a semi-structured interview guide was crafted and validated by experts. After validation, invitation letters together with the Informed Consent Form were sent out via Facebook Messenger. The informants were given considerable time to confirm their participation in this study. Upon confirmation, the

researchers asked the informants about their availability for the online interview via MS Teams. In the actual narrative interview, the informants were given a brief background on what the study was all about and were informed about the data handling measures that the researchers ought to observe. To build rapport, preliminary questions were asked to know how they were feeling. The informants were also given the freedom to use the language of their choice to express themselves fully. Each narrative interview lasted for at least 45 minutes to an hour.

After each round of interviews, the researchers transcribed the data collected. Audio recordings were safely stored via personal drive. These recordings were deleted once results were finalized to guarantee safe data handling and confidentiality.

2.5. Data Analysis

The study used Braun and Clarke's (2006) coding framework for thematic analysis. The six phases are the following: familiarization of data, generation of codes, combining codes into themes, reviewing themes, defining significant themes, and reporting of findings.

2.6. Ethical Considerations and Trustworthiness

The researchers went through the entire informed consent process and formally asked teachers to participate in the narrative interviews. The informants were given the assurance that personal and sensitive pieces of information collected were handled and kept with high confidentiality. Recordings and other files are to be deleted after the conduct of the study. The informants were also given a chance to withdraw their participation if they found any drawbacks. There is no known physical, psychological, social, or legal danger in this study. The researchers asked the informants about the interpretations of their statements to ensure that their experiences were accurately described. A reflexive journal was also used to note the researchers' biases about the topic. Transcripts were meticulously checked for obvious errors. Codes and themes generated were also checked and validated by an expert.

3. Results and Discussion

This section explores the heart of the study, narrating the various experiences and perspectives of the informants on the integration of AI in their practices. Through these narrated experiences, the study aimed to deeply understand the realities, benefits, and challenges of teachers while using AI. The transformative power of AI has impacted the way educators do things in their everyday practices. Like pilots, they navigate the pedagogical skies of AI to continually seek innovation and professional development. In this study, the researchers brought to light 5 themes based on the codes extracted from the transcripts using Braun and Clarke's (2006) thematic analysis. The themes are classified as follows: The Edge: Navigating the Pedagogical Skies using AI, Turbulence Ahead: The Pitfalls of AI Overdependence, Mapping an Ethical Pathway in the Digital Skies, Teachers as AI Pilots: Mastering the Skies Together, and The Sky Ahead: Venturing the Future of AI. Figure 1 below shows the thematic map illustrating how these themes are connected. This thematic map was anchored on the 5 themes that emerged from the analysis. The visualization model took inspiration from a plane's journey, which exhibited the connections of each theme.

