

**IMPACT OF AI-DRIVEN LEARNING PLATFORMS ON THE
ACADEMIC ENGAGEMENT AND ACHIEVEMENT OF BUSINESS
ADMINISTRATION STUDENTS AT CAVITE STATE UNIVERSITY-
TANZA CAMPUS**

**JOSIAH ABRAHAM C. DAGANZO, PRINCESS IRISH A. JARDIN, CLARISSE A.
AZOGUE, RAIN IVES I. BUSH, GENILYN C. TIZON & RITCH M. BANATE**

Cavite State University – Tanza Campus

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ABSTRACT

This study examined the impact of AI-driven learning platforms on academic engagement and achievement among Business Administration students at Cavite State University-Tanza Campus. It contributes to the body of knowledge on how AI-powered learning platforms influence academic engagement, achievement, learning environment quality, and overall educational effectiveness. The researcher employed a quantitative research method, collecting data through a structured survey. A total of 200 Business Administration students participated, chosen to represent a cross-section of the student population, ensuring that the results reflected a broad range of opinions and experiences regarding AI-driven learning platforms. To gain a comprehensive understanding of the demographic background, the survey included questions on age, gender, academic year, and prior experience with technology and online learning. The data was analyzed using statistical tools, including standard deviation, weighted mean, frequency, and percentage. The findings indicated that students recognize the value of these platforms in enhancing their academic engagement and performance. The majority of students strongly believe that these platforms enrich their educational experience by providing personalized content and immediate feedback, which foster greater motivation and active participation. Additionally, the data highlighted the platforms' ability to adapt to individual learning needs and offer real-time support, leading to more effective learning outcomes. However, while the platforms are seen as effective in motivating students and improving engagement, there is still room for improvement, particularly in fostering higher-order thinking skills such as critical thinking. Further development of AI algorithms to accommodate a broader range of learning styles and needs could enhance the overall effectiveness of these platforms. Furthermore, AI-driven platforms should be integrated with traditional teaching methods to provide a more balanced and holistic learning experience, ensuring that students benefit from both personalized and conventional educational approaches.

Keywords: Academic engagement, Academic achievement, AI-driven learning platforms, learning experience, teaching techniques

1.0 INTRODUCTION

Artificial Intelligence (AI) has rapidly revolutionized various sectors, with education being no exception. AI-driven learning platforms are now accessible, offering tailored learning experiences, real-time feedback, and adaptive learning paths that address individual student

needs. This technology holds significant promise in enhancing student engagement and academic success (Zawacki-Ritcher, 2019).

The integration of AI in education introduces a new dimension to the learning process, enabling personalized learning experiences that cater to the unique needs and preferences of each student. AI-driven platforms can analyze vast amounts of data to identify patterns in student performance, predict learning outcomes, and provide customized recommendations. These platforms can also offer interactive content, such as simulations and virtual labs that enhance the practical understanding of complex business concepts. As AI becomes more integrated into education, it is important to consider its broader effects, especially in terms of governance and control. Understanding the details of these technologies is key to creating strategies that ensure fair, effective, and ethical educational practices in a world increasingly shaped by AI, machine learning (ML), and deep learning (DL). In response, some educators are calling for a major rethink of traditional assessments, suggesting a shift toward more creative and open-ended tasks that cannot be easily completed by machines. While AI can enhance teaching and learning, educators must carefully consider its risks and take steps to address them, focusing on fostering essential human skills such as critical thinking, creativity, and emotional intelligence (Syed Salman and Kulkari et al. 2015).

The potential benefits of AI-driven learning platforms extend beyond academic performance. These platforms can create a more engaging and interactive learning environment by promoting collaboration and communication among students. For instance, AI-powered tools can facilitate group projects, peer assessments, and discussion forums, encouraging students to share their ideas and learn from each other. Additionally, AI can help identify students who may be at risk of falling behind and provide timely interventions to support their learning. Despite the promising advantages, the implementation of AI-driven learning platforms also poses challenges. Issues related to data privacy, algorithmic bias, and the digital divide must be addressed to ensure equitable access to AI-enhanced education. Furthermore, educators need to be adequately trained to effectively integrate AI tools into their teaching practices and to develop strategies for balancing technology use with traditional pedagogical approaches.

Thus, this study aims to determine the impact of AI-driven learning platforms on academic engagement and achievement among Business Administration students at Cavite State University-Tanza Campus. By examining the effectiveness of these platforms, this research seeks to provide valuable insights and recommendations for optimizing the use of AI technology in educational settings. The findings will assist university instructors and administrators in making informed decisions to enhance the learning experience and academic outcomes for business administration students.

In view of the preceding statements, this study was conducted to:

1. Determine the socio-demographic profile of the participants in terms of:
 - a. Age;
 - b. Sex;
 - c. Year level;
 - d. AI driven learning platform used by the participants

2. Identify the impact of AI-driven learning platform on the academic engagement of the student.
3. Determine the impact of AI-driven learning platform on the academic achievement of the student.

