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Effect of Modular Learning on Academic Performance and Skills of CBA Students

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ABSTRACT

The sudden shift to modular learning during the COVID-19 pandemic significantly transformed the learning environment of higher education institutions in the Philippines. This study examined the effects of modular learning on the academic performance and skills of College of Business and Accountancy (CBA) students at Our Lady of Fatima University, Valenzuela Campus, focusing on students' challenges, knowledge application, and academic implications. Employing a quantitative descriptive research design, data were collected from 298 CBA students via a validated Google Forms survey measuring self-discipline, learning material access, independent study motivation, cognitive retention, analytical thinking, problem-solving, and performance indicators like communication and participation. Findings revealed that while students demonstrated positive self-discipline and time management skills, managing multiple simultaneous modules remained difficult. Access to learning materials was rated favorably, but timely teacher feedback and ease of communication were identified as critical weaknesses. Furthermore, modular learning successfully supported subject matter retention, enhanced analytical and evaluative thinking, and promoted the application of business concepts to real-life scenarios; however, maintaining motivation during independent study without face-to-face interaction emerged as a persistent challenge. Overall, the study concludes that modular learning significantly affects the academic performance and skills development of CBA students. While the modality successfully fosters independence, critical thinking, and practical knowledge application, the study highlights that strengthening teacher-student interaction and implementing structured motivational support mechanisms are essential to maximize instructional effectiveness, providing valuable insights for educators and administrators to optimize future modular business education.

Keywords: *Modular Learning, Academic Performance, Skills Development, CBA Students, Independent Learning*

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INTRODUCTION

In the past decade, due to the COVID-19 pandemic, many things have happened. Unfortunately, face-to-face engagement of students and teachers within the school has been suspended, and this is where modular online learning for all the students began to prevent the spread of the virus and reduce infections. Schools, particularly in rural areas, employed Modular Distance Learning (MDL) to ensure education continuity. This study seeks to investigate the effects of MDL on the academic performance of learners to determine whether there is a significant difference in their performance before and after the implementation of MDL. After the implementation of MDL, denotes a significant difference in their academic performance. MDL strengthens family bonding, independent learning, and is cost-effective. However, it is an additional workload to working parents, there is limited teacher-learner interaction, learners lack socialization with other children, and have no exposure to significant school activities, but are rather exposed to many distractions at home. To bridge the gaps, simplifying modules accompanied by video lessons and audio recordings, conducting online mediations, neighborhood instruction, and home visitations are recommended (de Guzman, M. A., 2021).

Many educational institutions have been forced to close due to the unexpected COVID-19 outbreak, and many students are now learning online from home. Student responsibilities have changed dramatically in this remote setting. In addition to playing the role of students, the students also take on aspects of family matters, health care, and even financial difficulties. Based to a rapid evidence assessment review study based on the Preferred Reporting Items for Systematic Review and Meta-analysis (PRISMA) protocol, students' roles have changed significantly; they have taken on multiple roles, and they are socially and cognitively engaged in their roles—roles that can be enhanced by information technologies. Despite gains, each person's level of digital literacy still has to be raised. Online learning outcomes can be enhanced by digital technology and social governance (Yu Z., 2022).

According to Akpen et al., (2024), the COVID-19 epidemic led to a swift transition to online learning, resulting in heightened utilization of online learning platforms and a profound influence on global educational practices. This systematic study comprehensively analyzes the literature to ascertain the impact of online learning on student performance and participation. The evaluation incorporated peer-reviewed papers evaluating student involvement and performance in virtual learning settings. Following the application of inclusion and exclusion criteria, the study revealed a range of impacts of online learning on student engagement and performance. The flexibility and accessibility of online learning, which enables students to learn at their own pace, has been linked in some studies to improved academic performance. However, other studies highlighted challenges such as decreased engagement and isolation, and reduced interaction with instructors and peers. The effectiveness of online learning was found to be influenced by factors such as the quality of digital tools, good internet, and student motivation. Maintaining student engagement remains a challenge, effective strategies to improve student engagement, such as interactive elements, like discussion forums and multimedia resources, alongside adequate instructor-student interactions, were critical in improving both engagement and performance. Additionally, the COVID-19 epidemic has prompted a considerable move toward modular distance learning in global education systems. In the Philippines, the Department of Education has created Self-Learning Modules (SLMs) to ensure that all students receive a quality basic education during the pandemic. This research study seeks to identify the obstacles and effectiveness of the modular distance learning technique on students' academic performance. The students found the modular distance learning approach agreeable, with self-motivation being the most difficult aspect. The ability to convey thoughts was the most effective factor, while the ability to respond without pressure was the least effective. Moreover, it is essential to examine instructor preparedness and technological proficiency, along with other variables not addressed in this study, to improve the efficacy of the modular distance learning method. Despite the limits imposed by the epidemic, modular remote learning remains an effective alternative to traditional face-to-face education (de Ocampo., 2024).

