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From Awareness to Practice: Exploring the Knowledge, Attitudes, and Practices of Secondary ESL Teachers in the Philippines Toward ChatGPT in Education

De la Conciencia a la Práctica: Exploración de los Conocimientos, Actitudes y Prácticas de los Docentes de Inglés como Segunda Lengua en Secundaria en Filipinas hacia el Uso de ChatGPT en la Educación

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ABSTRACT

The rise of generative artificial intelligence (AI), particularly ChatGPT, has brought significant changes to educational practice. While research has largely emphasized student use, the perspectives of teachers, especially those in English as a second language (ESL) instruction, remain limited. This study examined the knowledge, attitudes, and practices (KAP) of 181 Filipino secondary ESL teachers in Zamboanga City regarding ChatGPT integration in language teaching. Using a descriptive-comparative quantitative design, data were gathered through the validated KAP-CQ39 instrument and analyzed via SPSS. The findings revealed that participants demonstrated a moderate level of knowledge, a somewhat positive attitude, and high positive usage of ChatGPT. Gender-based comparisons revealed no significant differences across the KAP dimensions. The item-level analysis highlighted the uneven awareness of ChatGPT's features, ethical implications, and varied implementation in classroom settings. These findings suggest a growing interest among ESL educators in engaging with AI tools, although knowledge gaps and ethical uncertainties persist. The study highlights the need for targeted training, institutional support, and clear guidelines to foster the responsible and effective use of ChatGPT in language education. This study contributes to a deeper understanding of AI adoption in linguistically diverse educational contexts within the Philippine context.

Keywords: Artificial Intelligence; Knowledge; Attitudes and Practices (KAP); ESL Teachers.

RESUMEN

El auge de la inteligencia artificial generativa (IA), particularmente ChatGPT, ha traído cambios significativos en la práctica educativa. Aunque la investigación se ha centrado en gran medida en el uso por parte de los estudiantes, las perspectivas de los docentes —especialmente aquellos dedicados a la enseñanza del inglés como segunda lengua (ESL)— siguen siendo limitadas. Este estudio examinó los conocimientos, actitudes y prácticas (CAP) de 181 docentes filipinos de nivel secundario en Zamboanga City con respecto a la integración de ChatGPT en la enseñanza de idiomas. Utilizando un diseño cuantitativo descriptivo-comparativo, se recopilaron datos mediante el instrumento validado KAP-CQ39 y se analizaron con SPSS. Los resultados mostraron que los participantes demostraron un nivel moderado de conocimiento, una actitud algo positiva y un uso altamente positivo de ChatGPT. Las comparaciones según el género no revelaron diferencias significativas en las dimensiones CAP. El análisis a nivel de ítems indicó una conciencia desigual sobre las funciones de ChatGPT, sus implicaciones éticas y su implementación variada en el aula. Estos hallazgos

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sugieren un creciente interés entre los docentes de ESL por involucrarse con herramientas de IA, aunque persisten brechas de conocimiento e incertidumbres éticas. El estudio resalta la necesidad de capacitaciones específicas, apoyo institucional y directrices claras para fomentar el uso responsable y efectivo de ChatGPT en la enseñanza de idiomas. Asimismo, contribuye a una comprensión más profunda de la adopción de la IA en contextos educativos lingüísticamente diversos en el entorno filipino.

Palabras clave: Inteligencia Artificial; Conocimientos; Actitudes y Práctica (KAP); ESL Profesores.

INTRODUCTION

The rise of generative artificial intelligence (AI), exemplified by OpenAI's ChatGPT, has sparked profound transformations in education across the globe. Since its public release, ChatGPT has garnered significant attention as a tool capable of enhancing teaching, learning, and academic productivity. (1,2) While much of the discourse around AI in education has centered on students' usage and perceptions, (3,4,5,6) the perspectives of teachers—particularly those in English as a second language (ESL) education—remain underexplored. ESL teachers operate at the intersection of language acquisition and digital literacy, rendering their knowledge, attitudes, and usage of ChatGPT a critical domain of inquiry for AI-integrated pedagogy.

A growing body of empirical literature highlights the divergent levels of awareness, skepticism, and enthusiasm among educators regarding the use of Al-powered tools such as the ChatGPT.^(7,8) In the context of ESL instruction, ChatGPT offers possibilities for personalized grammar correction, vocabulary building, conversational simulations, and writing enhancement. However, the successful integration of such technology hinges on teachers' knowledge of Al functions, their trust in its reliability, and their pedagogical readiness to embed it meaningfully into the classroom.^(7,9) As educators grapple with ethical implications, assessment concerns, and shifting classroom dynamics, understanding their cognitive and affective orientations toward ChatGPT becomes imperative.^(2,10)

Several recent studies have investigated the broader adoption of ChatGPT in higher education, offering valuable insights into the cognitive frameworks and behavioral intentions underpinning its use. (11,12,13) For example, (10) reported that training significantly mediates university students' acceptance of ChatGPT, a trend echoing faculty-focused research by (8), who reported that knowledge gaps among academics may hinder effective usage. This finding resonates with ESL settings, where digital competence and language pedagogy must coalesce to support learning outcomes. (14,15,16,17,18) Moreover, studies across disciplines suggest that demographic and professional background factors influence attitudes toward generative AI, (19,20,21) emphasizing the need for context-specific investigations within ESL education.

Although existing research have explored ChatGPT's educational applications in fields such as medicine, (10,13,22) pharmacy, (9) and fisheries, (23) there is limited literature on its implications for language teaching. This scarcity of research is particularly evident in the context of the Philippines, where much of the academic discourse has thus far concentrated on the broader integration of technology (24,25,26,27,28,29,30,31,32,33) and artificial intelligence in education across disciplines and fields, (34,35,36,37) rather than on ChatGPT use specifically. (38,39) call for a student-centered, collaborative framework in human-Al learning environments, yet the role of instructors in shaping this collaboration remains insufficiently theorized. Situated in the Philippine context, the present study addresses this gap by focusing on secondary ESL teachers—key agents who mediate linguistic, technological, and ethical discourses in Al-integrated classrooms.

The significance of this inquiry lies in its potential to inform evidence-based AI adoption frameworks for language education. Investigating ESL teachers' knowledge, attitudes, and usage of ChatGPT provides critical insights into digital readiness, resistance, and opportunities for innovation. As ⁽⁴⁰⁾ argues, the transformative impact of AI hinges not only on technological availability but also on pedagogical alignment, user trust, and professional development. Hence, this study aims to explore the intersecting dimensions of ESL educators' cognitive, affective, and behavioral engagements with ChatGPT, contributing to a distinct understanding of AI integration in linguistically diverse educational landscapes.

Literature Review

The interplay among ESL teachers' knowledge, attitudes, and usage of ChatGPT reveals a dynamic and interdependent framework that shapes their engagement with generative AI tools in education. Studies consistently suggest that foundational knowledge of ChatGPT's capabilities and limitations significantly influences both the disposition and willingness of teachers to incorporate the tool into their pedagogical practice. (41,42) Teachers with higher digital and AI literacy demonstrate more nuanced and constructive attitudes toward technology, often perceiving it not as a threat but as support for instructional innovation. (43,44) This informed attitude, in turn, has been linked to higher levels of actual use, particularly in designing writing tasks,

providing feedback, and facilitating autonomous language learning. (45,46,47) Conversely, insufficient knowledge can foster anxiety, ethical hesitation, or technophobia, leading to limited or cautious use despite positive perceptions. (19,48) The literature thus underscores that the effective integration of ChatGPT in ESL education demands a coherent alignment of cognitive understanding (knowledge), affective orientation (attitude), and behavioral application (usage), supported by ongoing training and contextualized pedagogical support. (49,50,51)

ESL teachers' knowledge of ChatGPT

Understanding ChatGPT's pedagogical and technical dimensions is foundational for ESL teachers aiming to integrate it meaningfully into instruction. ⁽⁵¹⁾, in their systematic review of ESL/EFL ChatGPT applications, emphasized that while educators recognize the tool's affordances—such as generating feedback, simplifying lesson scaffolds, and enhancing learner autonomy—many remain unaware of its limitations, such as hallucinated outputs and ethical concerns. Similarly, ⁽⁵²⁾ reported that EFL teachers acknowledged the benefits of ChatGPT for language learning but highlighted gaps in the understanding of its contextual appropriateness and the need for teacher-guided mediation.

Several studies underscore the limited AI literacy among both preservice and in-service teachers. (43) revealed that many preservice teachers lacked a deep understanding of generative AI operations and ethical dimensions, despite being familiar with basic functionalities. (44) reported that confidence in using ChatGPT was positively influenced by structured AI literacy training, although technical comprehension remained at the surface level. These findings mirror those of (53) in health education, which highlighted uneven digital literacy among faculty, and (54), who reported that teachers' low levels of trust in ChatGPT often stem from insufficient knowledge of how it works and what risks it entails.

Knowledge gaps appear to be discipline- and context-sensitive. ESL educators, in particular, must understand where ChatGPT can enhance language teaching—such as in writing prompts and grammar explanations—and where its limitations could mislead learners. (55) noted that even teachers aware of Al's instructional uses struggled to define its boundaries at specific learner levels. Thus, the effective integration of ChatGPT in ESL classrooms requires not only technical familiarity but also ethical discernment and domain-specific understanding, reinforcing the need for comprehensive, context-based Al training programs for educators.