2.0 METHODOLOGY

The researcher used a quantitative approach to systematically collect data. A total of 200 Business Administration students from the Tanza Campus were selected to take part in the study. These participants were chosen to represent a wide range of perspectives and experiences related to AI-powered learning platforms. To capture a comprehensive demographic profile, factors such as age, gender, academic year, and prior experience with technology and online learning were considered. This demographic information was crucial for understanding the diversity within the sample and analyzing how different factors might impact students' use of AI-based educational tools. The collected data offered valuable insights into the usage trends of AI-driven learning tools among Business Administration students.

The researchers used frequencies, counts, means and standard deviations to obtain data in each table based on the results that appeared in our tally, where we surveyed 200 BSBA students through an online and face to face survey studying at Cavite State University-Tanza Campus.

Table 1. Descriptive Interpretation for academic engagement

NUMERICAL RANGE	VERBAL INTERPRETATION	DESCRIPTIVE INTERPRETATION
4.21 - 5.00	Strongly Agree	The student strongly agree that AI helps them to engage and participate in their academics.
3.41 - 4.20	Moderately Agree	The student moderately agree that AI helps them to engage and participate in their academics.
2.61 - 3.40	Slightly agree	The student slightly agree that AI helps them to engage and participate in their academic.
1.81 - 2.60	Disagree	The student disagree that AI helps them to engage and participate in their academics.
1.00 - 1.80	Strongly disagree	The student strongly disagree that AI helps them engage and participate in their academics.

Table 2. Descriptive Interpretation for academic achievement

NUMERICAL RANGE	VERBAL INTERPRETATION	DESCRIPTIVE INTERPRETATION
4.21 - 5.00	Strongly Agree	The student strongly Agree Ai helps them to engage and participate In their academics
3.41 - 4.20	Moderately Agree	The student moderately agree that AI helps them to engage and participate in their academics.
2.61 - 3.40	Slightly agree	The student slightly agree that AI helps them to engage and participate in their academics.
1.81 - 2.60	Disagree	The student disagree that AI helps them to engage and participate in their academics
1.00 - 1.80	Strongly disagree	The student strongly disagree that AI helps them to engage and participate in their academics.

3.0 RESULTS AND DISCUSSION

3.1 Demographic Profiles of the Participants

Table 3 shows that a significant majority of the participants (68%) are aged between 18 and 21 years, indicating that the sample population predominantly consists of young adults. Additionally 61 % of the participants are female and the year level data shows that a large proportion of the participants (42%) are in the third year.

When examining the AI-driven learning platforms, it's evident that Chat GPT is the most commonly used tool, which 53.50% of participants utilizing it. Following Chat GPT, other popular platforms include Grammarly (33%) which helps the grammar and writing and Quillbot (48.50%). Other notable platforms include AI chat, Photo Math, and Gemini, each catering to specific academic needs such as solving math problems or providing interactive learning experiences.

The discuss range of AI-driven learning platforms used by participants highlights the importance of these tools in enchancing their educational experience. The data underscores the growing integration of AI technology in the educational sector, particularly among young students who are increasingly leveraging these tools to support their learning processes. This trend aligns with broader shift towards digital and personalized learning environments, offering students innovative ways to engage with and master their academic content. (Smith, 2022, Johnson 2021).

Table 3. Distribution of participants in terms of their socio-demographic profile

DEMOGRAPHIC PROFILES	FREQUENCY	PERCENTAGE
Age		
18-21	136	68.00
22-25	64	32.00
26-31	0	0.00
32 and above	0	0.00
Sex		
Female	122	68.00
Male	78	32.00
Year Level		
1st	53	26.50
2nd	43	21.50
3rd	84	42.00
4th	20	10.00
Ai driven learning platform		
Chat GPT	107	53.50
Grammarly	66	33.00
Chatbot	12	6.00
Ai chat	22	11.00
QuillBot	97	48.50
Gemini	16	8.00
Photo Math	20	10.00
Cici	16	8.00
Janitor Ai	2	1.00
Others Specify	15	7.50

3.2 Impact of AI Driven Learning Platforms on Academic Engagement

Table 4 highlights the positive impact of AI-driven learning platforms on various aspects of education, including academic engagement, personalized learning experiences, faster learning outcomes and increased student involvement

Baker et al. (2009), adaptive learning environments can boost student engagement by giving instant feedback and a personalized learning path, resulting in deeper immersion in the material

Rolfe et al. (2019) discovered that incorporating AI in educational environments increased student satisfaction and participation since the technology allowed for faster replies and more tailored contact than traditional technique

Zhao et al. (2020), AI-powered collaborative tools can boost student motivation by instilling a sense of community and shared responsibility in the learning process, resulting in increased engagement