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This study aims to examine the effect of studying modules/online learning on the academic performance of the CBA students. The researchers aim to determine if the effect will increase students' knowledge, assess the extent of the benefits after completion, and investigate the consequences of not completing the tasks.

METHODS

Research Design

This study will employ a quantitative descriptive research design. Quantitative descriptive research focuses on presenting and summarizing the current characteristics, conditions, and experiences of a specific group. In this study, the researchers aim to describe how CBA students experience modular learning/online learning in terms of participation, application, and development. It will also describe the general academic performance of the students based on their current learning situation.

This design is appropriate because the researchers do not intend to establish cause-and-effect relationships or measure the strength of connections between variables. Instead, the goal is to provide a clear and accurate picture of how students interact with modular learning/online learning. A descriptive approach allows the researchers to gather factual information, summarize trends, and present the overall situation of the respondents.

Furthermore, descriptive research makes the process easier and more practical for both researchers and respondents. It involves gathering information through straightforward methods such as questionnaires and summarizing the data through statistical descriptions. This design fits well with the study since it focuses on understanding the experiences and perceptions of students without requiring complex statistical analysis.

Research Locale

The study will be conducted at Our Lady of Fatima University (OLFU) – Valenzuela Campus, specifically among students from the College of Business and Accountancy (CBA). The campus provides a diverse group of accounting/business students who have been exposed to modular learning at different stages of their academic journey. This makes OLFU Valenzuela an ideal location for capturing a variety of experiences related to modular study habits.

The familiarity of the researchers with the school setting also contributes to the convenience of conducting the study. Since the researchers are part of the same institution, communication with faculty members, administrators, and possible respondents becomes easier. This helps ensure that the process of data gathering will be smooth, organized, and efficient.

Additionally, OLFU Valenzuela is equipped with accessible facilities and online platforms that support academic data collection. The environment is suitable for distributing questionnaires, whether face-to-face or online. Because of the school's strong academic culture, the researchers will be able to gather valid and meaningful information that reflects the genuine experiences of CBA students.

Sampling Technique

The researchers gathered data by conducting a survey that consisted of how modular system studies my affect CBA students that consists of 1,027 students from the College of Business and Accountancy (CBA) of Our Lady of Fatima University – Valenzuela Campus. These students are officially enrolled during the Academic Year 2025–2026 and are distributed across different programs, namely: the Operations Management that have a total of 29 students, Marketing have 408 students, Banking and Finance have 166 students, Bachelor of Science in Accountancy have 298 students and Bachelor of Science in Accounting Information Systems (BSAIS) have a total of 126 students.

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The study will employ Simple Random Sampling. This technique will be used because all respondents belong to the same population group, which is the College of Business and Accountancy students. Each student will be given an equal chance of being selected as a respondent.

Random selection of students who are included in the programs of the CBA department will be done through online and face-to-face distribution of the questionnaire to ensure fairness and minimize sampling bias.

