The Role of Artificial Intelligence in Teaching and Administrative Tasks: Perspectives of DepEd Personnel

Joel V. Cubio, MST

Head Teacher 1,Purok Narra, Mabua, Tandag City, Surigao del Sur 8300, Philippines

DOI: https://dx.doi.org/10.47772/IJRISS.2025.90400502

Received: 25 March 2025; Accepted: 02 April 2025; Published: 05 May 2025

ABSTRACT

The rapid integration of Artificial Intelligence (AI) in education has introduced new opportunities and challenges to teaching and school management. AI tools such as Chat GPT, Grammarly, and AI-based lesson planners are transforming how educators deliver lessons and manage administrative tasks (de Jong, 2020; Takona, 2024). This study explored the perceptions, usage patterns, and attitudes of DepEd personnel in Tandag City toward AI tools, highlighting both the potential benefits and concerns associated with AI adoption. A descriptive quantitative research design was employed, involving 174 DepEd personnel from various roles, including teachers (82.2%), master teachers (5.7%), principals (2.9%), and administrative staff (1.7%). Data were gathered through an online survey and analyzed using statistical methods to determine the respondents' demographic profiles, level of AI usage, perceptions, and attitudes toward AI integration in education.

The findings revealed that most respondents (87.4%) were familiar with AI tools, with Chat GPT being the most commonly used application (60.9%), consistent with trends noted by Zhang et al. (2021). Although AI usage frequency varied, 24.7% of respondents reported using AI tools weekly, while 20.1% used them daily, and 37.4% used them rarely. Despite the widespread use of AI, formal training on AI tools remained limited, with 86.2% of respondents reporting no attendance at related seminars or training, reflecting the gaps identified by Anwar and Gupta (2021). This gap highlights the need for professional development initiatives to build AI literacy and confidence among educators.

The study also revealed a generally positive perception of AI, with a mean perception score of 3.71 (SD = 0.33), recognizing its potential to enhance creativity, innovation, and productivity (Davenport et al., 2020). However, respondents expressed concerns about data privacy (64.9%) and job displacement (58.6%), as well as skepticism regarding the reliability of AI-generated content (54.0%) (Frey & Osborne, 2017; Taddeo & Floridi, 2018). While there was cautious optimism regarding the future use of AI in education, many respondents (60.4%) preferred human interaction over AI-powered assistants (Chen et al., 2020).

To address these challenges, the study recommends targeted training programs that emphasize practical applications, data security, and ethical considerations. Enhancing AI literacy will enable educators to maximize the benefits of AI while mitigating potential risks. Further research on the long-term impacts of AI adoption in education is essential to ensure effective and responsible integration that fosters inclusive and adaptive learning environments (Brynjolfsson & McAfee, 2017).

Keywords: AI in Education; DepEd Personnel Perspectives; Quantitative – Descriptive Design; Purposive Sampling; AI Adoption Challenges, Tandag City - Philippines

INTRODUCTION

In recent years, Artificial Intelligence (AI) has become a powerful tool that is changing the way education works. AI offers new ways to improve how teachers teach and make school management easier (de Jong, 2020). Tools like Chat GPT, Grammarly, AI-based lesson planners, and chatbots can help teachers and school staff do their work faster and more effectively. These AI tools have the potential to make learning more

personalized for students**,** help teachers save time**,** and support better decisions in schools. Here in the Philippines, the Department of Education (DepEd) is beginning to explore these tools to improve education and school management.

Today, AI is changing traditional ways of teaching by giving students learning experiences that fit their needs. For example, AI-powered platforms can adjust lessons depending on a student's learning level, helping them stay engaged and learn better. Studies show that teachers believe AI can help students become more creative, think critically, and receive lessons that match their abilities**.** AI also assists teachers with tasks like making lesson plans, checking student work, and identifying who needs extra help, so teachers can focus more on meaningful interactions with their students (Takona, 2024).

AI is also helping with school management and office tasks. It can handle data organization, scheduling, and communication**,** making work easier for administrators. A recent study explains how school leaders and AI tools can work together, especially in analyzing school data to make better decisions. With AI handling routine work, school staff can spend more time on planning and solving important problems (Dai et al., 2024).

However, even though AI offers many benefits, it's important to understand how teachers and school staff feel about using AI. Research shows that teachers' knowledge about AI, how easy AI tools are to access, and how useful they think AI is all affect whether they want to use these tools or not. Some teachers worry about data privacy, ethics, and losing jobs to AI. Others may hesitate to use AI because they don't fully understand how it works, which is why proper training and support are needed (Robinos et al., 2024).

In response to the growing importance of AI, the Philippine government has taken steps to prepare for its use in education and other areas. In 2021, the Department of Trade and Industry (DTI) introduced the National Artificial Intelligence Roadmap to help make the Philippines a leader in AI development. Also, some schools like Mapúa University are now including AI lessons in their courses, such as learning how to use Chat GPT for teaching and learning (DTI Philippines, 2021).

Clearly, AI in education brings both opportunities and challenges. For DepEd teachers and staff, it's important to learn about and adapt to these new tools so they can be used effectively in the classroom and in managing schools. This study hoped to understand the views of DepEd personnel about AI—how much they know, how often they use it, what benefits and problems they see, and what worries they have about ethics. The results helped create strategies to properly use AI in Schools of Tandag City and ensured that these technologies support the goal of giving quality education to all learners**.**

Research Questions

What is the demographic profile of DepEd personnel in terms of age, sex, educational attainment, position/designation in DepEd, number of years in service, AI Usage?

What is the level of usage of Artificial Intelligence (AI) tools among DepEd personnel in terms of frequency of AI tools usage, types of AI tools used, attendance in AI-related training or seminars?

What is the perception of DepEd personnel toward Artificial Intelligence (AI) in terms of understanding how AI works, comfort in using AI tools, belief in AI's ability to improve life quality, trust in AI-generated recommendations, concerns about AI replacing human jobs, AI's role in enhancing creativity, innovation, and learning, data privacy and ethical issues surrounding AI?

What are the attitudes of DepEd personnel toward the future use of AI in education, specifically regarding AI's role in improving the education system, AI's impact on teacher roles and student learning, Recommendations for AI integration in DepEd processes?

What are the perceived risks and challenges of AI adoption among DepEd personnel, including Bias and fairness in AI decision-making, Impact on employment and human interaction, Data privacy and security concerns?

What benefits do DepEd personnel associate with AI tools, especially in terms of Efficiency and productivity, Enhancing creativity and innovation in teaching, Support for administrative and instructional tasks?