ESL teachers' attitudes toward ChatGPT

The rise of ChatGPT as a generative AI tool has prompted increasing scholarly interest in how educators, particularly ESL teachers, perceive its integration into language instruction. Attitudes toward ChatGPT often reflect broader views on artificial intelligence in education, shaped by personal beliefs, digital competence, and institutional culture. In their cross-sectional study, (19) reported that preservice teachers' attitudes were significantly moderated by age and gender, with younger and male participants being more open to the educational potential of AI. (56) supported these findings by revealing a general openness among future teachers toward AI, although tempered by concerns over academic integrity and instructional authenticity. These studies demonstrate that while positive attitudes are emerging, they are not uniform and are deeply contextual.

Among ESL and EFL educators, attitudes toward ChatGPT often balance optimism for innovation with skepticism about pedagogical fit. (57) reported that preservice teacher education students generally held favorable attitudes, viewing ChatGPT as a useful assistant for grammar correction, brainstorming, and feedback generation. However, (41) surveying Thai EFL teachers, documented apprehensions about ChatGPT's limitations in fostering critical thinking and communicative competence—skills central to language education. Similarly, (58) noted that while some language educators appreciated ChatGPT's writing assistance, others feared that it might discourage learner autonomy and originality. These contrasting perspectives underscore the disciplinary specificity of AI integration in language education, where the focus on nuance, interaction, and expression challenges automated solutions.

Further complicating the attitude landscape are cultural and contextual variables. ^(59,60) reported that ESL students and early childhood teachers, respectively, perceived ChatGPT as a helpful tool for learning English, particularly in nonnative contexts. However, in more conservative or high-stakes educational systems, such as in Saudi Arabia, ⁽⁶¹⁾ discovered a more cautious stance among female EFL teachers, who balanced enthusiasm for innovation with moral and professional reservations. ^(20,62) also emphasized that preservice teachers' attitudes are influenced by institutional support and AI exposure; without structured training or discourse, attitudes often remain ambivalent and are driven more by media narratives than pedagogical reflection.

Global studies further reveal that psychological and sociotechnical factors—such as AI anxiety, trust, and perceived usefulness—shape educators' willingness to embrace the ChatGPT. (49) noted that teachers exhibited more reserved attitudes than students did, driven by concerns about AI's impact on critical thinking, workload, and assessment integrity. (63) identified a similar trend, where enthusiasm among student-teachers contrasted with their mentors' caution, highlighting generational and experience-based divides. (64) introduced the role of AI anxiety and social perceptions, arguing that negative attitudes are often less about the technology itself

and more about emotional responses and institutional uncertainty. These findings suggest that for ESL teachers to develop constructive and confident attitudes toward ChatGPT, professional development must address both technological literacy and the affective dimensions of Al adoption.

ESL teachers' usage of ChatGPT

The integration of ChatGPT in educational settings has rapidly expanded, prompting ESL educators to explore its practical applications for language instruction. (65) provided early insights into how EFL teachers utilize ChatGPT in classroom contexts, emphasizing ethical usage, task alignment, and learner engagement. The study reported that educators leverage the tool for grammar correction, vocabulary enrichment, and writing support while maintaining critical awareness of its limitations. Similarly, (46) reported that second-language learners benefitted from ChatGPT's immediate language feedback and scaffolding in vocabulary and syntax development, suggesting pedagogical gains when AI is used strategically. However, ethical concerns remain paramount, especially in assessment contexts. (46,47,48) warned that unregulated use may jeopardize academic integrity, calling for structured guidelines in teacher preparation.

Usage trends across disciplines further reveal subtle adoption patterns. For example, ⁽⁴²⁾ explored how Al tools, including ChatGPT, were incorporated into preservice language teacher education. Their study revealed that while usage was still in its formative stages, ChatGPT supported lesson planning, idea generation, and professional development when it was scaffolded by Al literacy training. Moreover, in STEM fields, ⁽⁶⁶⁾ demonstrated how science and math instructors adapted ChatGPT for concept explanations and quiz generation, suggesting cross-disciplinary parallels with ESL instruction in automating content support. However, discipline-specific needs vary, whereas STEM instructors value precision and speed, language educators emphasize contextual relevance and discourse sensitivity.⁽⁶⁷⁾

Technology acceptance studies have also framed ChatGPT usage through behavioral intention and adoption models. ⁽⁵⁰⁾ employed the Technology Acceptance Model (TAM) to examine university students' intentions to use ChatGPT, highlighting perceived usefulness and ease of use as strong predictors of actual usage. ⁽⁴⁵⁾ similarly reported that Honduran engineering students' adoption was influenced by institutional encouragement and peer use. These findings mirror ESL contexts, where platform familiarity and user confidence affect how teachers deploy AI tools. ⁽⁶⁸⁾ applied the UTAUT2 model to mathematics education, identifying performance expectancy and facilitating conditions as key drivers of ChatGPT adoption—elements that are increasingly applicable to ESL classrooms seeking personalized, AI-enhanced instruction.

Despite its emerging popularity, the use of ChatGPT among ESL teachers remains varied and is often shaped by individual teaching philosophies and institutional culture. In their case study of a computer science course, underscored the importance of guided usage protocols and curriculum integration to avoid misuse or overreliance. (69) ESL educators must likewise balance innovation with pedagogical intentionality. While ChatGPT clearly benefits language modeling and learner autonomy, its integration must be coupled with clear usage frameworks, as echoed by. (42,65) To foster meaningful adoption, professional development must equip teachers not only to use ChatGPT but also to critique, adapt, and innovate with it in discipline-appropriate ways.

METHOD

This study employed a descriptive quantitative research design to investigate the knowledge, attitudes, and practices (KAP) of Filipino English as a second language (ESL) teachers regarding ChatGPT. The descriptive component allowed for the systematic quantification of teachers' familiarity with, perceptions of, and engagement in using ChatGPT in educational settings. (70) Meanwhile, the comparative component focused on determining whether significant differences in these variables existed across gender groups. Furthermore, this study is cross-sectional, as it intends to capture respondents' perspective at a single point in time. (71) This research design was deemed appropriate, as it enabled the generation of measurable data that supported the statistical analysis and interpretation of group trends.

Respondents of the Study

The respondents of this study consisted of 181 Filipino ESL secondary school teachers who were actively teaching in public educational institutions in Zamboanga city at the time of data collection. These participants were selected on the basis of their current involvement in English language instruction and their potential exposure to the ChatGPT. The sample included 56 male and 125 female teachers, reflecting a gender distribution that aligns with prevailing trends in teacher education programs, where female participation consistently exceeds male participation. This pattern has been well documented in previous research, both in studies involving in-service and preservice teachers. (19,71,72,73,74,75,76,77,78,79,80,81,82,83)

Their participation provided a broad and diverse perspective on the evolving relationship between educators and artificial intelligence in language education.

Sampling Technique

The target population consisted of 340 tenured Filipino ESL secondary school teachers within the Zamboanga Division. With the use of the finite population sampling formula at the 95 % confidence level and a 5 % margin of error, the calculated sample size was 181. A random sampling technique was employed to identify the respondents who participated in the study.

Research Tool

Data were gathered via the KAP-CQ39, a validated survey instrument developed by $^{(84)}$ to measure teachers' knowledge, attitudes, and practices (KAP) regarding ChatGPT use in education. The instrument consists of three sections: a 15-item knowledge scale (true/false/ "I do not know"), a 15-item attitude scale rated on a 4-point Likert scale (1 = Strongly Disagree to 4 = Strongly Agree), and a 9-item practice scale (yes/no/ "I do not know"). Its validation process included assessments of content, construct, and face validity, and the instrument demonstrated excellent internal consistency (knowledge: $\alpha = 0.89$; attitudes: $\alpha = 0.91$; practices: $\alpha = 0.93$).

To contextualize the instrument for the current study, a pilot test was conducted among in-service teachers. In addition to the original KAP items, an additional demographic question on gender was included. The knowledge section yielded a Cronbach's alpha of α = 0,783, indicating acceptable reliability, although it was slightly lower than that of the pilot phase. The attitude section maintained a high reliability score (α = 0,904), closely mirroring the pilot results and confirming internal consistency. The practice section yielded a Cronbach's alpha of α = 0,774, suggesting moderate internal consistency, which, although slightly reduced from the pilot score, remained within acceptable thresholds for educational research.

These minor variations in reliability scores may be attributed to differences in sample characteristics or slight variations in how participants interpreted the items. Nevertheless, all scores remained within acceptable ranges, affirming the instrument's reliability in measuring the intended constructs. Given its demonstrated consistency and robustness, all the items from the adapted KAP-CQ39 were retained for the main study. This ensured comprehensive coverage of the constructs and enabled the study to capture nuanced insights into how in-service teachers perceive and engage with ChatGPT in their professional practice.

The validation and pilot testing processes reinforced the instrument's appropriateness, providing a strong foundation for its application. The results of the reliability analysis confirm the instrument's capacity to generate valid and meaningful data, contributing empirical evidence to the growing body of literature on artificial intelligence integration in education.