Table 1. *Demographic Profile*

Demographics	Frequency	Percent (%)
Year Level		
1st year	26	8.72
2nd year	67	22.48
3rd year	40	13.42
4th year	165	55.37
Course		
Banking and Finance	42	14.09
Bachelor of Science in Accountancy (BSA)	63	21.14
Bachelor of Science in Accounting Information Systems (BSAIS)	75	25.17
Marketing	114	38.26
Operations Management	4	1.34
Total	298	100.00

RESULTS AND DISCUSSION

Table 2. *Self-discipline and time management*

Statements	Mean	Standard Deviation	Verbal Interpretation
I follow a consistent study schedule when working on my modules.	3.99	0.92	Agree
I plan my work so I can finish modular tasks before the deadline without rushing.	4.12	0.83	Agree
I avoid distractions while studying my modules.	4.01	0.89	Agree
I manage my time well, even with multiple modules.	3.93	0.92	Agree
I start modular activities early instead of waiting until the last minute.	3.99	0.92	Agree
Overall	4.01	0.74	

Legend: 4.2-5.0 Strongly Agree, 3.4-4.2 Agree, 2.6-3.4 Neutral, 1.8-2.6 Disagree, 1.0-1.8 Strongly Disagree
Summarizes students' ratings on self-discipline and time management under modular learning using the mean (M), standard deviation (SD), and verbal interpretation.

Across items, the highest mean was for planning work to finish tasks before deadlines without rushing (M = 4.12, SD = 0.83; Agree), indicating that students most strongly endorsed proactive planning

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behaviors. The lowest mean was for managing time well even with multiple modules (M = 3.93, SD = 0.92; Agree), suggesting that multi-module workload remains the most challenging aspect of time control despite generally positive self-regulation. Overall, the theme yielded an Agree-level composite (M = 4.01, SD = 0.74), showing consistently favorable time-management habits with moderate variability across respondents.

These results imply that students' effective learning habits under modular learning are anchored more on planning and early initiation than on sustaining time control under heavier academic load, which aligns with evidence that self-discipline and time management are key determinants of performance in modular distance learning (Comendador, 2021). The generally positive ratings also fit Social Cognitive Theory, where self-regulation and self-efficacy support persistence in independent learning contexts (Bandura, 1986), and mirror findings that learners with strong self-management tend to maintain achievement in modular environments (Tolentino et al., 2022).

Overall, the pattern suggests that strengthening workload management supports (e.g., pacing guides, weekly planning checkpoints, and structured feedback) may further stabilize students' time regulation and reduce strain when multiple modules converge. This also indicates that interventions should prioritize helping students handle peak workload periods, not only basic scheduling habits.

Table 3. *Access to modular learning materials and teacher support*

Statements	Mean	Standard Deviation	Verbal Interpretation
The modules provided are clear and easy to understand.	4.03	0.89	Agree
I have reliable access to printed/digital modules.	4.05	0.87	Agree
Teachers usually provide feedback on my modular outputs within a reasonable time.	3.84	1.00	Agree
Instructions in the modules are complete and easy to follow.	4.05	0.90	Agree
I can contact teacher easily when I need help.	3.85	1.03	Agree
Overall	3.96	0.81	

Legend: 4.2-5.0 Strongly Agree, 3.4-4.2 Agree, 2.6-3.4 Neutral, 1.8-2.6 Disagree, 1.0-1.8 Strongly Disagree

Table 3 presents students' ratings on access to modular learning materials and teacher support in terms of the mean (M), standard deviation (SD), and verbal interpretation.

The highest mean ratings were tied for having reliable access to printed/digital modules and perceiving module instructions as complete and easy to follow (M = 4.05, SD = 0.87–0.90; Agree), indicating that materials were generally accessible and procedurally clear. The lowest mean was for teachers providing feedback within a reasonable time (M = 3.84, SD = 1.00; Agree), closely followed by ease of contacting teachers (M = 3.85, SD = 1.03; Agree), suggesting that responsiveness and communication were comparatively weaker areas. Overall, the theme obtained an Agree-level composite (M = 3.96, SD = 0.81), reflecting generally positive access and support with moderate variability across students.