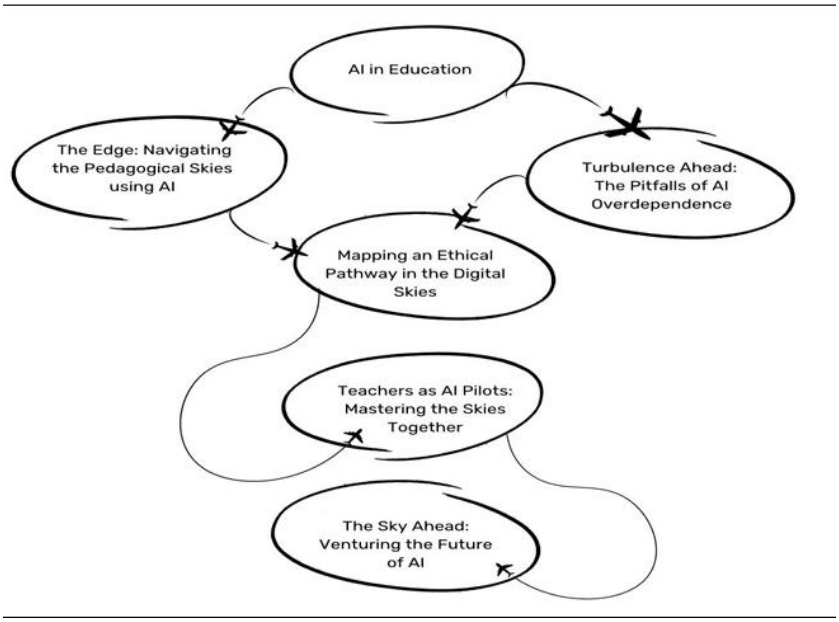

Fig. 1 Thematic Map

3.1. The Edge: Navigating the Pedagogical Skies using AI

This theme highlights the innovative ways in which AI has transformed teachers' pedagogical practices and focuses on AI's potential to assist teachers when it comes to personalizing instruction, analyzing data, making decisions, accessing various ideas and materials, assessing students' outputs and performance, etc. The teachers shared their experiences and insights on how AI has substantially helped them when it comes to lesson preparation and actual classroom instruction.

> *"It [AI] nourished my understanding of the topic, and it gives confidence in terms of how I would deliver it to my classes. So, I guess AI is helping me a lot in terms of my understanding of the topic." (Informant 2, page 1, lines 38-40)*

Leveraging AI tools can aid teachers in gaining deeper insights from complex chunks of information, which also impacts how they convey concepts to their students. They can also enhance class engagement by using interactive AI-powered tools, which provide a more dynamic and immersive experience for the students. This implies that, through AI, teachers can create effective and inclusive classroom environments that meet the various needs of learners in the digital age. This claim is affirmed by Chica et al. (2023) as they stated that AI facilitates personalized learning by matching educational content to individual student's needs, which consequently enhances student comprehension and engagement and leads to a better learning outcome.

The informants also expressed that AI can be useful in creating assessments and checking various student outputs and even correspondence. It drives efficiency and time-

saving measures for teachers as these AI-powered tools can automate generating questions and identifying errors in written outputs. This implies that teachers' productivity might skyrocket considering that they can still allocate time for other important tasks or spend more time on lesson preparation and instruction. According to Chica et al. (2023), AI allows the automation of repetitive tasks, which paves the way for more time doing "meaningful learning experiences." Furthermore, this also significantly impacts quality assurance as AI can detect and correct errors. Hence, it contributes to maintaining the quality of work that teachers do and adhering to the standards set.

> *"When I edit their work, I always integrate AI, you know, for me to check and edit mechanical errors or errors in general, and it's faster. You can use AI to proofread or to check the projects, the letters or any documents you have made, but I make sure that it's only used for proofreading." (Informant 3, page 1, lines 27-40)*

According to the informants, AI is also advantageous in terms of getting access to a wide array of ideas and resources. With just a click and the right prompt, teachers can explore hundreds or thousands of contents online. The high exposure to these materials fosters a deeper and wider understanding of various concepts. It can also spark the creativity and innovativeness of the teachers as they explore different trends, pedagogies, and other educational practices, promoting a culture of continuous learning and improvement. Moreover, Köprülü et al. (2023) stated that AI in teacher education enables continuous learning.

> *"Without AI, you're limited to only the texts that are in the box that you find in the different books that are given to you are the ones that are in the library. But now with AI, you can search as many different articles as there are and then you can vary the different genres. You can even shorten some of the texts that you think can be worked on by students." (Informant 5, page 7, lines 278-282)*

In summary, AI offered some real benefits to teachers in their practices. It helped them craft personalized teaching materials, find resources easily, and automate some classroom tasks, which are all crucial to creating dynamic and engaging lessons and interactions in the classroom. Overall, AI empowered teachers to better their craft and meet the diverse needs of the students in this digital era.

3.2. Turbulence Ahead: The Pitfalls of AI Overdependence

Despite the many benefits AI has brought to education, some concerns come to surface due to the users' excessive dependence on it. Considering the convenience that AI offers, teachers, as well as students, have become prey, too. This theme explores concerns such as AI overdependence, loss of human touch, and biases.