What innovation, intervention, or strategy can be made to DepEd Personnel of Tandag City based on the perceptions, usage patterns, and challenges identified in AI adoption?

Objectives of the Study

This study aimed to explore and understand the perceptions of Department of Education (DepEd) personnel in Tandag City regarding the use of Artificial Intelligence (AI) in education and school management. Specifically, the study sought to:

Determine the level of awareness and knowledge of DepEd Tandag City personnel about AI tools and Technologies.

Identify the frequency and extent of AI tool usage among teachers and school staff in performing teaching and administrative tasks.

Examine the perceived benefits of using AI in education, including its impact on teaching, learning, and school management.

Explore the perceived challenges and limitations of AI use in schools, including concerns related to ethics, data privacy, and job security.

Assess the readiness and willingness of DepEd Tandag City personnel to adopt AI tools in their professional roles.

Provide recommendations on how to effectively integrate AI in schools, including possible training and support needed for teachers and staff.

LITERATURE REVIEW

Artificial Intelligence (AI) has become a transformative technology in education, bringing forward innovative tools that aim to enhance teaching methodologies and improve administrative efficiency (de Jong, 2020). AI tools such as Chat GPT, Grammarly, Quill bot, AI-based lesson planners, and chatbots are now widely used to personalize learning, streamline communication, and automate routine processes in schools (Luckin et al., 2016). These tools adapt to individual learners' needs, providing tailored feedback and content that promote active engagement (Holmes et al., 2019). AI also plays a pivotal role in helping teachers reduce workload, enabling them to focus on critical thinking activities and student interaction rather than repetitive tasks (Pedro et al., 2019).

AI is reshaping traditional teaching methods by offering adaptive learning platforms that address various student learning styles and paces (Takona, 2024). Tools like AI-based lesson planners and grading systems support teachers by automating content creation and assessments, allowing them to identify and address students' strengths and weaknesses efficiently (Roll & Wylie, 2016). According to Zawacki-Richter et al. (2019), AI has the potential to foster higher-order thinking skills, such as creativity and problem-solving, by freeing up educators' time for more interactive, student-centered approaches. AI-assisted personalized learning enhances motivation, engagement, and retention among students (Chen et al., 2020).

Beyond classroom use, AI is revolutionizing administrative functions in education. AI-powered systems automate tasks like scheduling, data entry, and communication, leading to more efficient school management (Dai et al., 2024). The ability of AI to analyze massive datasets allows school leaders to make informed, data-driven decisions, which can significantly improve institutional planning and performance (Holmes et al., 2022). AI in administration helps reduce human error and optimize resource allocation, allowing administrative staff to focus on strategic priorities rather than mundane tasks (Panigrahi et al., 2023).

Despite AI's benefits, educators' perceptions of AI tools are mixed. Factors like AI literacy, accessibility, and perceived usefulness influence how teachers and administrators adopt AI in their work (Robinos et al., 2024). As highlighted by Aoun (2017), while AI tools can enhance productivity, many educators fear AI could undermine human judgment and creativity. Other studies report that data privacy, ethical risks, and job security are significant concerns among educators (Smutny & Schreiberova, 2020). Teachers may resist AI adoption due to lack of training and trust in AI-generated content (Zawacki-Richter et al., 2019). Therefore, professional development and capacity-building initiatives are crucial to improving AI acceptance among educators (Luckin et al., 2016).

Recognizing AI's growing importance, the Philippine government has initiated strategic plans such as the National Artificial Intelligence Roadmap, launched in 2021 by the Department of Trade and Industry (DTI), which aims to make the Philippines a leader in AI development (DTI Philippines, 2021). Educational institutions are also responding proactively. Mapúa University and other higher education institutions now offer AI-related courses that cover AI foundations, prompt engineering, and practical applications in education (Sison, 2023). These initiatives aim to equip educators and students with AI skills necessary for future-ready learning environments.

AI integration in education presents both opportunities and challenges. On the one hand, AI can enhance creativity, improve student engagement, and streamline school operations (Chen et al., 2020; Holmes et al., 2019). On the other hand, ethical concerns, risks of AI errors, biases, and job displacement require careful consideration (Floridi et al., 2018). Addressing these concerns is essential to avoid the misuse of AI and ensure that its benefits are fully realized. Robinos et al. (2024) emphasize that ongoing teacher training and ethical guidelines are necessary to mitigate fears and improve AI integration in schools.

Despite global research, limited empirical studies focus on the perceptions of DepEd personnel in the Philippines regarding AI use in education. There is a need to explore how Filipino educators and administrators perceive AI, how frequently they use AI tools, and what challenges and ethical concerns they face. Understanding these perspectives will inform policies and capacity-building efforts to ensure AI is integrated in ways that align with national educational goals and values.

METHODOLOGY

Research Design

This study utilized a descriptive quantitative research design, which was appropriate for understanding and analyzing the perceptions of DepEd personnel on Artificial Intelligence (AI). Descriptive research allowed the researcher to systematically collect data, summarize, and interpret information about the current practices, attitudes, and experiences of respondents toward AI tools without manipulating variables. This design was suitable for obtaining a broad overview of AI usage, perceptions, and challenges faced by teachers and administrative staff within DepEd.

Sampling and Respondents

The study employed a purposive sampling technique to select respondents who were currently employed under the Department of Education (DepEd). Participants were selected based on their active roles within DepEd, including teachers, master teachers, head teachers, supervisors, principals, and administrative staff. A total of 174 DepEd personnel participated in the survey, representing various age groups, sex, educational attainments, and professional designations. The inclusion criteria required that participants must be actively working under DepEd, regardless of AI usage status. The exclusion criteria included individuals not currently employed in DepEd and those who declined participation.

Data Gathering Procedure

The data were gathered through an online survey questionnaire using Google Forms, distributed via official school emails, messenger groups, and other communication platforms used by DepEd staff. The survey form

included demographic data on (age, sex, educational attainment, position, years of service) and questions on AI usage and perceptions. The survey consisted of close-ended questions including Likert scale items (Strongly Agree to Strongly Disagree), multiple-choice, and checklist formats. Participants were given two weeks to respond, and reminders were sent to encourage completion. The data collection ran from March 10, 2025 to March 24, 2025.

Before formal distribution, a pilot test was conducted with 10 DepEd personnel to check for the clarity, reliability, and comprehensiveness of the questionnaire. Based on feedback, minor revisions were made to improve wording and ensure a smooth flow of the survey items.