Data collection procedure

The data collection was conducted via an online survey platform (e.g., Google Forms). Potential respondents were invited to participate through institutional email announcements. Upon opening the survey link, the participants were presented with an informed consent form explaining the purpose of the study, the voluntary nature of participation, and the assurance of confidentiality. Only those who agreed to the terms completed the questionnaire. Responses were automatically recorded and stored in a secured digital file. Prior to analysis, all the data were reviewed for completeness, and incomplete or duplicate entries were excluded.

Ethical considerations

This study followed strict ethical guidelines to ensure the protection of participants. Ethical clearance was secured from the university's institutional review board prior to data collection. Participation in the study was entirely voluntary, and informed consent was obtained from all the respondents. The survey provided clear information about the study's objectives, procedures, and the respondents' rights, including the right to withdraw at any time without penalty. No identifying information was collected, and all the responses were treated with strict confidentiality. The data were stored in password-protected files accessible only to the researcher. The study complied with the ethical standards prescribed by the institution and the provisions of the Data Privacy Act of 2012 (RA 10173), thereby upholding the principles of respect, integrity, and accountability in conducting research with human participants.

Data Analysis Procedure and Statistical Treatment

The gathered data were processed and analyzed via the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics, including the mean, standard deviation, frequency, and percentage, were used to summarize the respondents' knowledge scores, attitude ratings, and extent of ChatGPT usage. To determine whether significant differences existed between male and female respondents, independent samples t tests were performed for each of the three main variables. Levene's test for the equality of variances was applied to check the assumption of homogeneity of variances. All inferential analyses were conducted at the 0,05 level of significance. This combined use of descriptive and inferential statistical techniques enabled a comprehensive and statistically grounded understanding of how ESL teachers perceive and utilize ChatGPT in the context of language instruction.

RESULTS AND DISCUSSION

Respondents' Level of Knowledge About ChatGPT

The level of knowledge about ChatGPT among English language teachers was assessed by categorizing each questionnaire response as correct or incorrect, followed by analyzing these responses via a predetermined scale to gauge each participant's knowledge level. The scores from each respondent were then averaged to compute an overall mean score for the group. Table 1 presents a summary of key statistics, including minimum and maximum scores, means, and standard deviations (StDev), along with an interpretation of the results. This approach provides a structured measure of ChatGPT knowledge among English language teachers, offering insights into their familiarity with the tool's capabilities and potential applications in language education.

Table 1. Filipino ESL Teachers' Knowledge of ChatGPT										
Variable	Minimum	Maximum	Mean	StDev.	Interpretation					
Level of Knowledge About ChatGPT	0	15	9,52	2,45	Moderate Level of Knowledge					
N-181										

The analysis shows that, on average, English language teachers have a moderate level of knowledge (M= 9,52, StDev. = 2,45) about ChatGPT. The responses to the items ranged from 0 to 15. Although many teachers had incorrect answers, a few teachers had complete items (15/15). Teachers' scores for knowledge about ChatGPT were very different from each other, which is in line with previous research (49) showing that teachers have uneven AI literacy, especially with respect to generative AI. (63)

Furthermore, this wide range shows the extent of variability in knowledge among teachers. Moreover, a standard deviation of 2,45 illustrates a wider variation, with individual scores above and below the mean indicating a fair amount of spread. In the previous two studies, the mixed responses indicate that some educators recognize the basic capabilities of the ChatGPT, such as text generation or feedback; however, there is less knowledge about its technical limitations (e.g., hallucinations and bias). This suggests possible differing degrees of knowledge and understanding of ChatGPT's capabilities and features, reflecting different levels of experience and varying degrees of exposure to the features and functions of the tool. These findings suggest differing degrees of familiarity with and understanding of ChatGPT's features and functionalities among English language teachers, reflecting a mix of experience levels and exposure to the tool within the teaching community.

Respondent Distribution by Knowledge Level

A comprehensive analysis categorizes English language teachers by knowledge level, providing insights into the distribution of familiarity with ChatGPT within this group. This breakdown helps clarify the range of knowledge levels, spanning from minimal to high familiarity among respondents. Table 2 presents this detailed analysis, illustrating the frequency and percentage of English language teachers within each knowledge level, thereby offering a clearer picture of their varying degrees of familiarity with and understanding of the ChatGPT's functionalities and applications in the educational context.

Table 2. Filipino ESL Teachers' Knowledge Levels About ChatGPT									
Knowledge Levels Score Range f %									
High Knowledge	12-15	35	19,34						
Moderate Knowledge	8-11	120	66,30						
Low Knowledge	4-7	22	12,15						
Very Low Knowledge	0-3	4	2,21						
N-181									

These results reveal that knowledge levels about ChatGPT among respondents are distributed in a variety of ways. Most respondents (66,30 %) scored at the moderate knowledge level; this meant that they received between 8 and 11 correct answers on the right track for understanding the tool. These results are consistent with research conducted by (53,65), who also reported that teachers presented moderate, uneven levels of generative AI knowledge across different disciplines and suggested that some form of differentiated response could be informed by personal and contextual factors.

High knowledge levels were evidenced by 19,34 % of the respondents who scored 12-15, indicating high familiarity with ChatGPT. The results of the present study support, $^{(43)}$ who reported that AI literacy training for

preservice teachers contributed to a greater degree of competence in meaningfully understanding and using ChatGPT to aid lesson design and support learners. (44) similarly supported existing findings that exposure to structured training and experimentation in AI made a difference in educators' AI competency.

A smaller group, 12,15 % of the respondents, scored between 4 and 7, indicating a low level of knowledge, which suggests limited familiarity. Finally, 2,21 % of the respondents had scores between 0 and 3, categorizing them as very low knowledge, indicating very little understanding of ChatGPT. There was a parallel to work by (55) in that even when ESL teachers were generally aware of AI's instructional potential, their knowledge base presented limitations.

Responses across Items Measuring Knowledge About ChatGPT

A descriptive analysis of responses across items in the instrument was conducted to assess English language teachers' knowledge of various aspects of ChatGPT. Table 3 presents the frequency and percentage of correct responses for each item, along with those for incorrect responses and "I do not know" (IDnK) selections. This detailed breakdown provides a clear view of teachers' familiarity with specific features of ChatGPT, highlighting areas where knowledge may be strong and where there may be gaps or uncertainty. This analysis helps illuminate the specific facets of ChatGPT that English language teachers understand well and those that may require further training or support.

	Table 3. Itemwise Responses Assessing Filipino ESL Teachers' Knowledge of ChatGPT										
		Responses									
No.	Statements	Ti	rue	False		IDnK					
		f	%	f	%	f	%				
1	ChatGPT uses artificial intelligence to generate anthropomorphic responses.	169	93,4	5	2,8	7	3,9				
2	ChatGPT can only provide answers in English.	46	25,4	67	37	68	37,6				
3	ChatGPT responses are 100 % accurate.	29	16	81	44,8	71	39,2				
4	ChatGPT is designed to provide anthropomorphic conversations.	136	75,1	24	13,3	21	11,6				
5	ChatGPT is trained on a diverse range of topics.	156	86,2	17	9,4	8	4,4				
6	ChatGPT is a commercial product and is not for free.	27	14,9	80	44,2	74	40,9				
7	ChatGPT can only provide text-based responses.	79	43,6	53	29,3	49	27,1				
8	ChatGPT responses are generated by a preprogrammed algorithm.	128	70,7	22	12,2	31	17,1				
9	ChatGPT can check and grade student assignments.	57	31,5	54	29,8	70	38,7				
10	ChatGPT can help teachers with lesson planning.	156	86,2	13	7,2	12	6,6				
11	ChatGPT can be used to assist learners with their coursework.	170	93,9	8	4,4	3	1,7				
12	ChatGPT can be integrated with virtual learning environments.	137	75,7	28	15,5	16	8,8				
13	ChatGPT can create essays and articles about a specific topic.	174	96,1	6	3,3	1	0,6				
14	ChatGPT can provide additional teaching resources and learning materials for learners.	162	89,5	12	6,6	7	3,9				
15	ChatGPT can provide instant feedback on pronunciation.	98	54,1	43	23,8	40	22,1				

The results indicated that items 13, 11, and 1—which focused on ChatGPT's generation of essays, assisting learners, and being an AI-based interaction—had the highest number of correct answers, at over 90 %. This clearly indicates strong baseline knowledge of ChatGPT's fundamental function, which is mirrored in the data from, (46,51) which revealed that educators recognized the affordances of different tasks and believed that ChatGPT was beneficial in language learning tasks in specific areas of content generation and provided feedback.

In contrast, items 6, 3, and 2 had significantly lower correct response rates, with fewer than 26 % of the

teachers providing incorrect answers. Notably, Item 3 ("ChatGPT responses are 100 % accurate") had the highest percentage of incorrect responses (44,8 %), which is an indication that educators may be overconfident with the tool. This aligns with the findings of $^{(52)}$, who argued that there is uncritical trust in ChatGPT, which is typically based on a lack of AI knowledge about hallucinated or biased outputs.

The IDnK category was also interesting to explore. Items 3, 2, and 9 were the highest rated in IDnKs, especially students' uncertainty around ChatGPT's language capabilities, accuracy, and grading capabilities. This finding supports the findings of (43,55), who argue that domain-specific uncertainty and an absence of experience can limit the confidence of ESL educators in properly utilizing AI with an ESL population.