This pattern indicates that material availability and clarity are stronger supports than interaction-related supports (feedback timeliness and ease of reaching teachers), echoing prior observations that modular learning can be workable but is constrained by limited teacher–learner interaction (Granfon, 2022). Consistent with broader reviews of online/distance learning, the effectiveness of remote modalities improves when instructor–student interaction and timely feedback are strengthened, as these elements help sustain engagement and learning quality beyond the modules themselves (Akpen et al., 2024).

Overall, the results imply that improving teacher accessibility and feedback systems (e.g., clear response-time expectations, scheduled consultation hours, and streamlined messaging channels) could

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meaningfully enhance students' learning support experience. Strengthening these interaction pathways may reduce delays, clarify misunderstandings earlier, and improve follow-through on modular outputs.

Table 4. *Motivation and focus during independent study*

Statements	Mean	Standard Deviation	Verbal Interpretation
I stay motivated when studying modules independently.	3.95	0.92	Agree
I can maintain focus for long periods when working on my modules.	3.80	0.99	Agree
I complete modules even when topics are difficult.	3.99	0.90	Agree
I still feel motivated to learn during modular even without face-to—face classes.	3.71	1.0	Agree
I stay interested when studying my modules.	3.84	0.95	Agree
Overall	3.86	0.84	

Legend: 4.2-5.0 Strongly Agree, 3.4-4.2 Agree, 2.6-3.4 Neutral, 1.8-2.6 Disagree, 1.0-1.8 Strongly Disagree

Table 4 presents students' ratings on motivation and focus during independent study in modular learning using the mean (M), standard deviation (SD), and verbal interpretation.

The highest mean was for completing modules even when topics are difficult (M = 3.99, SD = 0.90; Agree), followed closely by staying motivated when studying independently (M = 3.95, SD = 0.92; Agree), suggesting strong perseverance despite academic challenges. The lowest mean was for remaining motivated to learn without face-to-face classes (M = 3.71, SD = 1.08; Agree), indicating that the absence of in-person interaction is the most notable strain on motivation, with the widest variability across respondents. Overall, the theme obtained an Agree-level composite (M = 3.86, SD = 0.84), reflecting generally positive motivation and focus but with comparatively weaker endorsement for motivation in fully independent, non-face-to-face conditions.

These results indicate that while students report resilience and task persistence, sustaining motivation is harder when learning becomes socially "thin," which aligns with evidence that remote/online learning can reduce engagement through isolation and decreased interaction (Akpen et al., 2024). The pattern also supports findings that self-motivation is a common difficulty in modular distance learning even when students generally accept the modality (de Ocampo, 2024), and is consistent with Social Cognitive Theory, where motivation and self-efficacy help learners persist in self-directed environments, especially when supports and interaction are limited (Bandura, 1986).

Overall, the results imply that modular learning benefits from intentional motivation supports (e.g., structured check-ins, peer study groups, and feedback loops) to compensate for reduced face-to-face engagement. Strengthening social and instructional touchpoints may help stabilize motivation and improve sustained focus during independent module work.

Table 5. *Understanding and retention of subject matter*

Statements	Mean	Standard Deviation	Verbal Interpretation
I understand lessons well through modules.	3.90	0.91	Agree
I can remember concepts learned from modules even after several days.	3.83	0.96	Agree
Modules help me grasp complex topics.	3.86	0.87	Agree

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I can follow modular instructions without confusion.	3.84	0.91	Agree
I can explain modular concepts to others.	3.92	0.86	Agree
Overall	3.87	0.79	

Legend: 4.2-5.0 Strongly Agree, 3.4-4.2 Agree, 2.6-3.4 Neutral, 1.8-2.6 Disagree, 1.0-1.8 Strongly Disagree

Table 5 presents students' ratings on understanding and retention of subject matter under modular learning using the mean (M), standard deviation (SD), and verbal interpretation.

The highest mean was for being able to explain modular concepts to others (M = 3.92, SD = 0.86; Agree), closely followed by understanding lessons well through modules (M = 3.90, SD = 0.91; Agree), indicating generally strong perceived comprehension and communicability of learned content. The lowest mean was for remembering concepts after several days (M = 3.83, SD = 0.96; Agree), suggesting that retention over time is comparatively weaker than immediate understanding, though still positively rated. Overall, the theme yielded an Agree-level composite (M = 3.87, SD = 0.79), reflecting consistent perceived learning with moderate variation across respondents.