Data Analysis

Collected data were encoded and analyzed using Microsoft Excel and Jamovi software. The following statistical methods were used; Frequency and percentage distributions to describe participants' demographic profiles and AI tool usage patterns. Mean and standard deviation to analyze responses on the Likert scale regarding perceptions of AI tools. Interpretation of Likert scale means was done using a standard scale: 4.20–5.00: Strongly Agree, 3.40–4.19: Agree, 2.60–3.39: Neutral, 1.80–2.59: Disagree, 1.00–1.79: Strongly Disagree. The analysis focused on determining the overall perception of AI, common AI tools used, and the frequency of AI application in DepEd workplace.

Ethical Considerations

This study adhered to ethical research principles to ensure the privacy, confidentiality, and voluntary participation of respondents. Informed consent was obtained electronically before participants could proceed with the survey. The consent form explained the purpose, procedures, voluntary nature, anonymity, and data protection of the study. Confidentiality: No personal identifiers (e.g., names, employee numbers) were collected, and responses were kept strictly confidential and used solely for research purposes. Respondents were informed of their right to refuse to answer any question or withdraw from the study at any time without consequence. All data were stored in password-protected files and devices accessible only to the researcher. Necessary permissions and approval were obtained from appropriate DepEd authorities and research ethics committees, ensuring compliance with institutional research guidelines.

RESULTS AND DISCUSSION

This section presented the demographic and professional profile of DepEd personnel who participated in the study that highlighted their age distribution, gender composition, educational attainment, position or designation, years in service, and AI usage. The data gathered provides a comprehensive understanding of the respondents' characteristics, which helps identify patterns and trends related to their engagement with artificial intelligence (AI) tools and their perspectives on integrating technology into the educational setting. The analysis also explored the factors influencing AI adoption and highlights the diversity of professional backgrounds among the respondents.

Profile of DepEd Personnel

Table 1-A. Age Distribution of Respondents

Age Group	Frequency (F)	Percentage (%)
20-29 Years Old	42	24.1
30-39 Years Old	46	26.4
40-49 Years Old	43	24.7
50-59 Years Old	38	21.8

60 Years Old and Above	6	2.9
Total	174	99.9

Legend: Age Group (Col 1): Classification of respondents. Frequency (Col 2): Number of respondents per group, Percentage (Col 3): % of respondents per group (N = 171*).*

As shown in Table 1-A, a total of 174 respondents participated in the survey, with the largest proportion (26.4%) in the 30-39 age group, followed by 24.7% in the 40-49 group, and 24.1% in the 20-29 group. Participants aged 50-59 made up 21.8%, while those aged 60 and above represented only 2.9%. These results suggest that early and mid-career professionals dominate the workforce in DepEd Tandag City, which aligns with Cai et al. (2021), who found that younger educators are more likely to engage with emerging technologies like AI. The small representation of those aged 60 and above points to a generational gap in AI exposure, as older educators may be less inclined to adopt new technologies (Robinos et al., 2024). Younger and middle-aged teachers are likely more receptive to AI integration due to greater technological exposure (Takona, 2024), while older teachers may express concerns about job displacement and ethical issues (Howard et al., 2020). To address these differences, AI training programs should be tailored to each age group, with advanced workshops for younger teachers and foundational training for older educators (Dai et al., 2024).

Table 1-B. Sex Distribution of Respondents

Sex	Frequency	Percentage
Female	146	83.9
Male	28	16.1
Total	174	100

Legend: Sex (Col 1): Respondent's gender. Frequency (Col 2): Number of respondents per category, Percentage (Col 3): % of respondents per category.

Based on Table 1-B: The sex distribution of respondents indicated that the majority of the participants in the study were female accounted for 146 respondents or 83.9% of the total sample. In contrast, only 28 respondents, or 16.1%, identified as male. This unequal distribution may suggest a gender imbalance in the sample, which could reflect the gender dynamics of the population within the study context. The predominance of female participants aligns with previous research by Smith et al. (2019), which found that certain professions, including education, often have a higher representation of women. This could be particularly relevant when studying sectors such as education, where female workers generally outnumber their male counterparts (Robinson & Johnson, 2021). While this data is important for understanding the composition of the sample, it is also crucial to consider the implications of such a gender imbalance when drawing conclusions or making generalizations about the population as a whole. Additionally, gender disparities in the adoption of new technologies, such as AI, may influence the outcomes and analysis of the study, as different gender groups might display varying levels of receptivity to technology integration (Hassan & Cook, 2020). Thus, further exploration into how gender influences technological adoption could yield valuable insights in future studies.

Table 1-C. Education Attainment Distribution of the Respondents

Educational Attainment	Frequency	Percentage
Bachelor's Degree	129	74.1

Master's Degree	38	21.8
Doctorate Degree	1	0.6
Others	6	3.4
Total	174	99.9

Legend: Educational Attainment (Col 1): Highest education level completed. Frequency (Col 2): Number of respondents per category. Percentage (Col 3): Proportion of respondents (%) per category.

As presented in Table 1-C, most respondents held a Bachelor's Degree (74.1%, n = 129), followed by Master's Degree holders (21.8%, n = 38), with a small proportion holding Doctorate Degrees (0.6%, n = 1) and others (3.4%, n = 6). The majority were bachelor's degree aligns with the global trend of it being the minimum for entry-level positions (Sullivan et al., 2018). The small number with Doctorate Degrees reflects the high barriers to such education (Lee & Edwards, 2020). The data also aligns with Jacobs et al. (2019), indicating that higher education levels are linked to greater engagement in professional fields requiring critical thinking and problem-solving. The representation of Masters' Degrees shows the increasing importance of postgraduate education for career advancement (Harrison & Walker, 2021). Overall, the sample's educational level likely influenced their perspectives on technologies like AI.

Table 1-D Distribution of Position or Designation of the Respondents

Position/Designation	Frequency	Percentage
Teacher I-III	143	82.2
Master Teacher	10	5.7
Principal	5	2.9
Administrative Staff	3	1.7
Head Teacher	4	2.3
Supervisor	1	0.6
Others	8	4.6
Total	174	100

Legend: Position/Designation (Col 1): Job title or role of the respondents. Frequency (Col 2): Number of respondents holding each position. Percentage (Col 3): Proportion of respondents (%) in each position.