In contrast, items 13, 11, and 14 had the lowest IDnKs and can be seen to be well understood by most students since they are about text creation, the support of learners in the majority of learning contexts and providing resources for education—hallmarks and shared features of teacher discourse through induction and induction, as supported by Khajavi et al. (41). This analysis suggests an advance for context-specific AI training in which teachers are given explicit and implicit knowledge not only about the basic functioning of the tool itself but also about the critical perspective regarding the limitations and ethics of the tool's use.

Attitudes Toward the Use of ChatGPT in Language Instruction

The attitudes of English-language teachers toward ChatGPT were assessed through a structured analysis of responses to 15 items designed to capture their perspectives on the tool. These responses were grouped and analyzed via descriptive statistics, including the mean (M), standard deviation (StDev.), frequency count (f), and percentage (%). Table 4 presents these results, offering insights into the general sentiment of English language teachers as well as specific areas of interest or concern regarding ChatGPT's application and functionality in their teaching context. This analysis provides an understanding of how these educators view the ChatGPT, highlighting both positive sentiments and potential reservations related to its integration into language teaching practices.

	Table 4. F	ilipino	ESL Teac	hers' A	ttitudes	Towar	d ChatGI	PT			
#	Statements	9	SA		A		D	:	SD	М	StDev.
#	Statements	f	%	f	%	f	%	f	%	M	Stbev.
1	I find ChatGPT helpful in answering questions.	59	32,6	101	55,8	7	3,9	14	7,7	3,13	0,81
2	I trust the responses provided by ChatGPT.	14	7,7	93	51,4	64	35,4	10	5,5	2,61	0,71
3	I find ChatGPT responses to be accurate.	12	6,6	90	49,7	67	37	12	6,6	2,56	0,72
4	I find ChatGPT to be a useful instrument for learning.	49	27,1	101	57,5	17	9,4	11	6,1	3,05	0,78
5	I believe ChatGPT has the potential to revolutionize the way we access information.	41	22,7	111	61,3	17	9,4	12	6,6	3,00	0,77
6	I am concerned about the ethical implications of using ChatGPT.	12	6,6	15	8,3	78	43,1	76	42	3,20	0,85
7	I believe that using ChatGPT to complete academic assignments is unethical.	8	4,4	59	32,6	75	41,4	39	21,5	2,80	0,83
8	I believe that learners and teachers should be allowed to use ChatGPT in the classroom.	10	5,5	62	34,3	78	43,1	31	17,1	2,28	0,81
9	I believe that using ChatGPT for academic purposes should be discouraged.	28	15,5	99	54,7	40	22,1	29	16	2,54	0,87
10	I believe that ChatGPT should be banned in all schools and academic institutions.	8	4,4	59	32,6	75	41,4	14	7,7	2,22	0,80
11	I believe that the use of ChatGPT for academic purposes undermines the learning process.	9	5,0	62	34,3	84	46,4	26	14,4	2,70	0,77

12	I think that the use of ChatGPT for academic purposes should be monitored and regulated.	8	4,4	59	32,6	75	41,4	39	21,5	3,29	0,84
13	I think people who use ChatGPT for academic purposes are cheating.	16	8,8	89	49,2	55	30,4	21	11,6	2,45	0,81
14	I think that schools and educators should educate learners on the dangers of relying on ChatGPT for academic purposes.	11	6,1	8	4,4	69	38,1	93	51,4	3,35	0,83
15	I think ChatGPT is useful when used correctly and monitored accordingly.	112	61,9	52	28,7	2	1,1	15	8,3	3,44	0,88
Ove	erall Attitude Toward ChatGPT									2,84	0,49

The English language teachers included in this study demonstrated an overall 'somewhat positive' attitude toward ChatGPT (M = 2,84, StDev. = 0,49). This tendency toward a generally positive attitude aligns with ongoing international trends in educators' viewpoints. For example, ⁽⁵⁶⁾ and ⁽⁵⁷⁾ reported that most preservice teachers recognize that ChatGPT can be useful for idea generation, grammar checking, and lesson planning, an idea that places importance on Item 15 and Item 4 in this study. Compared with the other items, item 15 ("ChatGPT is useful if used correctly and monitored accordingly") had the highest means (M = 3,44), indicating that ChatGPT is strongly endorsed in guided and intentional scenarios.

Interestingly, cautionary attitudes were found in the data. Item 14, which discussed the focus of teaching learners on the issues of relying on ChatGPT or Item 12, which discussed regulating and monitoring the use of ChatGPT, had high means (M = 3,35 or 3,29). This illustrates a complex view whereby educators are not completely resistant to AI but are aware of the risks. This set of views may align with Wang et al. (63) noted as 'AI anxiety' or with issues surrounding academic integrity that impact teacher perspectives as an emotional and ethical concern.

Alternatively, lower mean scores were found for Items 10 and 8, which appear to indicate low support for a blanket ban or unrestricted use of ChatGPT in the classroom. Limited support for AI bans in education appears to concur with ⁽⁶³⁾ findings circling generational gaps, where preservice teachers were more positive and older mentors were more conservative. This generation gap could account for the varied responses throughout this study, especially with Items 8 and 10, which illustrated uncertainty around ChatGPT in the classroom.

The ethical concerns about ChatGPT use or applications of a teacher's use, indicated in Items 6, 7, and 13, were also much like the findings noted in (41,48), where concerns focused on cheating, authenticity, and dependence on technology. However, the data also demonstrated an emerging consensus that if guided, ChatGPT is a legitimate teaching partner; as noted by (41,85), views of AI will become positive when PD is delivered and institutional buy-in is visible.

In summary, the findings support a cautiously optimistic attitude toward ChatGPT by ESL teachers, affirming its pedagogical potential while seeking further defined ethical and pedagogical boundaries. Teacher attitudes, as highlighted by ⁽⁶²⁾, are shaped not only by personal beliefs about technology but also by the larger institutional and cultural narratives in which they are embedded. This is indicative of the need for technological and teacher training that critically engages negatively with technology.

Respondent distribution by extent of attitude

The distribution of English language teachers across varying levels of attitudes toward ChatGPT was determined by calculating each respondent's mean score from the attitude questionnaire and categorizing these scores into four defined attitude levels. Frequency counts and percentages were then computed to illustrate this distribution.

Table 5. Filipino ESL Teachers' Distribution across Extention of Attitudes Toward ChatGPT								
Attitudes Range f %								
Positive	3,25 to 4,0	24	13,26					
Somewhat Positive	2,50 to 3,24	136	75,14					
Somewhat Negative	1,75 to 2,49	10	5,52					
Negative	1,0 to 1,74	11	6,08					
N-181								

The results clearly show that 88,4 % of English language teachers have a good attitude toward ChatGPT, with 13,26 % having a positive attitude and 75,14 % having a somewhat positive attitude. The strong positive attitudes demonstrated that English language teachers generally accepted ChatGPT's role in education. This finding is also consistent with (85,86) who noted that teachers perceived AI tools such as ChatGPT positively, particularly if they supplemented or did not replace pedagogical roles. Similarly, (87) suggested that teachers appreciate ChatGPT for the potential to add interactivity to the classroom and improve resource gathering.

Conversely, a smaller share of the sample, 11,6%, had concerns, including 5,52% having a somewhat negative attitude and 6,08% having a negative attitude. The negative or somewhat negative attitudes may represent more directed concerns or anxieties about ChatGPT's potential use, such as ambiguous ethical concerns, the reliability of being responsible, and misinformation, which are generally echoed in research by $^{(20)}$ and $^{(59)}$, where there is tension in optimistically believing that technology can help but affording concerns of academic impropriety.

The data reveal that although English language teachers are generally excited about ChatGPT, a part of the population is hesitant or unsure. The evidence highlights the need to address potential concerns and ensure that teachers are fully supported in understanding and implementing ChatGPT effectively in their practice. This aligns with the argument of ⁽⁴⁸⁾ in calling for the structured training of education professionals to balance the richness and advantages of ChatGPT with its pedagogical limitations.

Respondents' Practices in the Use of ChatGPT

The assessment of ChatGPT usage among English language teachers involved tallying each respondent's "yes" responses, which were subsequently recorded in a dedicated column in SPSS for further analysis. This allowed for a comprehensive view of teachers' engagement levels with ChatGPT. The mean and standard deviation were then computed to facilitate interpretation of usage patterns. Table 6 presents the analytical outcomes, including a descriptive summary, minimum and maximum values, and an interpretation of the mean score, offering insights into the extent and variability of ChatGPT use among English language teachers in this study.

Table 6. Filipino ESL Teachers' Extent of Practices in the Use of ChatGPT									
Variable	Minimum	Maximum	Mean	StDev.	Interpretation				
Extent of Use of ChatGPT	1	10	6,18	2,43	High Positive Usage				
N-181									

The English language teachers' survey using ChatGPT exhibited varied patterns of use, as some teachers indicated only one item with a "yes", and some indicated use of all ten items, indicating variability in levels of familiarity and the use of this tool among teachers. These variabilities echo the findings of (50) and serve as a function of the educators' technological proficiency or comfort levels and their willingness to experiment.