> *"It's a different thing when they would just rely on the AI without actually doing their part. There's a little reminder of being responsible users of these tools." (Informant 1, page 1, lines 38-39).*

Some users often misunderstand whether they are using AI out of necessity or dependency. There is a clear distinction between using AI to aid users complete some

tasks and totally relying on it to the extent of abusing AI and just letting it do everything for them. This situation suggests that teachers must strike a balance between efficiency and responsibility. They can leverage these available AI tools but should make sure that they are held accountable and should encourage their students to use AI responsibly, too. It calls for promoting digital literacy in the classroom. Kreinsen and Schulz (2023) emphasized the importance of AI literacy in teacher education because of the increasing technological advancements and accessibility to AI like ChatGPT.

In connection to overdependency on AI, the teachers also raised another concern about connectivity. The use of AI is dependent on the internet. If there's no internet, then it would be difficult to use AI. Some schools, especially those from remote areas, are struggling with slow to no internet connection. This has affected how teachers integrate AI in the classroom. It also means that teachers have less exposure to these AI tools and resources, which could eventually affect the quality of content and instruction. The study by Polak et al. (2022) emphasized the importance of "enhancing the teachers' AI-related skills to effectively integrate contents into the subject they are teaching."

> *"Not everybody has access to good Internet and at the same time the technology and then, as I've said, if teachers are not trained, then they might teach dependency on technology, which is also wrong because the AI tools have limitations to these were just created by, you know, people. And then they only process that's been inputted into their system." (Informant 5, pages 3-4, lines 132-135)*

Another drawback of AI overdependence is the loss of human touch/tone and authenticity. An informant reported that AI's language has gradually affected their writing style. The more they are exposed to AI's language, the more they sound like AI. This poses several implications in terms of one's communication skills, creativity, and originality. First, higher exposure to AI could eventually weaken people's ability to communicate effectively in their own tone and voice because AI's language is too robotic. Humans do not communicate the way robots do. Humans are emotional beings. Robots are not. This could also result in a decrease in authenticity and rawness of communication. Second, overdependence on AI could also have a lasting effect on people's creativity in generating concepts or ideas. This claim is backed up by Sorin and Pagani (2022) when they stated that the decrease of novel ideas produced is a trade-off because of using AI. Even though AI helps with generating ideas, it could have an impact on originality and uniqueness.

> *Because I noticed it when we keep on reading AI or generated output, sometimes our way of writing also looks like that, so I was like…I wrote this line why it's captured as an AI… It's difficult now to humanize. (Informant 2, page 4, lines 166-168).*

They also narrated an issue about biases and stereotypes because of the algorithms. Since it is programmed by humans, AI has biases, too. The language model that AI uses is based on the preferences of the developers. The data used to train an AI model may reflect gender and racial biases. Marinucci et al. (2022) claimed that stereotypes and biases, especially when it comes to gender, are common in both human thinking and artificial intelligence. It implies an impact on the content that teachers are delivering and would impact the students' learning later. This kind of biased content does not promote diversity and inclusion in education.

"Sometimes it has issues on the biases because of the algorithms. Perhaps, depending on who keeps on using or giving prompts, this prompts AI. It can have some biases to in terms of, let's say, race perhaps, or gender perhaps." (Informant 5, page 4, lines 143-145)

Overall, AI in education brought up concerns about relying too heavily on it, which calls for training programs to better educate teachers on how to deal and leverage AI tools responsibly, without compromising the ethical standards. Additionally, connectivity issues, which led to limited accessibility to AI tools, along with bias issues, were the other concerns raised. To mitigate the impact of these issues, teachers can investigate some apparent biases in their teaching contents and strategies which kill off inclusivity and diversity in the classroom.