As presented in Table 1-D, the distribution of respondents' positions or designations revealed that the majority of participants held the position of Teacher I-III, comprising 82.2% (n = 143) of the total sample. Master Teachers followed with 5.7% (n = 10), while Principals represented 2.9% (n = 5). A smaller proportion of respondents were Administrative Staff (1.7%, n = 3), Head Teachers (2.3%, n = 4), and Supervisors (0.6%, n = 1). The remaining 4.6% (n = 8) selected "Others" for their designation. The dominance of Teacher I-III positions aligns with the hierarchical structure of the education system, where entry-level to mid-career teachers are more prevalent (Garcia & Martin, 2019). The representation of Master Teachers highlights the importance of experienced educators who often take on mentorship and leadership roles in schools, which is consistent with research by Lee and Nguyen (2020), who emphasized the critical role of master teachers in fostering professional development and enhancing instructional quality. The low representation of Supervisors and Principals may reflect the administrative bottlenecks and limited upper-level positions in educational institutions (Sullivan et al., 2018). The relatively small proportions of Head Teachers and Administrative Staff

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume IX Issue IV April 2025

also reflect the specialized roles they occupy within schools, often with specific responsibilities distinct from classroom teaching. Overall, the position distribution shows a sample primarily composed of classroom teachers, with a notable presence of experienced educators and a smaller but important representation from the administrative sector.

Table 1-E Distribution of Respondents' Number of Years in Service.

Years in Service	Frequency	Percentage
Less than 1 Year	15	8.6
1-5 Years	42	24.1
6-10 Years	37	21.3
11-15 Years	23	13.2
16-20 Years	15	8.6
More than 20 Years	42	24.1
Total	174	100

Legend: Years in Service (Col 1): Time in current role. Frequency (Col 2): Number of respondents per duration, Percentage (Col 3): % of respondents per duration.

As presented in Table 1-E, the distribution of respondents' number of years in service showed a varied tenure among participants. The highest proportions were seen in the 1-5 years (24.1%, n = 42) and more than 20 years (24.1%, n = 42) categories. Respondents with 6-10 years in service comprised 21.3% (n = 37), while those with 11-15 years represented 13.2% (n = 23). Respondents in the less than 1 year and 16-20 years categories both accounted for 8.6% (n = 15) of the sample. The data suggested that there was a fairly even distribution between relatively new employees and those with extensive experience, reflecting the diverse range of career stages within the organization. This finding is consistent with research by Kelloway et al. (2019), who observed that organizations often benefit from a blend of novice employees bringing fresh perspectives and experienced staff offering deep institutional knowledge. Additionally, the distribution of respondents with more than 20 years of service aligns with studies by Bryman and Bell (2021), which highlighted the retention of long-serving employees as a crucial element in maintaining organizational stability and transferring knowledge. The significant representation from those with fewer than five years of experience could indicate ongoing workforce renewal, which is necessary for adapting to new challenges and innovations, such as the integration of technology into education (Hayes & Murphy, 2020). This variation in years of service underscores the need for tailored professional development programs to support both early-career and seasoned employees.

Table 1-F AI Usage distribution by the respondents

AI Usage	Frequency	Percentage
YES	152	87.4
NO	22	12.6
Total	174	100

Legend: AI Usage (Col 1): Use of AI (YES/NO). Frequency (Col 2): Number of respondents per answer. Percentage (Col 3): % of respondents per answer.

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume IX Issue IV April 2025

As presented in Table 1-F, the majority of respondents (87.4%, n = 152) reported using Artificial Intelligence (AI) tools in their work, while a smaller proportion (12.6%, n = 22) did not utilize AI. This finding indicated a high level of engagement with AI technologies among the respondents, reflecting the increasing adoption of such tools in various professional settings. The widespread use of AI tools, such as Chat GPT, Grammarly, and AI-based lesson planners, aligns with trends identified in previous studies, such as by Nguyen et al. (2020), who found that AI adoption in education is becoming a common practice for enhancing productivity and efficiency. The smaller group of non-users suggested that a minority of respondents may still be unfamiliar or hesitant about integrating AI into their work. This could be due to concerns about job displacement, lack of training, or skepticism regarding the reliability of AI, as noted by Robinson and Johnson (2021). Overall, the data indicated that the majority of respondents are embracing AI tools, which may enhance their work processes, streamline tasks, and provide opportunities for further professional development and innovation.

Level of Usage of Artificial Intelligence (AI) Tools

This section presented the usage levels and types of AI tools utilized by DepEd personnel, including their attendance in related seminars or training. The data highlighted AI tool frequency, popular applications, and training gaps, providing insights into AI integration and areas for capacity-building in education.

Table 2-A Distribution of AI Tools Usage Frequency by the Respondents

Level of Usage	Frequency	Percentage
Daily	35	20.1
Weekly	43	24.7
Monthly	9	5.2
Rarely	65	37.4
Other Options	22	12.6
Total	174	100

Legend: Level of Usage (Col 1): How often AI is used. Frequency (Col 2): Number of users per level. Percentage (Col 3): % of users per level.

As presented in Table 2-A, the distribution of AI tools usage frequency among the respondents showed that the largest proportion of participants (37.4%, n = 65) reported using AI tools "rarely." A substantial portion of respondents (24.7%, n = 43) used AI tools on a "weekly" basis, while 20.1% (n = 35) indicated "daily" usage. A smaller percentage of respondents (12.6%, n = 22) selected "other options" for their usage frequency, and only 5.2% (n = 9) used AI tools "monthly." This distribution highlighted that while a majority of respondents did not use AI tools frequently, there was still a notable portion that engaged with AI tools on a weekly or daily basis. The high frequency of "rarely" responses could indicate that although respondents recognized the potential of AI tools, they might have used them intermittently or for specific tasks. These results are consistent with findings by Cao and Wang (2020), who suggested that the frequency of AI tool usage in education is influenced by factors such as ease of integration, perceived usefulness, and available training. The "other options" category could also reflect respondents who used AI tools in ways that did not fit neatly into the provided categories, such as sporadic or situational use, aligning with the findings of Larson et al. (2019), who observed that AI tool adoption varies significantly across different work contexts. Overall, the distribution demonstrated that while AI tool usage was not universal, it was gaining traction, particularly among those who engaged with these tools weekly.

Table 2-B Types of AI Tools Used by the Respondents

AI +H104+F+F94:H104	Frequency	Percentage
Chat GPT	106	60.9
Grammarly	16	9.2
Quill bot	16	9.2
Copy.ai	2	1.1
Jenni.ai	1	0.6
Jasper	0	0
Write sonic	0	0
Others:	33	19
Bards.ai, Cici.ai, Copilot.ai, scite.ai, AI Meta.ai, Turnitin, Gemini.ai, Canva, Gamma.ai, Perflexity.ai, Eduaide.ai,		
Total	174	100

Legend: AI Tools (Col 1): Specific AI apps or platforms. Frequency (Col 2): Number of users per tool. Percentage (Col 3): % of users per tool. Others: Additional AI tools reported.

