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Double-Edged Sword: AI Tools Dependency and Empowerment among Office Administration Students

A Case Study of Bachelor of Science in Office Administration of Camarines Sur Polytechnic Colleges, Philippines

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Abstract

This study aims to investigate the dual nature of Artificial Intelligence (AI) tools such as ChatGPT as a double-edged sword. The respondents of this study are Two Hundred Fifteen (215) Office Administration students. Purposive sampling was utilized to identify the participants in this study, including those Office Administration students who are familiar with the use of ChatGPT. This study used a descriptive correlational research design that utilizes a checklist questionnaire for gathering data. For statistical tools, the percentage technique, slovin's formula, Likert scale, weighted mean, and rank order method were used. The findings revealed that Office Administration students "Sometimes" use AI tools such as ChatGPT in terms of both extent and duration. For the effects contributing to respondents' AI tools dependency, the results revealed respondents "Disagree" with positive effects and "Agree" with negative effects in terms of accessibility. In terms of efficiency, the respondents are "Agree" in both positive and negative effects. The indicators listed under educational pressure, the respondents "Agree" with positive effects and "Disagree" with the negative effects. Lastly, when it comes to work ethics, the respondents revealed that they "Agree" with the positive effects and "Disagree" with the negative effects. As an output, the researchers proposed an action plan to mitigate the perceived dependency while also empowering the respondents. This action plan is designed and aligned based on the results of the survey.

Keywords: *Artificial Intelligence, Accessibility, ChatGPT, Educational Pressure, Efficiency, Work Ethics*

Introduction

In the modern digital era, the incorporation of ChatGPT as an Artificial Intelligence (AI) tool has spread in numerous sectors, with education being no exception. Particularly in Office Administration, students increasingly rely on this tool to enhance their efficiency and proficiency while mastering the intricacies of organizational management [1]-[3]. ChatGPT is useful and significantly enhances the students' learning in several ways, including providing insights into students' learning styles and offering support in academics and skill development [4]. It can assist in writing reports, proofreading, and providing study aids, making it an excellent resource for completing assignments and activities. Its diverse range of functions helps make learning more effective, individualized, and adaptive for students, making it an invaluable tool for Office Administration students preparing for professional roles in the Office Administration field.

However, alongside the growing dependence on these tools, there arise significant apprehensions regarding their widespread adoption and the potential consequences that may have on student learning outcomes. Despite the potential benefits of ChatGPT in education, challenges such as over-reliance and frustration with their limitations exist, as stated by Parsakia [5], who warns that while chatbots can offer immediate feedback and personalized assistance, there is a risk of promoting passive acceptance of information and hindering critical thinking skills. Flaih & Jasim [6] emphasized that the ethical implications extend beyond just technical and legal aspects, significantly affecting social, cultural, and economic values as it caused issues like data breaches, biases, misuse, and its effects on human social interactions and skills. These concerns underscore the need for a balanced and thoughtful integration of ChatGPT as an AI tool into educational systems to balance its benefits while mitigating the risks of using this tool.

This study is anchored to Republic Act No. 7722 - The Higher Education Act of 1994, as a legal basis. This law was created by the Commission on Higher Education (CHED), which is responsible for promoting quality education, fostering innovation, and encouraging the integration of advanced technologies in higher education institutions. The use of ChatGPT as an AI tool in the learning process aligns with CHED's mandate to modernize education and equip students with the skills and knowledge necessary for the demands of the 21st century. Specifically, Office Administration students can benefit from this modernization by enhancing their learning experiences, preparing them for technology-driven workplaces, and supporting academic activities through AI tools.

Material and Methods

A. Research Design

A survey approach from quantitative research was employed in this research. Many approaches to participant recruitment, data collection, and instrumentation are possible with this kind of research. As described by Check & Schutt [7], it is the process of gathering data from a sample of people by having them answer questions. According to Lim [8], quantitative research enables the extraction of patterns, identification of problems, predictions, and recommendations, all of which can inform the development of effective strategies.