3.3. Mapping an Ethical Pathway in the Digital Skies

The great power of AI comes with a great responsibility among its users. This theme discusses the ethical aspects that teachers need to consider while using Artificial Intelligence. It explores fairness, accountability, and transparency in the decision-making processes while using AI. This theme also highlights the need for clear-cut guidelines to ensure that responsible AI use is observed.

"There's no clear-cut policy yet, but there was an initial survey that was circulating in our email. They're still trying to establish clear-cut guidelines on the use of AI."
(Informant 6, page 4, lines 142-143)

This highlights that there are no established guidelines in their respective schools yet. Without these guidelines in place, there would be apparent confusion among teachers about what is really expected from them. They would be too subjective on what to do and what not to do when they use AI. This confusion would result in inconsistency in decision-making practices. Additionally, this paves the way for a higher chance of potential AI misuse. Ronanki (2023) revealed the inconsistencies in ethical guidelines used across various organizations. This suggests the need for a standardized ethical principle when using AI.

Another point worthy of discussion is whether teachers should allow or not allow students to use AI in the classroom, which has also implications for the teachers' ethical considerations. This suggests a more structured approach to using AI. This approach can be in the form of an agreement within a class - specifying the kind of AI to use, what time of the day they can use AI, and what kind of activities students are allowed to do. Doing this promotes accountability and transparency among teachers, as well as students. It also strengthens the culture of collaboration of thinking or decision-making because not only the teachers are involved but also the students.

"I allow them to use AI, but what I do is that I tell them when to use it and then I would also ask them as to what kind of AI you're going to use, and you must declare that to me. I guess the practice I do is that agreement… agreement as to what AI are they going to use and how far AI should be used." (Informant 2, page 2, lines 45-47).

In connection to the discussion above, it suggests teachers set boundaries regarding the students' use of AI. It is a good practice to have better control in facilitating AI use in

the classroom. Yang et al. (2021) mentioned that teachers prefer sharing control with AI to minimize their workload facilitating in the classroom. This means that it has become a shared responsibility between the teacher and the students. Of course, it is also expected that students are guided and mentored well to minimize the risks of AI misuse.

> *"We have just so to limit students' dependency on the use of the gadgets or the AI tools. We set the limit. We set the boundaries so students can only use a certain kind of AI material or, you know, use their gadgets in." (Informant 5, page 8, lines 324-326)*

Furthermore, the informants shared their decision-making procedures when it comes to using AI content or AI-supported content. They expressed that they only use AI as a scaffold to conceptualize, but they never totally rely on it in creating content. In other words, they use AI to enhance their content and not generate the entire content for them. This kind of practice preserves their creativity in the thinking process and their credibility as professionals. On the other hand, using AI alone for generating content poses risks for copyright issues. Cho (2022) stated that human and AI works are similar when it comes to copyright use. Additionally, the use of AI works entails considerations of copyright infringement judgments.

> *"I only use AI as you know as a scaffold or as a tool, but I never use AI like totally it's AI generated to uh with the things I need to make. I always make it sure that you know I get to have personal touch." (Informant 3, page 6, lines 255-258)*

An informant also expressed their sentiment on promoting AI inclusivity. The narrative below underscores this.

> *"So now it becomes a challenge to a teacher how he or she will use the different AI tools to cater to all the needs of the students. But at the same time, it has to be inclusive, not exclusive. So it should not only be limited to those students who have their gadgets, but, you know, try the teacher has to try his or her best to and allow everybody in the classroom to take part in the activity, even if others do not have their gadgets." (Informant 5, page 3, lines 127-131)*

The statement above places a responsibility among teachers in making AI inclusive. This means that teachers need to carefully integrate AI tools and content that meet the diverse needs of their students. They also need to consider factors like students' equipment, connectivity, and accessibility to these tools. They need to be mindful of their activities and strategies so that all students will be engaged (no student shall be left behind). In this case, teachers do away with bias and discrimination. Hence, they foster equity and fairness.