These results suggest that modular learning supports initial comprehension and the ability to articulate concepts, which aligns with Bloom's Mastery Learning view that structured, goal-oriented learning materials and opportunities to revisit content can improve understanding (Bloom, 1968). However, the relatively lower rating for delayed recall indicates that retention may depend on how actively learners review and consolidate learning—consistent with evidence that modular learning outcomes are strengthened when students sustain self-management habits and learning strategies over time (Tolentino et al., 2022).

Overall, the findings imply that modules are generally effective for building understanding, but retention may be improved through reinforcement supports such as review prompts, short formative quizzes, and feedback cycles. Strengthening these consolidation mechanisms can help transform short-term comprehension into longer-term mastery of subject matter.

Table 6. *Analytical and evaluative thinking*

Statements	Mean	Standard Deviation	Verbal Interpretation
Modules encourage me to analyze business scenarios.	3.98	0.83	Agree
I can evaluate different business concepts using what I learned from the modules.	3.97	0.82	Agree
I can answer case study questions using module knowledge.	3.96	0.86	Agree
Modular activities require critical thinking.	4.22	0.71	Strongly Agree
My modules help improve my analytical skills.	4.14	0.77	Agree
Overall	4.05	0.68	

Legend: 4.2-5.0 Strongly Agree, 3.4-4.2 Agree, 2.6-3.4 Neutral, 1.8-2.6 Disagree, 1.0-1.8 Strongly Disagree

Table 6 presents students' ratings on analytical and evaluative thinking under modular learning using the mean (M), standard deviation (SD), and verbal interpretation. The highest mean was for the statement that modular activities require critical thinking (M = 4.22, SD = 0.71; Strongly Agree), followed by the perception that modules improve analytical skills (M = 4.14, SD = 0.77; Agree), indicating strong endorsement that module tasks demand higher-order thinking. The lowest mean was for being able to answer case study questions using module knowledge (M = 3.96, SD = 0.86; Agree), though the difference

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across items is small and all indicators remained positive. Overall, the theme produced an Agree-level composite mean (M = 4.05, SD = 0.68), reflecting consistently high perceived effects of modular learning on analytical and evaluative thinking with relatively low variability.

These results suggest that modular learning is perceived to cultivate higher-order reasoning, consistent with Bloom's Mastery Learning perspective that well-structured instruction and sequenced practice can strengthen complex cognitive outcomes when learners engage with progressively challenging tasks (Bloom, 1968). The strong agreement on critical thinking demand also aligns with evidence that CBA students benefit when modular or blended approaches include structured activities that develop practical and analytical skills, particularly when learning tasks mirror discipline-specific applications (Fabian & Mendoza, 2023).

Overall, the findings imply that modules are effective not only for content delivery but also for promoting analytical and evaluative thinking, especially when activities are designed to require judgment and reasoning. Sustaining this advantage may involve ensuring that case-based tasks are paired with timely guidance and feedback so that students can consistently translate module learning into strong case performance.

Table 7. *Real-life problem-solving and application of concepts*

Statements	Mean	Standard Deviation	Verbal Interpretation
I can apply modular lessons to real-life business situations.	3.96	0.88	Agree
I feel confident solving real-life business problems using what I learned from modules.	3.89	0.90	Agree
Modular activities improve practical decision-making.	4.00	0.82	Agree
I understand how module concepts relate to business tasks.	4.06	0.78	Agree
I use modular knowledge to analyze real-life examples.	3.91	0.88	Agree
Overall	3.96	0.76	

Legend: 4.2-5.0 Strongly Agree, 3.4-4.2 Agree, 2.6-3.4 Neutral, 1.8-2.6 Disagree, 1.0-1.8 Strongly Disagree

Table 7 presents students' ratings on real-life problem-solving and application of concepts in modular learning using the mean (M), standard deviation (SD), and verbal interpretation.