For the most part, participants indicated a "high degree of usage", reflected in the mean value of 6,18. In addition, the standard deviation (2,43), along with moderate levels of variability, indicate that while many English language teachers indicated use on most, some indicated low use, which parallels, (83) as while a core group of teachers plan lessons, simplify text, or support students using ChatGPT, some remain less engaged due to unfamiliarity or institutional support.

This spread depicts the different ways in which teachers use ChatGPT as an instructional tool and as a learning activity. (88) stated that ChatGPT implementation is shaped by teachers' attitudes and contextual factors, such as the school context, workload, and availability for digital and information access. Therefore, while mainly they are used proactively, the variation in use indicates the need for differentiated approaches to support teachers at different levels of readiness.

Distribution of respondents across range-based categorizations of usage

The extent of ChatGPT usage among English language teachers was categorized to gain insight into their engagement levels. Frequency counts and percentages were calculated, allowing for a descriptive analysis of the data.

Table 7. Filipino ESL Teachers Categorized by Usage Frequency								
Categories of Usage	f	%						
Low Positive Usage	1-3 'yes' responses	29	16,02					
Moderate Positive Usage	4-6 'yes' responses	61	33,70					
High Positive Usage	7-10 'yes' responses	91	50,28					
N-181								

Table 7 presents this information, offering a clear view of how often English language teachers utilize ChatGPT in their professional activities. This breakdown helps illustrate the diversity of usage patterns within the group, from minimal to extensive engagement, providing a comprehensive overview of ChatGPT's role in teaching practices.

The analysis revealed that English language teachers use ChatGPT to varying degrees. Over half of the respondents, who constituted 50,28 % of the sample, exhibited high positive use, with 7-10 "yes" responses, indicating that half of the sample actively used the ChatGPT in their professional activities. In their findings, ⁽⁴⁵⁾ noted the high use of a new and growing number of educators about generative AI in educational and teaching tasks such as using assessment support and generating lesson plans.

In contrast, 33,70% of the sample responded positively within the moderate use category; use that indicates a balanced and reasonable interaction with the tool and sustainable use, which $^{(87)}$ noted, are very often interpreted as practical, beneficial uses such as leaning, easily adapting instructional content for their learners, simplifying instructional content, or producing time-saving features that ChatGPT can produce. A small portion of the teachers (16,02%) exhibited low positive use on the basis of 1-3 "yes" responses, indicating low use from the sample and limited engagement. This finding also substantiates those from $^{(69)}$, as low use could be due to a barrier to change, such as limited training, not knowing how to correctly use AI resources for pedagogy, and the hesitation of schools or institutions to allow educators to use innovative technology.

Knowledge Level of ChatGPT by Gender

An independent samples t test was conducted to determine whether there was a significant difference in ChatGPT knowledge levels between male and female English language teachers. Levene's test for equality of variances was included, yielding a nonsignificant result (p = 0,359), which confirmed that the assumption of equal variances was met. Table 8 presents the results of this analysis, detailing the independent variable (gender) and the dependent variable (knowledge level), along with the mean scores and standard deviations for both male and female respondents, the p value, and the t value. This analysis provides insights into whether gender plays a role in the knowledge levels of English language teachers regarding ChatGPT.

Table 8. Filipino ESL Teachers' Knowledge Levels About ChatGPT across Genders										
Variables			Moan	C+Dov	t-	р				
Independent	Depen	dent	mean	StDev.	value	value				
Level of Knowledge About	Gender	Male	9,64	1,98	0,54	0,651				
ChatGPT		Female	9,46	2,64						
N- 181										

Analysis of the level of knowledge of ChatGPT by gender revealed that, on average, male teachers had slightly higher knowledge levels than female teachers did; however, the difference was not statistically significant. This is representative of the general tendency reported by ⁽³⁵⁾, who noted that gender differences in AI use and knowledge tended to be inconsequential in educational contexts, especially if there was parity regarding access to and exposure to such tools.

The t test results (t = 0.54, p = 0.651) indicate that gender does not significantly influence knowledge of ChatGPT. This confirms the position of $^{(68)}$, who claim that in regard to professional environments such as education, knowledge of generative AI tools tends to rely more on a person's own initiative to learn about the tools rather than on demographic information such as gender.

Attitudes Toward the Use of ChatGPT by Gender

To evaluate the difference in attitudes toward ChatGPT use between male and female English language teachers, an independent samples t test was conducted. Levene's test for equality of variances yielded a nonsignificant result (p = 0.390), confirming that the assumption of equal variances was met.

Table 9. Filipino ESL Teachers' Attitudes Toward the Use of ChatGPT across Genders										
Variables			Moan	StDov	t-	р				
Independent	Depen	dent	Mean	StDev.	value	value				
Attitude Toward the Use of	Gender	Male	2,81	0,52	0,65	0,518				
ChatGPT		Female	2,86	0,48						
N- 181										

The results suggest a weak difference in perceptions of ChatGPT use among English language teachers, with female respondents having a mildly higher mean rating (M = 2,86) than male respondents did (M = 2,81). However, this difference was not statistically significant. This finding supports the findings of ⁽¹⁹⁾, who also perceived convergence in attitudes toward artificial intelligence tools among educators, including a range of perceptions on the basis of perceived usefulness or ethical concerns, rather than perceptions that are divergent on the basis of gender.

In contrast to the insignificant difference between male and female respondents (t = -0.65, p = 0.518), both groups appear to have generally favorable attitudes toward ChatGPT, which is consistent with prior literature suggesting that most teachers have a cautiously optimistic outlook toward ChatGPT. This cautiously optimistic outlook includes some recognition of potential harm, as observed by $^{(52)}$, including overreliance on ChatGPT and academic misconduct.

Extent of use of the ChatGPT

A comparison of ChatGPT use across genders among English language teachers was conducted via an independent samples t test. Levene's test for equality of variances yielded a nonsignificant result (p = 0,130), indicating that the assumption of equal variances was met. Table 10 presents the findings, with gender as the independent variable and the extent of ChatGPT use as the dependent variable. The table includes mean scores, standard deviations, and p values and t values for both male and female respondents, providing a detailed view of ChatGPT usage patterns across genders within the English language teaching community.

Table 10. Filipino ESL Teachers' Extent of Use of ChatGPT across Genders											
Variables					Mean	StDev.	t-	р			
Independen	t	Dependent			Mean	Sidev.	value	value			
Extent of	Use	of	Gender	Male	6,29	2,22	0,403	0,60			
ChatGPT	hatGPT		Female	6,13	2,52						
N- 181											

The evaluation of male and female English language teachers' use of ChatGPT, comprising 56 males and 125 females, revealed no meaningful difference in the scores across genders (t = 0.403, p = 0.60). While males had a slightly higher mean score (M = 6.29) than females did (M = 6.13), both exhibited a high level of positive use. This result is consistent with that of Wang et al. (63) who reported that the most significant predictors of AI tool use were institutional support and perceived usefulness, not gender.

The high level of usage is consistent with findings from ⁽⁶¹⁾ that ChatGPT was adapted widely by educators as a tool to reduce preparation time, increase engagement with learners, and provide instructional material. The absence of significant differences by gender suggests that educators' attitudes and patterns of use for AI tools are becoming more homogenous across all participants as they become more familiar with the tools.

CONCLUSIONS

This investigation explored the knowledge, attitudes, and practices of teachers with respect to ChatGPT, and it was determined that the respondents presented a moderate level of knowledge via a four-point scale instrument, which suggests that the participants' level of knowledge is relatively high, which is pertinent to ChatGPT. Additionally, their attitudes toward the use of ChatGPT in language instruction are somewhat positive, as is premised on a four-point scale instrument, which fortifies their claim of having a moderate level of knowledge in that their favorable stance toward ChatGPT in language instruction must contribute to the knowledge level they exuded, or vice versa. Either way, the findings may be related to the high positive usage of ChatGPT, as indicated by the respondents' responses. All this skew is indicative of the route through which education is treading, as already evinced by those who are at the frontline of the teaching workforce. Vilifying artificial intelligence at this point, or more particularly ChatGPT, will most definitely do more harm than good; as a point of departure, arming the educators both in the domains of cognition and accountability relative to the incorporation of the ChatGPT in instruction is now a sine qua non.

RECOMMENDATIONS

Premised on the findings of the investigation, for inquirers who intend to carry out an exploration identical to this paper's centripetal focus, the expansion of the scope relative to the number of respondents is recommended. Likewise, the inclusion of teachers from other regions of the country, their teaching experience in drawing upon their length of service as a research barometer, and the juxtaposition of teachers from different subject areas and year levels are recommended. Furthermore, a void will be left in the puzzle if the learners, the clientele

of education, are not made a part and parcel of the study; hence, their inclusion is critical.

The integration of AI literacy in the curriculum is no longer a question of necessity but one of time. Immediacy is necessary in the incorporation of AI literacy into the curriculum because present-day education necessitates a revolution in the delivery of instruction. Technological advancements seem to have disgorged educationalists, educators, and learners about AI-driven tools, which, as of the present, are still deemed antagonistic by some. With the current findings, the stark level of embrace of the foregoing tools, ChatGPT in particular, is not far from materialization. Resistance will only prove to be futile, or worse yet, a bane.