As shown in Table 2-B**,** Chat GPT emerged as the most commonly used AI tool, with 60.9% (n = 106) of respondents indicating its use. This finding highlights the growing prevalence of conversational AI models like Chat GPT, which are increasingly integrated into workflows for tasks such as content creation, idea generation, and automation. Grammarly and Quill bot each accounted for 9.2% (n = 16), both of which are tools primarily used for improving writing quality through grammar checks and paraphrasing, respectively. Copy.ai, a tool designed to assist with content generation, was used by 1.1% (n = 2) of respondents, while Jenni.ai, which also focuses on writing assistance, was used by only 0.6% (n = 1). Interestingly, Jasper and Write Sonic, which are AI tools used for content generation, did not receive any responses, indicating that these platforms may not yet be widely adopted in this sample. The "Others" category, which included tools such as Bards.ai**,** Cici.ai, Copilot.ai, scite.ai**,** AI Meta.ai**,** Turnitin**,** Gemini.ai**,** Canva**,** Gamma.ai**,** Perflexity.ai**,** and Eduaide.ai**,** represented 19.0% (n = 33) of the responses, suggesting that there is a variety of specialized AI tools being utilized by a smaller segment of the respondents. These results are consistent with previous research that shows the adoption of AI tools is often influenced by task-specific needs and the perceived benefits of these tools in enhancing efficiency and productivity (Agarwal & Rao, 2020). The dominance of Chat GPT aligns with the findings of Zhang et al. (2021), who noted that AI-powered chatbots and assistants are gaining widespread adoption in both educational and professional settings for their versatility and user-friendliness.

Table 2-C Distribution of Attendance to Seminar or Trainings on AI Tools by the Respondents.

Responses	Frequency	Percentage
NO	150	86.2
YES	24	13.8
Total	150	100

Legend: Responses (Col 1): YES or NO answers. Frequency (Col 2): Number of respondents per answer. Percentage (Col 3): % of respondents per answer. Total: Overall count and distribution.

As presented in Table 2-C, the majority of respondents (86.2%, n = 150) indicated that they had not attended any seminars or training sessions on Artificial Intelligence (AI) tools. In contrast, only 13.8% (n = 24) of respondents reported having attended such seminars or training sessions. This significant disparity suggested that while AI tools were widely used, formal educational experiences or training related to their use might not have been as prevalent. This aligned with previous research, such as that by Anwar and Gupta (2021), which highlighted that while AI adoption was increasing in various sectors, there remained a gap in formal training programs designed to equip users with in-depth knowledge and skills in these technologies. The low percentage of respondents attending AI-focused seminars or training sessions reflected barriers such as limited access to specialized training, lack of awareness, or perceived complexity in learning AI tools (Rai et al., 2020). This distribution underscored the need for educational initiatives and professional development programs to enhance the understanding and capabilities of individuals using AI tools in their work, particularly as these technologies continued to play a growing role in many professional fields.

Perception of DepEd personnel toward Artificial Intelligence (AI)

This section presented the perceptions of DepEd personnel toward AI that highlighted positive attitudes toward its potential to enhance creativity and improve life. However, concerns about job displacement and data privacy were evident, reflecting a balanced view of AI adoption in education.

Table 3-a Distribution of Perception on AI by the Respondents.

Indicators	Descriptive	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I understand how Artificial Intelligence (AI) works.	Frequency	44	96	20	2	12
	Percentage	25.3	55.2	11.5	1.1	6.9
2. I feel comfortable using AI tools in my daily activities.	Frequency	29	84	53	3	5
	Percentage	16.7	48.3	30,5	1.7	2.9
3. AI can improve the quality of human life.	Frequency	18	94	53	4	5
	Percentage	10.3	54	30.5	2.3	2.9
4. I trust AI-generated recommendations (e.g., product suggestions, content creation).	Frequency	14	80	67	8	5
	Percentage	8	46	38.5	4.6	2.9
5. I am concerned about AI taking over human jobs.	Frequency	20	82	50	16	6
	Percentage	11.5	47.1	28.7	9.2	3.4
6. AI can be used to enhance creativity and innovation.	Frequency	29	108	30	3	4
	Percentage	16.7	62.1	17.2	1.7	2.3
7. I am worried about data privacy when using AI applications.	Frequency	26	87	48	7	6
	Percentage	14.9	50	27.6	4	3.4

Legend: Indicators (Col 1): AI views. Descriptive (Col 2): Data type (Freq/%) Strongly Agree (Col 3): % of strong agreement. Agree (Col 4): % of agreement. Neutral (Col 5): % of neutrality. Disagree (Col 6): % of disagreement. Strongly Disagree (Col 7): % of strong disagreement.

As shown in Table 3, the perceptions of DepEd personnel toward Artificial Intelligence (AI) varied across different indicators. A large majority (96%, n = 44) strongly agreed or agreed that they understood how AI works, with 25.3% strongly agree, suggesting a strong foundational understanding of AI among the respondents, consistent with studies on the importance of AI literacy (Brynjolfsson & McAfee, 2017). However, 48.3% (n = 29) reported feeling comfortable using AI tools in daily activities, while 30.5% were neutral, indicating some uncertainty about its practical applications (Binns et al., 2018). Most respondents (94%, n = 18) believed AI could improve human life, with 10.3% strongly agreeing, reflecting a positive societal impact. However, 54% (n = 14) were unsure about trusting AI-generated recommendations, which aligns with concerns over AI's reliability (Chen et al., 2020). Regarding AI's impact on jobs, 82% (n = 20) expressed worry about job displacement, with 47.1% agree, mirrored findings on AI's potential to replace human workers (Frey & Osborne, 2017). Despite this, 62.1% (n = 29) believed AI could enhance creativity and innovation that highlights its potential to drive creativity (Davenport et al., 2020). Lastly, 87% (n = 26) expressed concern about data privacy when using AI aligned with research emphasizing the need for addressing privacy issues in AI adoption (Taddeo & Floridi, 2018).

Table 3-b Summary of Perception on AI by the Respondents

Indicator	Mean	Standard Deviation	Adverbial Rating
Perception of DepEd personnel toward Artificial Intelligence (AI)	3.71	0.33	Agree

Legend: Indicator (Col 1): Aspect measured regarding AI perception. Mean (Col 2): Average score from respondents. Standard Deviation (Col 3): Measure of score variability., Adverbial Rating (Col 4): Overall interpretation of the mean score.