The highest mean was for understanding how module concepts relate to business tasks (M = 4.06, SD = 0.78; Agree), followed by the view that modular activities improve practical decision-making (M = 4.00, SD = 0.82; Agree), indicating strong perceived relevance of modules to applied business work. The lowest mean was for confidence in solving real-life business problems using modular learning (M = 3.89, SD = 0.90; Agree), suggesting that confidence in application—while positive—lags slightly behind perceived relevance and decision-making gains. Overall, the theme obtained an Agree-level composite (M = 3.96, SD = 0.76), reflecting consistently favorable perceptions of real-world application with moderate variability across respondents.

These results indicate that modules are perceived to connect well to authentic business tasks, supporting the idea that structured learning materials can promote transfer when concepts are clearly linked to practical exercises—consistent with mastery-oriented instruction where guided practice strengthens applied understanding (Bloom, 1968). However, the slightly lower confidence rating reinforces that application benefits from interaction and coaching; CBA-focused studies note that modular learning can support readiness and skill development, but sustained engagement and guidance help learners apply theory more effectively (Serrano, 2022).

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Overall, the findings imply that modular learning can promote practical application of business concepts, but students' confidence may be further strengthened through more frequent case simulations, feedback-rich activities, and consultation opportunities. Emphasizing authentic performance tasks and supportive feedback loops can help translate perceived relevance into stronger real-world problem-solving confidence.

Table 8. Communication between students and teachers

Statements	Mean	Standard Deviation	Verbal Interpretation
Teachers respond quickly to my questions.	3.78	1.00	Agree
The modules clearly explain how and when I should communicate with my teachers.	3.85	0.89	Agree
I feel comfortable reaching out to teachers.	3.81	0.99	Agree
Teachers provide clear guidance for modular tasks.	3.94	0.86	Agree
I receive helpful feedback from teachers on my modular work	3.85	0.96	Agree
Overall	3.84	0.85	

Legend: 4.2-5.0 Strongly Agree, 3.4-4.2 Agree, 2.6-3.4 Neutral, 1.8-2.6 Disagree, 1.0-1.8 Strongly Disagree

Table 8 presents students' ratings on communication between students and teachers in modular learning using the mean (M), standard deviation (SD), and verbal interpretation.

The highest mean was for teachers providing clear guidance for modular tasks (M = 3.94, SD = 0.86; Agree), indicating that instructional direction is the strongest communication-related support perceived by students. The lowest mean was for teachers responding quickly to questions (M = 3.78, SD = 1.00; Agree), with relatively high variability, suggesting uneven experiences in response timeliness across respondents. Overall, the theme obtained an Agree-level composite (M = 3.84, SD = 0.85), reflecting generally positive communication with moderate inconsistency, particularly on responsiveness.

These results suggest that while students perceive guidance and feedback as generally helpful, the comparatively lower score for quick responses points to a common limitation of modular/distance setups—reduced immediacy of interaction—which prior work also notes as a challenge among business and accounting students in modular contexts (Granfon, 2022). Consistent with broader evidence on remote learning, maintaining learning quality and engagement depends heavily on adequate instructor–student interaction and timely feedback, as these reduce confusion and sustain momentum in independent tasks (Akpen et al., 2024).

Overall, the findings imply that improving response-time systems (e.g., set consultation hours, clearer communication channels, and feedback timelines) may strengthen students' academic support and performance under modular learning. Enhancing interaction consistency can help convert clear task guidance into faster problem resolution and more effective completion of modular outputs.

Table 9. *Participation and completion of academic outputs*

Statements	Mean	Standard Deviation	Verbal Interpretation
I submit modules on time.	4.24	0.83	Strongly Agree
I actively participate in activities related to my modules (e.g., online discussions, quizzes, group tasks).	4.13	0.75	Agree
I complete all required modular tasks in each subject.	4.25	0.76	Strongly Agree
	4.23	0.72	Strongly Agree
	4.08	0.79	Agree

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I review my modular outputs to make sure they are complete before submitting.		
I actively participate in group activities related to module topics		
Overall	4.19	0.64

Legend: 4.2-5.0 Strongly Agree, 3.4-4.2 Agree, 2.6-3.4 Neutral, 1.8-2.6 Disagree, 1.0-1.8 Strongly Disagree

Table 9 presents students' ratings on participation and completion of academic outputs under modular learning using the mean (M), standard deviation (SD), and verbal interpretation.