The establishment of a monitoring and evaluation mechanism for the use of chatbots at the grassroots level ensures that the literacy obtained as an offshoot of the preceding recommendation closely follows a regulation. This is to ensure that chatbots, or AI in a more generic sense and ChatGPT from a more specific perspective, are capitalized without sacrificing teachers' and learners' firsthand involvement in their outputs, both in the scientific province and/or the arts.

Teachers may need technical assistance to further improve their already moderate level of knowledge. This may be carried out via a helpdesk where individuals with sheer expertise constantly make available to teachers a hand to address queries and rule out technical difficulties of any sort. This may likewise be done via formal workshops where teachers are afforded the know-how pertinent to the use of AI tools.

To fortify the preceding recommendations, institutional policies on the use of AI, the ChatGPT most unquestioningly included, must be put in place. This is to ascertain that the use of chatbots is appropriately regulated. This is necessary to ensure accountability, which puts a premium on human agency, creativity, and critical thinking. Furthermore, training on the ethical use of chatbots may likewise be needed.

The first recommendation above proposes the expansion of the understanding of the dynamics of teachers and learners alike in their grapple with education alongside AI or chatbots. The succeeding ones ought to further the curriculum, making it sway along the tide of curricular demands to ensure that the learners' learning necessities are met with prodigious accuracy and timeliness. Additionally, the other ones should demand human agency that solidifies creativity and critical thinking—two cerebral functions that make humans thinkers stand above bots and others—for doing otherwise will pose a grave threat to human cognition, whose effects are long-term, irreversible, and transcendental.

BIBLIOGRAPHIC REFERENCES

- 1. Jo H. Decoding the ChatGPT mystery: A comprehensive exploration of factors driving AI language model adoption. Information Development. 2023;0(0). https://doi.org/10.1177/02666669231202764
- 2. Wen Y, Zhao X, Li X, Zang Y. Attitude mining toward generative artificial intelligence in education: The challenges and responses for sustainable development in education. Sustainability. 2025;17(3):1127. https://doi.org/10.3390/su17031127
- 3. Howlader MH, Tohan MM, Zaman S, Chanda SK, Jiaxin G, Rahman MA. Factors influencing the acceptance and usage of ChatGPT as an emerging learning tool among higher education students in Bangladesh: a structural equation modeling. Cogent Educ. 2025;12(1):2504224. https://doi.org/10.1080/2331186X.2025.2504224
- 4. Rahman MS, Sabbir MM, Zhang J, Moral IH, Hossain GMS. Examining students' intention to use ChatGPT: Does trust matter? Australas J Educ Technol. 2023;39(6):51-71. https://doi.org/10.14742/ajet.8956
- 5. Tin TT, Chor KY, Hui WJ, Cheng WY, Kit CJ, Husin WNAAW, Tiung LK. Demographic factors shaping artificial intelligence (AI) perspectives: Exploring their impact on university students' academic performance. Pak J Life Soc Sci. 2024.
- 6. Turós M, Nagy R, Szűts Z. What percentage of secondary school students do their homework with the help of artificial intelligence?-A survey of attitudes towardds artificial intelligence. Comput Educ Artif Intell. 2025;8:100394. https://doi.org/10.1016/j.caeai.2025.100394
- 7. Alnsour MM, Qouzah L, Aljamani S, Alamoush RA, AL-Omiri MK. Al in education: enhancing learning potential and addressing ethical considerations among academic staff—a cross-sectional study at the University of Jordan. Int J Educ Integr. 2025;21(1):16. https://doi.org/10.1007/s40979-025-00189-4
- 8. Karafil B, Uyar A. Exploring knowledge, attitudes, and practices of academics in the field of educational sciences towards using ChatGPT. Educ Inf Technol. 2025:1-44. https://doi.org/10.1007/s10639-024-13291-w
- 9. Iwasawa M, Kobayashi M, Otori K. Knowledge and attitudes of pharmacy students towards artificial intelligence and the ChatGPT. Pharm Educ. 2023;23(1):665-75. https://doi.org/10.46542/pe.2023.231.665675

- 10. Prahl A, Jin KTW. Doctor who?: Norms, care, and autonomy in the attitudes of medical students toward Al pre- and post-ChatGPT. Hum Mach Commun. 2024;8:163-83. https://doi.org/10.30658/hmc.8.8
- 11. García-Alonso EM, León-Mejía AC, Sánchez-Cabrero R, Guzmán-Ordaz R. Training and technology acceptance of ChatGPT in university students of social sciences: A netcoincidental analysis. Behav Sci (Basel). 2024;14(7):612. https://doi.org/10.3390/bs14070612
- 12. Masa'deh RE, Majali SA, Alkhaffaf M, Thurasamy R, Almajali D, Altarawneh K, et al. Antecedents of adoption and usage of ChatGPT among Jordanian university students: Empirical study. Int J Data Netw Sci. 2024;8(2):1099-1110. https://doi.org/10.5267/j.ijdns.2023.11.024
- 13. Sallam M, Salim NA, Barakat M, Al-Mahzoum K, Al-Tammemi AB, Malaeb D, Hallit R, Hallit S. Assessing health students' attitudes and usage of ChatGPT in Jordan: validation study. JMIR Med Educ. 2023;9(1):e48254. https://doi.org/10.2196/48254
- 14. Alieto E, Abequibel-Encarnacion B, Estigoy E, Balasa K, Eijansantos A, Torres-Toukoumidis A. Teaching inside a digital classroom: A quantitative analysis of attitude, technological competence and access among teachers across subject disciplines. Heliyon. 2024;10(2):e24282. doi:10.1016/j.heliyon.2024.e24282
- 15. Andrade Preciado JS, González Vallejo R. Integrating ChatGPT and generative AI apps in specialized text translation and post-editing: an exploratory study. Semin Med Writ Educ. 2024;3:624. https://doi.org/10.56294/mw2024624
- 16. González Vallejo R. Evaluation of the effectiveness and personalization of artificial intelligence tools in language teaching: perspectives and future directions. Semin Med Writ Educ. 2024;3:594. https://doi.org/10.56294/mw2024.594
- 17. Torres-Toukoumidis Á, Santín-Picoita FG, Henríquez-Mendoza E. Capítulo 2. Inteligencia Artificial y educomunicación. Espejo De Monografías De Comunicación Social. 2024;(23):37-57. https://doi.org/10.52495/c2.emcs.23.ti12
- 18. Torres-Toukoumidis A, Jiménez MMF, Merchán-Romero J, Vega-Ramírez JFA. Gamification and artificial intelligence in the educational context: analysis of scientific literature. In: Schönbohm A, et al., editors. Games and Learning Alliance. GALA 2024. Lecture Notes in Computer Science. Cham: Springer; 2025. https://doi.org/10.1007/978-3-031-78269-5 34
- 19. Balasa KA, Dumagay HA, Alieto EO, González Vallejo R. Gender and age dynamics in future educators' attitudes toward AI integration in education: A sample from state-managed universities in Zamboanga Peninsula, Philippines. Semin Med Writ Educ. 2025;4(668):668. doi:10.56294/mw2025668
- 20. Lima AJS, Senados JM, Senturias MGR, Simagala MJL. Shaping the future of AI in education: Insights from pre-service science teachers' knowledge, attitudes, and perceptions. In: 2025 14th International Conference on Educational and Information Technology (ICEIT); 2025 March, IEEE; 2025. p. 380-5. doi:10.1109/ICEIT64364.2025.10975974
- 21. Tin TT, Chor KY, Hui WJ, Cheng WY, Kit CJ, Husin WNAAW, Tiung LK. Demographic factors shaping artificial intelligence (AI) perspectives: Exploring their impact on university students' academic performance. Pak J Life Soc Sci. 2024;22(2):12248-64. doi:10.57239/PJLSS-2024-22.2.000876
- 22. Pan G, Ni J. A cross-sectional investigation of ChatGPT-like large language models application among medical students in China. BMC Med Educ. 2024;24(1):908. doi:10.1186/s12909-024-05871-8
- 23. Das S, Argade SD, De HK, Kilodas R, Sahoo B, Sreenivasan P. ChatGPT as an AI-enabled academic assistant: attitude and usage among fisheries students. Indian J Ext Educ. 2024;60(3):54-59. https://doi.org/10.48165/ IJEE.2024.60311
- 24. Abequibel B, Ricohermoso C, Alieto EO, Lucas RI. Prospective reading teachers' digital reading habit: a cross-sectional design. TESOL Int J. 2021;16(4.4):246-260.