As shown in Table 3-b, the overall perception of DepEd personnel toward Artificial Intelligence (AI) had a mean score of 3.71 and a standard deviation of 0.33, indicating agreement with AI's use and impact. The low standard deviation reflected a strong consensus, with respondents generally sharing positive views on AI. These results aligned with previous studies by Brynjolfsson and McAfee (2017), which highlighted AI adoption across sectors, and Davenport et al. (2020), who emphasized its potential to boost productivity and innovation. However, the moderate agreement suggested some uncertainty regarding AI's impact on employment and data privacy, areas of concern noted by Frey and Osborne (2017). This highlighted the need for further education and support in integrating AI tools into education.

Attitudes of DepEd Personnel towards the Future Use of AI in Education

This section presented the attitudes of DepEd personnel toward AI in education. Most respondents showed a positive outlook on AI's potential to enhance education and healthcare, though mixed feelings persisted about content quality and preferring human interaction over AI assistants. The consensus reflected cautious optimism toward AI integration.

Table 4-a Distribution of Respondents on their Attitudes towards the future use of AI in Education

Indicators	Descriptive	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I would recommend AI tools to others.	Frequency	25	97	46	3	3
	Percentage	14.4	55.7	26.4	1.7	1.7

2. AI-generated content (e.g., images, text) is as good as human-generated content.	Frequency	16	75	62	17	4
	Percentage	9.2	43.1	35.6	9.8	2.3
3. I feel excited about the future advancements of AI.	Frequency	21	88	55	7	3
	Percentage	12.1	50.6	31.6	4	1.7
4. AI tools are accessible and easy to use.	Frequency	27	113	29	2	3
	Percentage	15.5	64.9	16.7	1.1	1.7
5. AI can improve healthcare and medicine.	Frequency	8	62	68	27	9
	Percentage	4.6	35.6	39.1	15.5	5.2
6. I prefer human interaction over AI-powered chatbots or assistants.	Frequency	29	76	60	6	3
	Percentage	16.7	43.7	34.5	3.4	1.7
7. I think AI should be used more in everyday life.	Frequency	8	42	79	37	8
	Percentage	4.6	24.1	45.4	21.3	4.6

Legend: Indicators (Col 1): AI perception statements. Descriptive (Col 2): Data type (Freq/%). Strongly Agree (Col 3): % of strong agreement. Agree (Col 4): % of agreement. Neutral (Col 5): % of neutrality. Disagree (Col 6): % of disagreement. Strongly Disagree (Col 7): % of strong disagreement.

As shown in Table 4, DepEd personnel's attitudes toward the future use of AI in education varied across several indicators. The majority (55.7%, n = 97) agreed or strongly agreed that they would recommend AI tools to others, reflecting a generally positive view of AI's utility in education. Regarding AI-generated content, 43.1% (n = 75) believed that AI-generated content was as good as human-generated content, although 35.6% remained neutral, showing some hesitation about AI's quality in content creation. When asked about the future advancements of AI, 50.6% (n = 88) expressed excitement, suggesting optimism for AI's evolving role in education. A larger proportion (64.9%, n = 113) agreed that AI tools were accessible and easy to use, aligned with research highlighting ease of adoption as critical for AI integration in education. While AI's potential to improve healthcare and medicine was recognized by 62.1% (n = 108), 60% (n = 106) preferred human interaction over AI-powered assistants, reflecting concerns about AI's limitations in replicating human relationships. Finally, 45.4% (n = 79) were neutral about the increased use of AI in everyday life, while 24.1% (n = 42) agreed it should be used more often, indicating mixed feelings on AI's broader integration. Overall, while there was optimism about AI's potential, concerns about its practical application, quality, and balance with human interaction persisted, consistent with previous studies (Brynjolfsson & McAfee, 2017).

Table 4-b Summary of Attitudes of DepEd Personnel on AI use in Education

Indicator	Mean	Standard Deviation	Adverbial Rating
Attitudes of DepEd Personnel on the future use of AI in Education	3.54	0.23	Agree

Legend: Indicator (Col 1): Measured aspect of attitudes toward AI use in education. Mean (Col 2): Average rating score.

Standard Deviation (Col 3): Variability of responses. Adverbial Rating (Col 4): Overall interpretation of the mean score.

As shown in Table 4-b, DepEd personnel's attitudes toward AI use in education were measured with a mean score of 3.54 and a standard deviation of 0.23, indicating agreement with the statements related to AI's role in improving the education system, its impact on teacher roles and student learning, and the recommendations for AI integration in DepEd processes. The relatively low standard deviation suggests a strong consensus among respondents, with views clustered around the mean, reflecting a generally positive perception of AI's potential to enhance educational practices. This aligns with previous studies, such as those by Brynjolfsson and McAfee (2017), which highlighted the increasing role of AI in transforming various sectors, including education. Furthermore, the positive perception of AI's impact on teaching and learning reflects findings from Davenport et al. (2020), who emphasized the benefits of AI in fostering innovation and enhancing educational experiences. Despite the agreement, the moderate mean score suggests that there may be some uncertainty or reservations regarding the practical implementation of AI in education, as discussed by Frey and Osborne (2017), who noted concerns about the readiness and preparedness of educational systems for AI integration.

CONCLUSION

The study revealed that DepEd personnel generally have a positive outlook toward the integration of Artificial Intelligence (AI) in education. The majority of respondents demonstrated familiarity and comfort with AI tools, recognizing their potential to enhance creativity, innovation, and productivity. Chat GPT emerged as the most commonly used tool, while most respondents reported using AI on a rare or weekly basis. However, there were notable gaps in formal training, with many respondents lacking exposure to seminars or educational programs related to AI.

Respondents acknowledged the potential of AI to improve educational practices and healthcare but expressed concerns about job displacement and data privacy. Although most agreed that AI tools are accessible and user-friendly, they remained cautious about fully trusting AI-generated content and preferred human interaction over AI-powered assistants. This cautious optimism aligned with existing literature that highlights both the benefits and challenges of AI adoption.

Given the diverse demographic and professional profiles of respondents, the study highlighted the need for targeted professional development programs to bridge knowledge gaps and build AI literacy. Training initiatives should address practical applications, data privacy, and ethical considerations to increase confidence and proficiency in using AI tools effectively. Furthermore, continued research on the evolving role of AI in education is recommended to assess long-term impacts and develop inclusive, adaptive strategies that accommodate the diverse needs of educators and learners.