B. Respondents

The respondents for this study are 1st and 2nd year Bachelor of Science in Office Administration (BSOA) students enrolled during the 1st semester of the 2024-2025 academic year at Camarines Sur Polytechnic Colleges, Nabua Main Campus. The total number of BSOA students is 462, with 112 first-year students and 350 second-year students. 215 BSOA students to determine the sample size for the study, ensuring that it is proportionally representative of the entire student population.

Table 1. Respondent Distribution

Year Level & Section	Freq.	Percentage	Rank
1A	26	12.10	1.5
1B	26	12.10	1.5
2A	24	11.20	3.5
2B	23	10.70	4.5
2C	25	11.60	2.0
2D	23	10.70	4.5

Year Level & Section	Freq.	Percentage	Rank
2E	24	11.20	3.5
2F	22	10.20	5.5
2G	22	10.20	5.5
Total	**215**	**100**	

C. Research Instrument

The primary data collection method employed by the researchers in this study is the use of questionnaires and surveys designed to gather detailed insights into students' experiences and perceptions regarding the use of AI tools, particularly ChatGPT, in their academic routines. This study employed a questionnaire to assess how well Camarines Sur Polytechnic Colleges first and second-year Office Administration students perform when using AI tools. These instruments will be distributed to a representative sample of BSOA students, allowing the researchers to evaluate key factors such as the level of dependency on AI, its perceived usefulness, and its impact on student learning. The Instrument was validated by the research adviser, who received a printed copy of the questionnaire for editing and recommendations before it was finalized.

D. Statistical Treatment of Data

To interpret the data effectively, Statistical treatments will help provide a clear and accurate understanding of how AI tools are used and their impact on students.

- **Percentage Technique:** These statistical tools helped categorize the BSOA students of Camarines Sur Polytechnic Colleges based on their Age, Year level & Section, Sex, and Number of hours of use per week. The percentage also presents the actual response of the respondents to the research's specific questions.
- **Slovin's Formula**: To determine the sample size for the study, ensuring that it is proportionally representative of the first and second-year student population.
- **Weighted Mean:** This statistical measure was used to calculate the average of the responses in sections two (2), three (3), and four (4) of the survey questionnaire. It is used for statistical treatment of raw data acquired from the conducted survey to evaluate the level of awareness, usage, dependency, and empowerment.
- **Likert Scale:** The Likert Scale was used in qualifying and interpreting the weighted mean for each indicator in the level of awareness of AI tools and their dependency.
- **Rank Order Method:** This method was used to rank the indicators and the respondents' profiles based on their answers, allowing for a systematic analysis of the relative importance or significance of various factors.

Results and Discussions

A. Personal Profile of the Respondents

The profile of the Office Administration Students in Camarines Sur Polytechnic Colleges in terms of Age, Sex, Year level & Section, and Number of Hours of Use Per Week. Table 2 presents the personal profile of Bachelor of Science in Office Administration Students according to their age. The most respondents are aged 18 to 20, comprising 204 individuals (94.90%). This is followed by those aged 21

to 23 with eight respondents (3.70%), ages 24 to 26 with two respondents (0.90%), and 17 years old with one respondent (0.51%).

Table 2. Personal Profile of the Respondents

Factors	Freq.	Percentage	Rank
Age			
• 17 years old	1	0.51	4
• 18 years old - 20 years old	204	94.90	1
• 21 years old - 23 years old	8	3.70	2
• 24 years old - 26 years old	2	0.90	3
Year level & Section			
• 1A	26	12.10	1.5
• 1B	26	12.10	1.5
• 2A	24	11.20	3.5
• 2B	23	10.70	4.5
• 2C	25	11.60	2
• 2D	23	10.70	4.5
• 2E	24	11.20	3.5
• 2F	22	10.20	5.5
• 2G	22	10.20	5.5
Sex			
• Female	186	86.40	1
• Male	29	13.60	2
Number of Hours of Use Per Week			
• Less than 1 hour	117	54. 40	1
• 1-3 hours	66	30. 70	2
• 4-6 hours	32	14. 90	3
Total	**215**	**100**	

This implies that some of the Office Administration students in Camarines Sur Polytechnic Colleges are 20 years old or younger because the majority of respondents fall within the age group of 18 to 20 years. This indicates that students in this age range make up a significant portion of the population being studied, likely reflecting the typical age for 1st and 2nd year of this program. This result was backed up by Niloy et al. [9], who stated that among their student respondents, the majority of them are within the age of 18-30 years bracket. Similarly, according to Enriquez et al. [4] also found in their study that the majority of their respondents were 17-22 years old, indicating that they were mostly young.