- 25. Alieto EO, Ricohermoso C, Abequibel B. An investigation on digital and print reading attitudes: samples from Filipino preservice teachers from a non-metropolitan-based university. Asian EFL. 2020;27(4.3):278-311.
- 26. Bagares U, Alieto E, Buslon J, Somblingo R, Cabangcala R. Perceptions of Filipino preservice teachers toward the quality of online learning during the COVID-19 pandemic. In: Motahhir S, Bossoufi B, editors. Digital Technologies and Applications. ICDTA 2023. Lecture Notes in Networks and Systems. Cham: Springer; 2023. p. 421-30.
- 27. Clorion FD, Fuentes JO, Suicano DJ, Estigoy E, Serdenia JR, Alejandrino P, et al. Smartphones and syntax: A quantitative study on harnessing the role of mobile-assisted language learning in the digital classroom and applications for language learning. Procedia Comput Sci. 2025; 257:7-14.
- 28. de la Rama JM, Sabasales M, Antonio A, Ricohermoso C, Torres J, Devanadera A, et al. Virtual teaching as the 'new norm': analyzing science teachers' attitude toward online teaching, technological competence and access. Int J Adv Sci Technol. 2020;29(7):12705-15.
- 29. Fernandez MA, Cabangcala C, Fanilag E, Cabangcala R, Balasa K, Alieto EO. Technology in education: An attitudinal investigation among prospective teachers from a country of emerging economy. In: Farhaoui Y, Hussain A, Saba T, Taherdoost H, Verma A, editors. Artificial Intelligence, Data Science and Applications. ICAISE 2023. Lecture Notes in Networks and Systems, vol. 837. Cham: Springer; 2024. p. 248-55.
- 30. Flores B, Amabao K, Aidil-Karanain F, Dumagay AH. Bachelor of Culture and Arts student's attitude toward using digital games for learning. Sci Int (Lahore). 2023;35(3):357-61.
- 31. Lozada P, Sarona J, Marumas DG, Hasan NN, Aidil-Karanain F, Alieto EO. Correlation among learners' economic ability, attitude toward ICT, and reading performance: An exploration among twenty-first century teacher aspirants. In: Fortino G, Kumar A, Swaroop A, Shukla P, editors. Proceedings of Third International Conference on Computing and Communication Networks. ICCCN 2023. Lecture Notes in Networks and Systems. Vol. 977. Singapore: Springer; 2023. p. 41-52. https://doi.org/10.1007/978-981-97-2671-4_4
- 32. Bantoto FMO, Rillo R, Abequibel B, Mangila BB, Alieto EO. Is AI an effective "learning tool" in academic writing? Investigating the perceptions of third-year university students on the use of artificial intelligence in classroom instruction. In: International Conference on Digital Technologies and Applications. Cham: Springer Nature Switzerland; 2024. p. 72-81. https://doi.org/10.1007/978-3-031-68650-4_8
- 33. Clorion FDD, Alieto E, Fuentes J, Suicano DJ, Natividad ER, Miñoza M, et al. Artificial intelligence in academic writing in higher education in a country of emerging economy: An analysis of knowledge, perceived influence, extent of use, and perception. In: Lahby M, Maleh Y, Bucchiarone A, Schaeffer SE, editors. General Aspects of Applying Generative AI in Higher Education. Cham: Springer; 2024. p. 301-26.
- 34. Giray L, De Silos PY, Adornado A, Buelo RJV, Galas E, Reyes-Chua E, Santiago C, Ulanday ML. Use and impact of artificial intelligence in Philippine higher education: Reflections from instructors and administrators. Internet Ref Serv Q. 2024;28(3):315-338. doi:10.1080/10875301.2024.2352746
- 35. Santos ZMB, Cadano KJ, Gyawali YP, Alieto EO, Clorion FD. Navigating between conditions and convictions: Investigating the influence of sociogeographical factors on interest and attitudes toward artificial intelligence among secondary school teachers. In: Motahhir S, Bossoufi B, editors. Digital Technologies and Applications. ICDTA 2024. Lecture Notes in Networks and Systems, vol. 1101. Cham: Springer; 2024. p. 168-77.
- 36. Alieto E, Devanadera A, Buslon J. Women of K-12: Exploring teachers' cognition in language policy implementation. Asian EFL J. 2020;24(4.1):143-62.
- 37. Espartinez AS. Exploring student and teacher perceptions of ChatGPT use in higher education: A Q-methodology study. Comput EducArtif Intell. 2024 Dec; 7:100264. https://doi.org/10.1016/j.caeai.2024.100264
- 38. Razmerita L. Human-Al collaboration: A student-centered perspective of generative Al use in higher education. In: Proceedings of the 23rd European Conference on e-Learning ECEL 2024. Academic Conferences and Publishing International; 2024. p. 320-9. doi:10.34190/ecel.23.1.3008

- 39. Liu Y. Leveraging the power of AI in undergraduate computer science education: Opportunities and challenges. In: 2023 IEEE Frontiers in Education Conference (FIE). IEEE; 2023. p. 1-5. doi:10.1109/FIE58773.2023.10343474
- 40. Ullaa MB, Peralesa WF, Busbus SO. ChatGPT in language education: How to use it ethically? Pasaa. 2023;67(1):361-77. doi:10.58837/CHULA.PASAA.67.1.12
- 41. Khajavi Y, Ezhdehakosh M. Enhancing language teacher education: Exploring the integration of Alpowered tools in preservice teacher education. J Res Appl Linguist. 2025;16(1):174-91. doi:10.22055/rals.2024.48226.3405
- 42. Gregorio TAD, Alieto EO, Natividad ERR, Tanpoco MR. Are preservice teachers "totally PACKaged"? A quantitative study of pre-service teachers' knowledge and skills to ethically integrate Artificial Intelligence (AI)-based tools into Education. In: International Conference on Digital Technologies and Applications. Cham: Springer Nature Switzerland; 2024. p. 45-55. doi:10.1007/978-3-031-68660-3_5
- 43. Hur JW. Fostering Al literacy: Overcoming concerns and nurturing confidence among preservice teachers. Inf Learn Sci. 2025;126(1/2):56-74. doi:10.1108/ILS-11-2023-0170
- 44. Rivera-García M, Mejía-Rivera K. Assessing Students' Adoption of ChatGPT in the Engineering Faculty: Insights from a Honduran Higher Education Setting. In: International Conference on Interactive Collaborative Learning. Cham: Springer Nature Switzerland; 2024. p. 514-24. doi:10.1007/978-3-031-85652-5_51
- 45. Sangeethapriya S. Al based ChatGPT impacts on second language learners. In: 2024 10th International Conference on Communication and Signal Processing (ICCSP). IEEE; 2024. p. 790-4. doi:10.1109/ICCSP60870.2024.10543703
- 46. Tanpoco M, Rillo R, Alieto EO. Filipino to English transfer errors in writing among college students: implications for the senior high school English curriculum. Asian EFL. 2019;26(6.1):227-46.
- 47. Obed K, Anangisye WA, Sanga P. Academic integrity considerations of using ChatGPT in assessment activities among university student teachers. Qual Assur Educ. 2025;33(2):305-20. doi:10.1108/QAE-06-2024-0100
- 48. Dietrich LK, Grassini S. Assessing ChatGPT acceptance and use in education: a comparative study among German-speaking students and teachers. Educ Inf Technol. 2025:1-26. doi:10.1007/s10639-025-13658-7
- 49. Haq MZU, Cao G, Abukhait RMY. Examining students' attitudes and intentions towards using ChatGPT in higher education. Br J Educ Technol. 2025. doi:10.1111/bjet.13582
- 50. Lo CK, Yu PLH, Xu S, Ng DTK, Jong MSY. Exploring the application of ChatGPT in ESL/EFL education and related research issues: A systematic review of empirical studies. Smart Learn Environ. 2024;11(1):50. https://doi.org/10.1186/s40561-024-00342-5
- 51. Tarannum T, Ahmed R, Seraj PMI, Khan TS. ELT Teachers' perception and usage of ChatGPT as a teaching tool in the Bangladeshi EFL context. Educ Inf Technol. 2025;1-27. https://doi.org/10.1007/s10639-025-13515-7
- 52. Li P, Tan R, Yang T, Meng L. Current status and associated factors of digital literacy among academic nurse educators: a cross-sectional study. BMC Med Educ. 2025;25(1):16. https://doi.org/10.1186/s12909-024-06624-3
- 53. Bhaskar P, Misra P, Chopra G. Shall I use ChatGPT? A study on perceived trust and perceived risk towards ChatGPT usage by teachers at higher education institutions. Int J Inf Learn Technol. 2024;41(4):428-447. https://doi.org/10.1108/IJILT-11-2023-0220
- 54. Uğraş H, Uğraş M, Papadakis S, Kalogiannakis M. Innovative early childhood STEM education with ChatGPT: Teacher perspectives. Technol Knowl Learn. 2025;30(2):809-831. https://doi.org/10.1007/s10758-024-09804-8
- 55. Hopcan S, Türkmen G, Polat E. Exploring the artificial intelligence anxiety and machine learning attitudes of teacher candidates. Educ Inf Technol. 2024;29:7281-7301. https://doi.org/10.1007/s10639-023-12086-9

56. Fuentes JO, Clorion FDD, Abequibel B, Valerio AS, Alieto EO. Understanding the attitude of teacher education students toward utilizing ChatGPT as a learning tool: A quantitative analysis. In: International

https://doi.org/10.1007/978-3-031-68650-4_9

57. Zimotti G, Frances C, Whitaker L. The future of language education: Teachers' perceptions about the surge of AI writing tools. Technol Lang Teach Learn. 2024;6(2):1136. https://doi.org/10.29140/tltl.v6n2.1136

Conference on Digital Technologies and Applications. Cham: Springer Nature Switzerland; 2024. p. 82-93.