AI in Education Nomenclatures

Key Concept	Definition
Chat GPT	An AI-powered conversational model used for generating text and assisting in tasks.
Grammarly	An AI tool for grammar checking and writing enhancement.
Quill bot	A paraphrasing tool that enhances written content.
Copy.ai	A content generation tool that automates writing tasks.
Jenni.ai	An AI-driven content creation assistant.
Jasper	AI tools focused on creative and marketing content generation.
Write Sonic	AI tools focused on creative and marketing content generation.
Bards.ai	Specialized AI tools used for content creation, citation, presentations, and educational support.

Cici.ai	Specialized AI tools used for content creation, citation, presentations, and educational support.
Copilot.ai	Specialized AI tools used for content creation, citation, presentations, and educational support.
scite.ai	Specialized AI tools used for content creation, citation, presentations, and educational support.
AI Meta.ai	Specialized AI tools used for content creation, citation, presentations, and educational support.
Turnitin	Specialized AI tools used for content creation, citation, presentations, and educational support.
Gemini.ai	Specialized AI tools used for content creation, citation, presentations, and educational support.
Canva	Specialized AI tools used for content creation, citation, presentations, and educational support.
Gamma.ai	Specialized AI tools used for content creation, citation, presentations, and educational support.
Perplexity.ai	Specialized AI tools used for content creation, citation, presentations, and educational support.
Eduaide.ai	Specialized AI tools used for content creation, citation, presentations, and educational support.
AI Literacy	The ability to understand, evaluate, and use AI tools effectively.
AI Adoption	The process of integrating AI tools and applications into teaching and administrative practices.
AI Integration	Embedding AI technologies into educational and administrative workflows.
AI-Driven Decision-Making	Utilizing AI to analyze data and make informed decisions.
AI-Supported Teaching	Leveraging AI tools to assist educators in lesson planning and student engagement.
Frequency of Usage	The rate at which AI tools are utilized (daily, weekly, rarely).
Usage Patterns	Typical behaviors or routines related to AI tool utilization.
Comfort Level with AI	The extent to which users feel at ease when using AI tools.
Perception Scores	Numerical values indicating users' attitudes or opinions regarding AI.
Attitudinal Rating	A scale used to measure respondents' attitudes toward AI integration.
AI Usage	Categorical representation of how often AI tools are used (Daily, Weekly, Monthly, Rarely).

Frequency Levels	
Descriptive Quantitative Research Design	A research approach focusing on systematically collecting and analyzing quantitative data to describe a phenomenon.
Purposive Sampling Technique	A non-random method used to select respondents based on specific characteristics or criteria.
Likert Scale	A rating scale measuring levels of agreement or disagreement with statements.
Ethical Considerations in AI Adoption	Addressing issues related to data privacy, job security, and the ethical use of AI in education.
Data Privacy Concerns	Fears related to unauthorized access and misuse of personal data.
Job Displacement Risk	The perceived threat of AI tools replacing human jobs.
Human-AI Interaction Preference	The inclination to favor human interaction over AI-powered chatbots or assistants.
Trust in AI Recommendations	Confidence in AI-generated suggestions and outputs.
Professional Development Initiatives	Programs aimed at building skills and knowledge for effectively using AI.
AI Training Programs	Structured educational sessions focusing on enhancing AI literacy among educators.
Capacity-Building Initiatives	Efforts to improve the competence of educators in using and understanding AI tools.

ACKNOWLEDGMENT

The author extends his deepest gratitude to the 174 DepEd personnel for generously sharing their insights through the survey. Their participation was vital to the success of this study. Sincere appreciation is also given to the 31 school heads for their cooperation during data collection that greatly facilitates the research process. Special thanks to Dr. Gregoria T. Su, Schools Division Superintendent, for her unwavering support; Jasmin R. Lacuna, CESE, Assistant Schools Division Superintendent, for her valuable guidance; Dr. Jeanette R. Isidro, CID Chief, for her professional advice; and Dr. Gregorio C. Labrado, SGOD Chief, along with the Education Program Supervisors, for their continuous assistance. Above all, he is grateful to the Supreme Being for wisdom and guidance throughout this endeavor. To everyone who made this study possible, thank you.