3.4. Teachers as AI Pilots: Mastering the Skies Together

As AI pilots, teachers have a critical role in propelling AI use in the teaching-learning processes. This theme accentuates the need for professional development, more training, and collaborative efforts among teachers and other stakeholders. It also emphasizes the role of teachers in this digital age. The informants expressed the following:

"Remember the principle that you are the master and AI is just basically a servant. AI will only give us opportunity to make our job easy, but AI cannot teach…cannot teach human in terms of in terms of, you know, socialization." (Informant 2, page 3, lines 95-96).

"Teachers are irreplaceable since AI doesn't have an emotion, but teachers have. With confidence, AI cannot replace totally the teachers. However, teachers should adapt." (Informant 4, page 3, lines 108-110)

The narratives above suggest that teachers should gain control over AI use. It also implies that they must keep autonomy in the decision-making regarding their practices while using AI. No matter how fascinating AI is, it can never replace the teachers' ability to make human-to-human connections, which AI is incapable of/lacks. Teachers can understand the complexities of human communication and behaviors, but AI cannot. AI teaches the mind, but a teacher touches the heart. According to Felix (2020), AI is not able to replace teachers because teachers have unique qualities that AI does not have. However, human teachers and AI can work well together to achieve a common goal. Human teachers just need to embrace the changes in the digital landscape with the help of AI. With this kind of collaboration, the quality of education in this digital age would prosper.

Aside from the human teacher and AI collaboration, teachers can also collaborate with other professionals to learn new strategies and best practices. This human-to-human collaboration can provide valuable insights to help enhance the teachers' craft. Contextually, this is made possible through professional conversations, seminars, and training. As they say, more heads are better than one.

"We don't use AI for show, we use AI for teaching enhancement. So, I think it's important that teachers are, uh, constantly innovating themselves, and then at the same time, schools or administrations have to provide more trainings to the teachers." (Informant 5, page 9, lines 375-377)

Teachers play a vital role in spearheading the integration of AI into education. To keep pace with the changes in the educational landscape, they need continuous professional development through workshops, collaboration with other teachers, and professional conversations. Through this, they can maximize the potential of AI while reducing some risks and maintaining autonomy.

3.5. The Sky Ahead: Venturing the Future of AI

AI's 'infiltration' in the educational system is going places. It is to stay, and it will thrive even more. Teachers need to keep up with it, so they will not be left behind. However, the future of AI in education depends on how we use it today. This theme looks into the future of AI in education. It speculates on the reach of AI, and it explores the attitudes of teachers toward AI use in the years to come. Teachers need to have an open mind to embrace the constant changes in the educational landscape. Teachers should be willing to see AI as a friend, not an enemy. AI is not a rival but a collaborator. AI is a servant, not a master. AI is neither good nor bad the distinction depends on how we use it. The statements below highlight this:

"It really becomes a problem and maybe number one that we have to work on is the acceptance of our teachers, because the more that we refrain ourselves using

it, the more that we cannot guide our students so. Yeah. For me, for me, that's the entire point. I always tell them you cannot leave. You know, we cannot be like a blind leading another blind, so we need to really make ourselves ready for this." (Informant 2, page 6, lines 255-260)

The informants expressed that they need to keep up with the pace and maximize the benefits of AI instead of evading it.

"We have to be on the first line. We have to be the frontliners. We don't just let our students explore it and that's it and become better than us. So as a teacher, we need to be the first people to explore it and then help our students and guide them and direct them." (Informant 2, page 7, lines 268-270)

"I think AI is there to stay, and there are more AIs popping out. But the teachers always have to try them, you know, different ones, depending on what will work in your classroom. But it doesn't mean to say that you are an effective teacher if you can use that same more than 10 AI tools. It doesn't mean that way, regardless of how many AI tools you can use. I think the question there is how effective you can use this AI in your classroom so that you can maximize learning at the same time the learning of the students becomes meaningful." (Informant 5, page 9, lines 367-373)