- 58. Francisco CI, Pantaleon CE, Lantaya GMA, Francisco WAR, Alieto EO. Understanding the attitude of senior high school students toward utilizing ChatGPT as a learning tool: A quantitative analysis. In: Sustainable Data Management: Navigating Big Data, Communication Technology, and Business Digital Leadership. Vol. 1. Cham: Springer Nature Switzerland; 2025. p. 37-49. https://doi.org/10.1007/978-3-031-83911-5_4
- 59. Allehyani SH, Algamdi MA. Digital competences: early childhood teachers' beliefs and perceptions of ChatGPT application in teaching English as a second language (ESL). Int J Learn Teach Educ Res. 2023;22(11):343-63. https://doi.org/10.26803/ijlter.22.11.18
- 60. Alruwaili AR, Kianfar Z. Investigating EFL female Saudi teachers' attitudes toward the use of ChatGPT in English language teaching. Forum Linguist Stud. 2025;7(2):203-16. https://doi.org/10.30564/fls.v7i2.7937
- 61. Nissim Y, Simon E. The diffusion of artificial intelligence innovation: perspectives of preservice teachers on the integration of ChatGPT in education. J Educ Teach. 2025;51(2):381-401. https://doi.org/10.1080/0260 7476.2025.2469128
- 62. Brandhofer G, Tengler K. Acceptance of Al applications among teachers and student teachers. Discov Educ. 2025;4(1):1-25. https://doi.org/10.1007/s44217-025-00637-w
- 63. Wang C, Li X, Liang Z, Sheng Y, Zhao Q, Chen S. The roles of social perception and AI anxiety in individuals' attitudes toward ChatGPT in education. Int J Hum Comput Interact. 2024;41(9):5713-30. https://doi.org/10.1080/10447318.2024.2365453
- 64. Ulla MB, Perales WF, Busbus SO. 'To generate or stop generating response': Exploring EFL teachers' perspectives on ChatGPT in English language teaching in Thailand. Learn Res Pract. 2023;9(2):168-82. https://doi.org/10.1080/23735082.2023.2257252
- 65. Taani O, Alabidi S. ChatGPT in education: Benefits and challenges of ChatGPT for mathematics and science teaching practices. Int J Math Educ Sci Technol. 2024:1-30. https://doi.org/10.1080/0020739X.2024.2357341
- 66. Yadav PV, Kollimath US, Giramkar SA, Pisal DT, Badave SS, Dhole V. Impact of ChatGPT and other AI advancements on the teaching-learning process: initial trend. In: 2023 3rd International Conference on Emerging Smart Technologies and Applications (eSmarTA). IEEE; 2023. p. 1-6. https://doi.org/10.1109/eSmarTA59349.2023.10293464
- 67. Wijaya, T. T., Su, M., Cao, Y., Weinhandl, R., & Houghton, T. (2025). Examining Chinese preservice mathematics teachers' adoption of AI chatbots for learning: Unpacking perspectives through the UTAUT2 model. Education and Information Technologies, 30(2), 1387-1415. https://doi.org/10.1007/s10639-024-12837-2
- 68. Lopez-Fernandez D, Vergaz R. ChatGPT in computer science education: a case study on a database administration course. Appl Sci. 2025;15(2):985. https://doi.org/10.3390/app15020985
 - 69. Singh YK. Fundamental of research methodology and statistics. New Delhi: New Age International; 2006.
- 70. Stockemer D. Quantitative methods for the social sciences: A practical introduction with examples in SPSS and Stata. Springer International Publishing; 2019. p. 31-2. https://doi.org/10.1007/978-3-319-99118-4
- 71. Alieto EO, Dumagay AH, Serdenia JRC, Labad EM, Galang SK, Vallejo RG. Attitude toward artificial intelligence among teacher aspirants in an emerging AI landscape: A gender-based analysis. In: González Vallejo R, Moukhliss G, Schaeffer E, Paliktzoglou V, editors. The Second International Symposium on Generative AI and Education (ISGAIE'2025). Lecture Notes on Data Engineering and Communications Technologies, vol. 262. Springer; 2025. https://doi.org/10.1007/978-3-031-98476-1_39

- 72. Bacang B, Rillo R, Alieto O. The gender construct in the use of rhetorical appeals, hedges and boosters in ESL writing: A discourse analysis. Asian EFL J. 2019;25(52):210-24.
- 73. Berganio ME, Tanpoco M, Dumagay AH. Preservice teachers' perceived level of digital literacy: A quantitative study from a developing country. In: Motahhir S, Bossoufi B, editors. ICDTA 2024. Lecture Notes in Networks and Systems, vol. 1101. Cham: Springer; 2024. p. 158-67.
- 74. Cabangcala R, Alieto EO, Estigoy E, Delos Santos M, Torres J. When language learning suddenly becomes online: Analyzing English as Second Language Learners' (ELLs) attitude and technological competence. TESOL Int J. 2021;16(4.3):115-131.
- 75. Casiano PKM, Encarnacion BA, Jaafar SH, Alieto EO. Digital-game-based language learning: An exploration of attitudes among teacher aspirants in a non-metropolitan area. In: Fortino G, Kumar A, Swaroop A, Shukla P, editors. Proceedings of Third International Conference on Computing and Communication Networks. ICCCN 2023. Lecture Notes in Networks and Systems, vol 917. Singapore: Springer.
- 76. Devanadera A, Alieto O. Lexical bias among Tagalog-speaking Filipino preschool children. Asian EFL J. 2019;24(4):207-28.
- 77. Gapol PAM, Alieto EO, Capacio EA, Dumagay AH, Francisco CI, Vallejo RG. Preservice teachers' extent of knowledge and willingness to adopt generative AI in higher education. In: González Vallejo R, Moukhliss G, Schaeffer E, Paliktzoglou V, editors. The Second International Symposium on Generative AI and Education (ISGAIE'2025). Lecture Notes on Data Engineering and Communications Technologies. Vol. 262. Cham: Springer; 2025. https://doi.org/10.1007/978-3-031-98476-1_6
- 78. Gapol PA, Bantoto FM, Fuentes J, Pil AO, Sarona J, Lacao-Lacao L, et al. Is sustainability a 'lesson plan' for preservice teachers? Extent of environmental awareness in the framework of waste management among preservice teachers. Procedia Comput Sci. 2024;236:527-532.
- 79. Gonzales LI, Yusoo RJ, Miñoza M, Casimiro A, Devanadera A, Dumagay AH. Reading in the 21st century: Digital reading habit of prospective elementary language teachers. In: Farhaoui Y, Hussain A, Saba T, Taherdoost H, Verma A, editors. Artificial Intelligence, Data Science and Applications. ICAISE 2023. Lecture Notes in Networks and Systems, vol. 837. Cham: Springer; 2024. p. 134-41.
- 80. Lee A, Alieto E. Analyzing teaching self-efficacy correlates in virtual education: A gender-driven structural equation modeling approach. Malays J ELT Res. 2023;20(2):110-28.
- 81. Maghanoy J, Tahil M, Sulasula J, Vallejo RG, Dumagay AH, Alieto EO. Gender and educational attainment dynamics on artificial intelligence anxiety among educators with emerging understanding. In: González Vallejo R, Moukhliss G, Schaeffer E, Paliktzoglou V, editors. The Second International Symposium on Generative AI and Education (ISGAIE'2025). Lecture Notes on Data Engineering and Communications Technologies. Vol. 262. Springer; 2025. https://doi.org/10.1007/978-3-031-98476-1_40
- 82. Pahulaya V, Reyes A, Buslon J, Alieto EO. Gender divide in attitude towards Chavacano and cognition towards mother tongue among prospective language teachers. Asian EFL. 2020;27(3.1):41-64.
- 83. Serdenia JR, Dumagay AH, Balasa KA, Capacio EA, Lauzon LDS. Attitude, acceptability, and perceived effectiveness of artificial intelligence in education: A quantitative cross-sectional study among future teachers. LatlA. 2025;3:313
- 84. obledo DAR, Zara CG, Montalbo SM, Gayeta NE, Gonzales AL, Escarez MGA, Maalihan ED. Development and validation of a survey instrument on knowledge, attitude, and practices (KAP) regarding the educational use of ChatGPT among preservice teachers in the Philippines. Int J Inf Educ Technol. 2023;13(10):1582-90. doi:10.18178/ijiet.2023.13.10.1965
- 85. Zimotti G, Frances C, Whitaker L. The future of language education: Teachers' perceptions about the surge of AI writing tools. Technol Lang Teach Learn. 2024;6(2):1-24.
- 86. Teubner T, Flath CM, Weinhardt C, et al. Welcome to the Era of ChatGPT et al. Bus Inf Syst Eng. 2023;65(2):95-101. https://doi.org/10.1007/s12599-023-00795-x

87. Lin Z. Why and how to embrace AI such as ChatGPT in your academic life. R Soc Open Sci. 2023 Aug 23;10(8):230658. https://doi.org/10.1098/rsos.230658

88. Taani O, Alabidi S. ChatGPT in education: benefits and challenges of ChatGPT for mathematics and science teaching practices. Int J Math Educ Sci Technol. 2024;1-30. https://doi.org/10.1080/0020739X.2024.2357341

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