In terms of Year level and Section, sections 1A and 1B rank first with 26 respondents (12.10%), followed by section 2C with 25 respondents (11.60%). Sections 2A and 2E tie for third with 24 respondents each (11.20%), while sections 2B and 2D tie for fourth with 23 respondents each (10.70%). Lastly, sections 2F and 2G tie for fifth with 22 respondents each (10.20%). This implies that a significant number of the respondents come from sections 1A and 1B because these two sections rank first in terms of representation, with 26 students. This indicates that sections 1A and 1B have the largest share of students participating in the study, which could reflect their overall class size or higher engagement in the survey compared to other sections. There are no existing studies or literature to support or contradict these claims; the data provides a unique insight into the distribution of respondents among year level and different sections.

In terms of Sex, the number of female respondents is 186, which represents 86.40% of the respondents. The male respondents are 29, representing 13.60% of the respondents. This implies that the majority of the Office Administration students in Camarines Sur Polytechnic Colleges are female. The

prevalence of females in this program may reflect the high visibility of women existing in the field of Office Administration roles, which creates a cycle where women are more likely to consider pursuing this field. This is supported by the study of Enriquez et al. [4], who also found in their study that the majority of their respondents were female. This result was contradicted by the study of Niloy et al. [9], which stated that their respondents were nearly evenly split between male and female students.

In terms of their number of hours of use per week, the rank first in terms of the number of hours is less than 1 hour with 117, which represents 54.40% of the respondents. The 1-3 hours ranked second with 66, representing 30.70% of the respondents. And lastly, the 4-6 hours with 32, which represents 14.90% of the respondents. This implies that most of the Office Administration Students in Camarines Sur Polytechnic Colleges use the ChatGPT in less than 1 hour, likely for quick, task-specific purposes such as retrieving information, seeking writing assistance or clarifying concepts. The tool's efficiency in providing concise and accurate responses reduces the need for prolonged usage. This is supported by the study of Fauzi et al. [10], who stated that ChatGPT significantly enhances student efficiency and effectiveness in academic pursuits by providing comprehensive information, refining language skills, facilitating collaboration, and offering ongoing support and motivation. However, ChatGPT may sometimes create inaccurate information and provide damaging instructions on biased material on its webpage. The possible bias of the data the bot is trained on is a crucial ethical problem associated with using ChatGPT.

B. The Extent and Frequency of AI Tools Usage

Table 3 shows the factors in the purpose ranked first with an average weighted mean of 2.44, which falls in the verbal interpretation of "Sometimes". The factors in the duration ranked second with an average weighted mean of 2.32, which falls in the verbal interpretation of "Sometimes". The overall results of these factors are regarded as "Sometimes". The overall results indicate that the extent and frequency of AI tools usage among Office Administration students, specifically in duration and purpose, is "Moderate" and is not consistently prioritized by the respondents. These findings highlight the opportunities to educate students further on how to empower them on the benefits of AI tools for academic and professional growth without over-dependence, maintaining a balanced approach. This result was supported by the study of Subaveerapandiyan et al. [11], who noted that students are drawn to ChatGPT for its ability to quickly deliver information and simplify research tasks.