To reap the maximum benefits from AI, it is important that teachers fully embrace and maximize using it to keep up with the emerging trends. As technology leaders, they need to actively explore and effectively integrate AI into their craft. Teachers need to be more proactive in looking for opportunities to integrate AI into their practice and adapt their pedagogy to the students' evolving needs. Aside from leveraging AI, teachers should also focus on the quality of their pedagogy rather than the quantity of AI tools used. This calls for carefully evaluating tools that work best for them and align best with the student's diverse needs. It also encourages teachers to embrace continuous learning in their profession.

4. Conclusion and Recommendations

The use of AI has significantly impacted the teachers' pedagogy - assisting them with lesson preparation and delivery. Through AI, teachers can personalize their lessons to cater to their students' diverse needs. In terms of productivity and efficiency, they can accomplish more important tasks as they can save time creating assessments and checking students' outputs. Since teachers have access to a wide array of teaching-learning resources and ideas, they can continuously learn, unlearn, and relearn some concepts, especially teaching strategies and practices. However, overdependence can lead to copyright infringement, loss of creativity, loss of human touch and connection, and some biases. To mitigate these ethical concerns, it is essential to set clear-cut guidelines on the use of AI to avoid uncertainties among users and set specific limits on how much AI is permissible. Furthermore, AI will not replace teachers. AI will continue to stay to aid teachers in their pedagogy. However, it is a challenge for teachers to keep up with the emerging technologies. Teachers need to embrace this digital era, so they will not be left behind. They can work together and grow professionally by sharing some best practices in integrating AI.

The study recommends that educational institutions may consider establishing guidelines and policies to promote responsible AI use. They can conduct training programs promoting

responsible AI use and digital literacy among teachers, students, and other stakeholders. Teachers are encouraged to look at AI as a collaborative tool, not something that will replace them. Teachers may leverage AI for productivity but still maintain responsible use. Teachers may continue to collaborate with other teachers and seek more opportunities for continuous professional growth. In terms of future research, continuous research on AI's impact on teaching-learning is highly encouraged to evaluate and refine the present guidelines in place. Further study on productivity and efficiency gains to quantify the amount time saved by teachers as they use AI in their tasks may be done.

REFERENCES

Baskara, R. (2023). Personalised Learning with Ai: Implications for Ignatian Pedagogy. *IJEBP (International Journal of Educational Best Practices), 7*(1), 1. https://doi.org/10.31258/ijebp.v7n1.p1-16

Borenstein, J., & Howard, A. M. (2020). Emerging challenges in AI and the need for AI ethics education. *AI And Ethics*, *1*(1), 61–65. https://doi.org/10.1007/s43681-020-00002-7

Chica, M., Guerra, M. C., & Guerra, G. C. (2023). The Role of Artificial Intelligence in the Development of Teaching Effectiveness: A Tool for Personalization of Learning in Higher Education. *IAFOR Conference on Educational Research & Innovation Official Conference Proceedings*. https://doi.org/10.22492/issn.2435-1202.2023.14

Cho, Y. H. (2022). A study on copyright issues in the use of works for the contents created by artificial intelligence. *Saibeo Keomyunikeisyeon Hakbo/Sa'i'beo Keo'myu'ni'kei'syeon Hagbo*, *39*(2), 83–133. https://doi.org/10.36494/jcas.2022.06.39.2.83

Felix, C. V. (2020). The role of the teacher and AI in education. In *Innovations in higher education teaching and learning* (pp. 33–48). https://doi.org/10.1108/s2055-364120200000033003

Köprülü, F., Oyebimpe, A. O., Başarı, Ş., & Besim, S. (2023). Innovative Effects Of Artificial Intelligence On Teacher Education. *Conhecimento & Diversidade, 15*(40), 449– 465. https://doi.org/10.18316/rcd.v15i40.11240