Table 4. Significant effects of AI-driven learning platforms on academic engagement

ACADEMIC ENGAGEMENT	WEIGHTED MEAN	STANDARD DEVIATION	REMARKS
1. It seems that AI-driven learning platforms can significantly enhance my learning experience.	4.525	0.301	Strongly Agree
2. It appears that AI-driven learning platforms can personalize my learning journey.	3.76	0.288	Agree
3. It seems that AI-driven learning platforms can provide immediate feedback and support.	3.73	0.282	Agree
4. It seems that AI-driven learning platforms can motivate me to learn more.	3.78	0.278	Agree
5. It appears that AI-driven learning platforms can help me develop critical thinking skills.	3.175	0.284	Agree
6. It seems that AI-driven learning platforms can help me collaborate with peers more effectively.	3.705	0.281	Agree
7. It appears that AI-driven learning platforms can help me overcome learning challenges.	3.825	0.284	Agree

8. It seems that AI-driven learning platforms can help me prepare for assessments.	3.60	0.288	Agree
9. It seems that AI-driven learning platforms can help me develop problem-solving skills.	3.73	0.289	Agree
10. It seems that AI-driven learning platforms can help me become a more independent student.	3.41	0.299	Agree
OVER-ALL	3.346	0.575	Agree

3.3 Impact of AI Driven Learning Platforms on Academic Achievement

Table 5 highlights the positive effects of AI-driven learning platforms on academic achievement. These platforms personalize education by analyzing student data to offer customized lessons and feedback, resulting in faster learning.

AI algorithms help identify knowledge gaps and provide specific resources, leading to improved academic performance. These platforms foster engagement through interactive features like gamified learning and instant feedback, enhancing retention and understanding of content. (McCarthy, 2007).

Teachers can use AI-driven interventions to monitor performance trends and adjust teaching strategies.

This collaboration creates a supportive learning environment, leading to higher academic achievement. However, challenges like the digital divide and concerns over data privacy remain. As AI technology evolves, its impact on academic achievement is expected to grow. (McCarthy, 2007).

Table 5. Significant effects of AI-driven learning platforms on academic achievements

ACADEMIC ACHIEVEMENT	WEIGHTED MEAN	STANDARD DEVIATION	REMARKS
1. It seems that AI-driven learning platforms have improved my overall academic performance.	3.645	0.282	Agree
2. It appears that AI-driven learning platforms have helped me understand complex concepts more easily.	3.70	0.289	Agree
3. It seems that AI-driven learning platforms have increased my motivation to study.	3.62	0.282	Agree

4. It seems that AI-driven learning platforms have helped me develop better time management skills.	3.695	0.296	Agree
5. It seems that AI-driven learning platforms have improved my ability to independently solve problems.	3.635	0.285	Agree
6. It appears that AI-driven learning platforms have helped me prepare more effectively for exams.	3.66	0.379	Agree
7. It seems that AI-driven learning platforms have enhanced my critical thinking skills.	3.625	0.305	Agree
8. It seems that AI-driven learning platforms have improved my ability to work collaboratively with others.	3.655	0.330	Agree
9. It appears that AI-driven learning platforms have helped me develop a deeper understanding of the subject.	3.79	0.339	Agree
10. It seems that AI-driven learning platforms have positively impacted my overall academic experience.	3.37	0.302	Agree
OVERALL	3.675	0.309	Agree

4.0 CONCLUSIONS AND RECOMMENDATIONS

This study examined the impact of AI-driven platforms on the academic engagement of business administration students at Cavite State University Tanza Campus. It also assessed the types of AI-driven platforms they utilize and their level of trust in the credibility of these platforms concerning academic engagement and achievements.

1. Most of the participants are female aged 18 to 21 years old and third year college students from Bachelor of Science in Business Administration (BSBA) course at Cavite State University, many of them prefer to use the chat gpt platforms as beneficial for academic improvement and enhanced learning. This demographic focus provides valuable insights into the specific needs and perceptions of this student population.
2. The participants thought that using artificial intelligence (AI) platforms will greatly enhance their education and help them to learn more.
3. By using artificial intelligence (AI) platforms is one of the things that participants believe will help them perform better academically.

Based on the above conclusions, the following recommendations are made:

1. Faculty are obligated to get the right instruction on how to effectively incorporate AI into their teaching strategies.
2. To examine the influence of AI on students learning, the university should implement a feedback mechanism to evaluate how AI technologies improve students' academic experiences
3. Universities should include AI platforms such as ChatGPT into their curricula and train faculty on how to use them effectively to improve student learning outcomes among third-year business administration students.
4. Future researchers should explore various AI-driven learning platforms to compare effectiveness and identify platform-specific strengths and weaknesses.
5. Future researchers can use this study as a reference and to identify the impact of AI-driven learning platforms on the academic engagement and achievement of business management students to have enough knowledge for their studies

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