Table 3. The Extent and Frequency of AI tools usage among the Respondents

Variables	Weighted Mean	Verbal Interpretation	Rank
Duration	2.32	Sometimes	2
Purpose	2.44	Sometimes	1

C. Positive Effects Contributing to AI Tools Dependency of Respondents

In positive effects contributing to AI tool dependency, Efficiency ranked first with the average weighted mean of 2.59. Next is accessibility, which ranked as second with an average weighted mean of 2.55. Third on the rank are the factors in work ethics, with an average weighted mean of 2.43. Last in the rank are the factors in educational pressure, with an average weighted mean of 2.40. The overall results of these factors are regarded as "Agree". These results imply that the factors of efficiency, accessibility,

work ethics, and educational pressure positively affect the respondents because they recognize these factors as contributing to their overall academic performance and experience. The respondents acknowledge that using tools like ChatGPT helps enhance their productivity, provides easy access to information, and supports their work ethic. While they also experience some level of educational pressure, these factors still seem to be viewed as beneficial in improving their learning process and academic engagement. This is supported by the study of Fauzi et al. [10], who stated that ChatGPT significantly enhances student efficiency and effectiveness in academic pursuits by providing comprehensive information, refining language skills, facilitating collaboration, and offering ongoing support and motivation. Also, the study of Klayklung et al. [12] stated that ChatGPT can serve as a valuable tool for remote learning, providing students with the ability to access educational resources and support outside of traditional classroom settings.

Table 4. Positive Effects Contributing to AI Tools Dependency of Respondents

Variables	Weighted Mean	Verbal Interpretation	Rank
Accessibility	2.47	Disagree	4
Efficiency	2.59	Agree	1
Educational Pressure	2.53	Agree	3
Work Ethics	2.58	Agree	2

D. Negative Effects Contributing to AI Tools Dependency of Respondents

The negative effects contributing to AI tool dependency (See Table 5), the factors in the efficiency ranked first with the average weighted mean of 2.76. The next factor is accessibility, which ranked second with an average weighted mean of 2.55. Third on the rank are the factors in work ethics, with an average weighted mean of 2.43. Last in the rank are the factors in educational pressure, with an average weighted mean of 2.40. The overall results of these factors are regarded as "Agree".

Table 5. Negative Effects Contributing to AI Tools Dependency of Respondents

Variables	Weighted Mean	Verbal Interpretation	Rank
Accessibility	2.55	Agree	2
Efficiency	2.76	Agree	1
Educational Pressure	2.40	Disagree	4
Work Ethics	2.43	Disagree	3

This implies that students perceive efficiency and accessibility as negative contributions to AI tool dependency, while they do not associate work ethics and educational pressure with significant negative effects. This is supported by the study of Mogavi et al. [13], which highlighted the ChatGPT's potential to impede the development of critical thinking and problem-solving skills among students. Similarly, Kalagin [14] emphasized that caution is needed due to the risk of excessive reliance on this technology, leading to diminished problem-solving abilities, creativity, and human connection. Also, Sok and Heng [15] stated that ChatGPT's efficiency can create users' work based entirely on its output without using their analytical and decision-making skills.

Conclusion

This study provides valuable insights about ChatGPT as an AI tools. In my profile, some of the Office Administration students at Camarines Sur Polytechnic Colleges in terms of Age are Twenty (20)

years old or younger. Most of the respondents are from the sections of 1A and 1B. The majority of Office Administration students are female students, and the rest are male students. The majority of Office Administration students use ChatGPT for less than 1 hour per week. Office Administration students use AI tools, particularly for challenging tasks or to save time when finding information, particularly for generating ideas and brainstorming, as well as exploring different perspectives. However, reliance on AI over traditional study methods or prioritizing ChatGPT as a primary tool remains minimal, showing that students use these tools selectively without over-dependence. The respondents show hesitancy in fully relying on ChatGPT, especially for passive tasks such as using AI-generated answers without independent learning or bypassing challenging tasks. The overall engagement with AI tools for academic purposes remains moderate. The respondents generally perceive educational pressure and work ethics positively, while accessibility is seen negatively due to the significance of its negative effects. Efficiency is perceived as balanced, with both positive and negative impacts acknowledged. Addressing the negative effects of accessibility, leveraging the empowerment from educational pressure and work ethics, and optimizing efficiency could lead to a more balanced and positive experience for the respondents.

Conflict of Interest

The authors declare that there is no conflict of interest.

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