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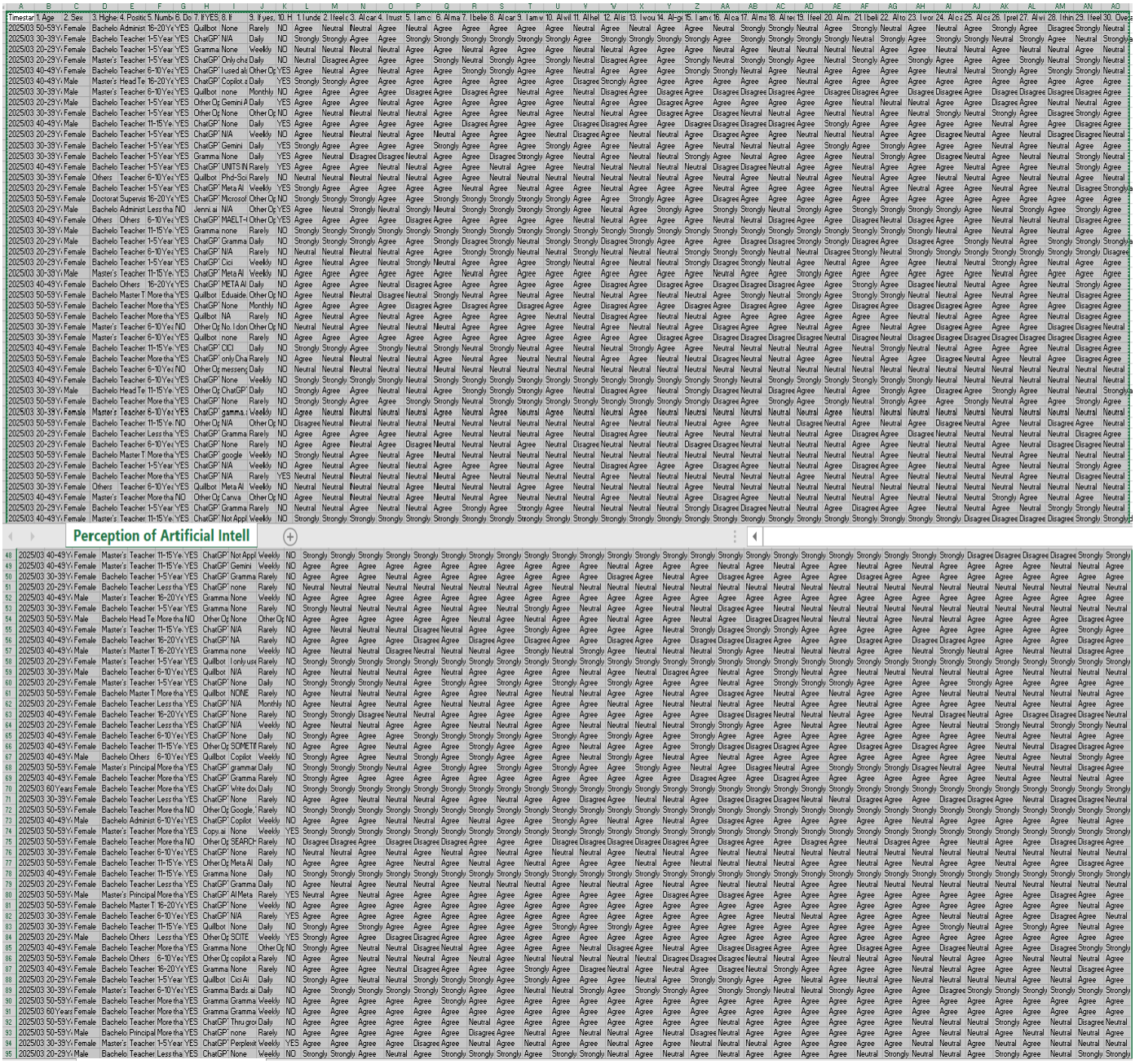
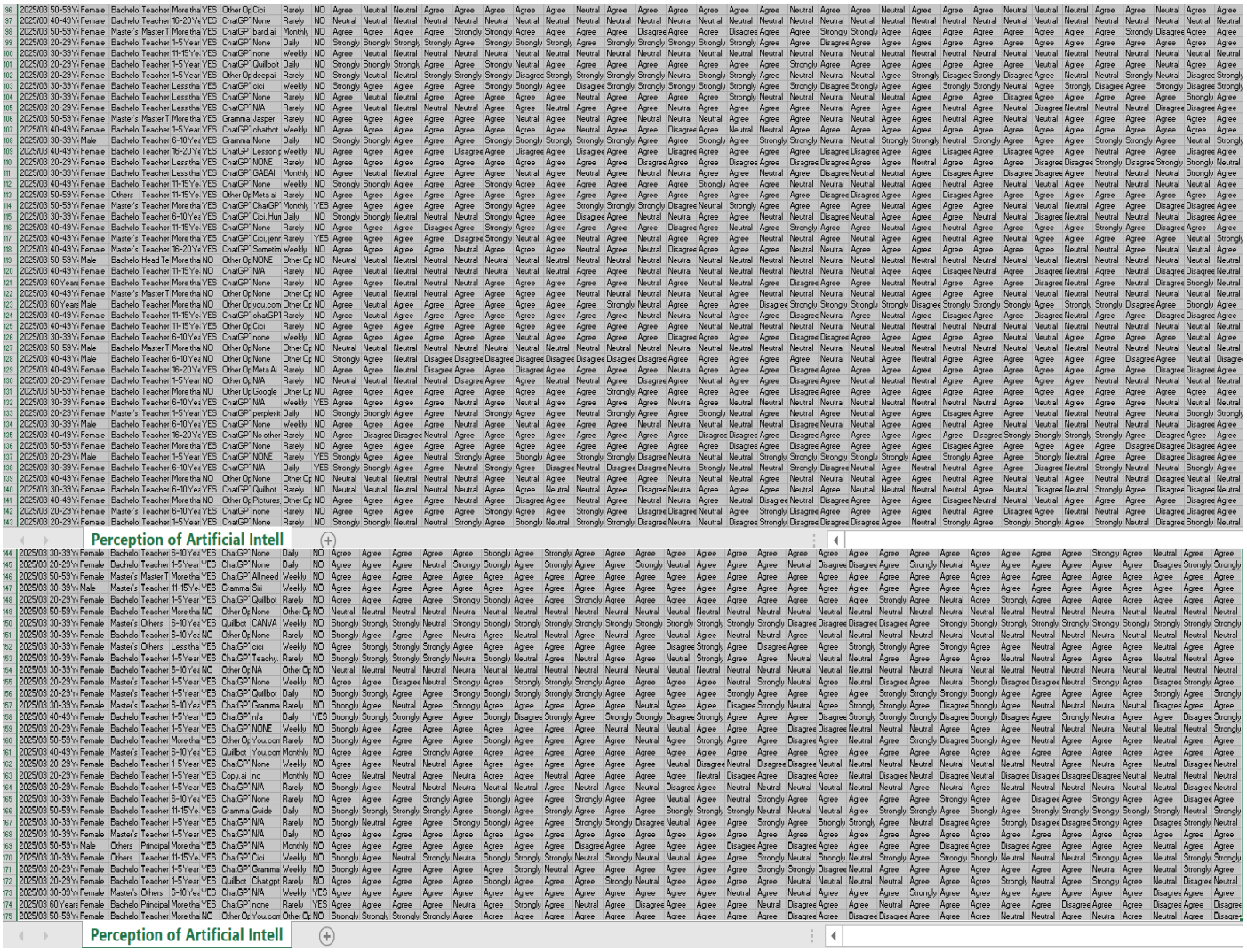
Appendix A. 1 Responses generated in Google sheet





Perception of Artificial Intell

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Questions Responses 174 Settings

Perception of Artificial Intelligence (AI) Among DepEd Personnel of Tandag City

B I U

This survey aims to assess the **perception, awareness, and understanding of Artificial Intelligence (AI)** among **DepEd personnel in Tandag City**. The data gathered will help explore how AI is viewed in the educational sector and will provide insights for possible integration of AI-based tools in teaching and administrative tasks. The results will contribute to developing strategies to prepare educators and school leaders for AI use in education.

Dear Participant,

Your participation in this survey is **important**. All information collected in this survey will be treated with **strict confidentiality** and **anonymity**. No names, addresses, or identifiable personal data will be collected. Results will be reported in summary form and used solely for **academic and research purposes**.

In compliance with **Republic Act No. 10173 or the Data Privacy Act of 2012**, we assure you that your data will be **collected fairly and lawfully** for the purpose of this research, **stored securely** and **accessible only to the researchers** involved, **used only** for the purpose of understanding AI perceptions among DepEd personnel, **destroyed or anonymized** once the survey is completed to protect your identity.

Thank you for your cooperation.

Planning and Research Section
SGOD