Kreinsen, M., & Schulz, S. (2023, March 18). Towards the Triad of Digital Literacy, Data Literacy and AI Literacy in Teacher Education – A Discussion in Light of the Accessibility of Novel Generative AI. https://doi.org/10.35542/osf.io/xguzk

Marinucci, L., María, C., & Gangemi, A. (2022). Exposing implicit biases and stereotypes in human and artificial intelligence: state of the art and challenges with a focus on gender. *AI & Society*, *38*(2), 747–761. https://doi.org/10.1007/s00146-022-01474-3

Nassar, A., & Kamal, M. (2021). Ethical Dilemmas in AI-Powered Decision-Making: A Deep Dive into Big Data-Driven Ethical Considerations. *International Journal of Responsible Artificial Intelligence*, *8*. https://neuralslate.com/index.php/Journal-of-Responsible-AI/article/view/43

Gartner, S., & Krašna, M. (2023, June 6). *Artificial Intelligence in Education - Ethical framework*. IEEE Conference Publication | IEEE Xplore. https://ieeexplore.ieee.org/document/10155012 GMA Integrated News. (2023, January 18). Students under probe for allegedly using AI in submitted academic requirements. *GMA News Online*. https://www.gmanetwork.com/news/topstories/nation/857872/using-ai-to-write-essays-is-cheating-says-up-prof/story/

Hennink, M., & Kaiser, B. N. (2021). *Sample sizes for saturation in qualitative research: A systematic review of empirical tests*. Social Science & Medicine, 292, 114523. https://doi.org/10.1016/j.socscimed.2021.114523

Polak, S., Schiavo, G., & Zancanaro, M. (2022). Teachers' Perspective on Artificial Intelligence Education: An Initial Investigation. *CHI Conference on Human Factors in Computing Systems Extended Abstracts*. https://doi.org/10.1145/3491101.3519866

Remian, D. (2019). Augmenting Education: Ethical Considerations for Incorporating Artifificial Intelligence in Education. *Instructional Design Capstones*

Collection, 52. https://scholarworks.umb.edu/instruction_capstone/52

Rizvi, M. (2023, June 8). *Exploring the landscape of artificial intelligence in education: Challenges and opportunities.* IEEE Conference Publication | IEEE

Xplore. https://ieeexplore.ieee.org/document/10156773

Ronanki, K. (2023). Towards an AI-centric Requirements Engineering Framework for Trustworthy AI. *IEEE*. https://doi.org/10.1109/icse-companion58688.2023.00075

Slimi, Z., & Carballido, B. (2022). Navigating the Ethical Challenges of Artificial Intelligence in Higher Education: An Analysis of Seven Global AI Ethics Policies. *TEM Journal*, *12*(2), 590– 602. https://doi.org/10.18421/TEM122-02

Sonday, A., Ramugondo, E., & Kathard, H. (2020). Case study and narrative inquiry as merged Methodologies: A Critical Narrative Perspective. *International Journal of Qualitative Methods*, *19*, 160940692093788. https://doi.org/10.1177/1609406920937880

Sorin, N., & Pagani, M. (2022). Artificial Intelligence Systems: The Influence on Human Entrepreneurial Creativity. *Proceedings - Academy of Management*, *2022*(1). https://doi.org/10.5465/ambpp.2022.12146abstract

Tseng, W., & Warschauer, M. (2023). AI-writing tools in education: if you can't beat them, join them. *Journal of China Computer-assisted Language Learning*, *3*(2), 258–262. https://doi.org/10.1515/jccall-2023-0008

Yang, K., Lawrence, L., Echeverría, V., Guo, B., Rummel, N., & Aleven, V. (2021). Surveying teachers' preferences and boundaries regarding Human-AI control in dynamic pairing of students for collaborative learning. In *Lecture notes in computer science* (pp. 260–274). https://doi.org/10.1007/978-3-030-86436-1_20