The highest mean was for completing all required modular tasks in each subject (M = 4.25, SD = 0.76; Strongly Agree), followed closely by submitting modules on time (M = 4.24, SD = 0.83; Strongly Agree) and reviewing outputs before submission (M = 4.23, SD = 0.72; Strongly Agree), indicating strong task follow-through and compliance behaviors. The lowest mean was for actively participating in group activities related to module topics (M = 4.08, SD = 0.79; Agree), though this remained high and suggests that collaborative participation is slightly less endorsed than individual completion behaviors. Overall, the theme yielded a high composite rating (M = 4.19, SD = 0.64), reflecting consistently strong participation and completion with relatively low variability among respondents.

These results indicate that modular learning is associated with strong completion habits and output management, aligning with evidence that students with strong self-management tend to sustain achievement in modular learning contexts (Tolentino et al., 2022). The slightly lower emphasis on group participation is also consistent with reports that modular setups can limit interaction and reduce collaborative engagement compared with more interactive modalities, even when students remain productive in independent tasks (Akpen et al., 2024).

Overall, the findings imply that modular learning supports timely submission and task completion, which can positively contribute to academic performance indicators tied to output compliance. Strengthening structured collaborative opportunities (e.g., guided group tasks with clear roles and teacher check-ins) may help raise group participation to match the very high levels of individual completion.

Table 10. *Student motivation and feedback interaction*

Statements	Mean	Standard Deviation	Verbal Interpretation
Feedback motivates me to improve.	4.27	0.75	Strongly Agree
I feel more motivated to study when teachers comment on my modular outputs.	4.14	0.78	Agree
I use feedback to revise my work.	4.21	0.70	Strongly Agree
I feel confident when teachers acknowledge my efforts.	4.33	0.74	Strongly Agree
I ask for feedback when needed.	4.14	0.82	Agree
Overall	4.22	0.63	

Legend: 4.2-5.0 Strongly Agree, 3.4-4.2 Agree, 2.6-3.4 Neutral, 1.8-2.6 Disagree, 1.0-1.8 Strongly Disagree

Table 10 presents students' ratings on student motivation and feedback interaction under modular learning using the mean (M), standard deviation (SD), and verbal interpretation.

The highest mean was for feeling confident when teachers acknowledge efforts (M = 4.33, SD = 0.74; Strongly Agree), followed by feedback motivating improvement (M = 4.27, SD = 0.75; Strongly Agree), indicating that recognition and feedback are strong drivers of confidence and persistence. The lowest means were tied for feeling more motivated when teachers comment on outputs and asking for feedback when needed (M = 4.14, SD = 0.78–0.82; Agree), suggesting that while feedback is valued,

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initiating feedback-seeking and motivation from comments are slightly less strongly endorsed than confidence and improvement effects. Overall, the theme obtained a high composite mean (M = 4.22, SD = 0.63), reflecting consistently strong agreement that feedback interaction supports motivation and performance.

These findings align with Bloom's Mastery Learning Theory, where continuous feedback and opportunities for correction strengthen learning and performance by guiding students toward improvement (Bloom, 1968). They also reflect Social Cognitive Theory, as acknowledgment and feedback can enhance self-efficacy—supporting students' confidence to persist and refine outputs in self-directed learning contexts (Bandura, 1986). Consistent with evidence on modular/online learning, instructional interaction remains pivotal for sustaining engagement and learning quality beyond module content alone (Akpen et al., 2024).

Overall, the results imply that feedback systems are not merely supportive but function as a key motivational mechanism in modular learning, helping sustain effort and improve output quality. Encouraging structured feedback cycles (e.g., predictable commenting schedules and simple channels for feedback requests) may further strengthen students' feedback-seeking behaviors and sustain high motivation.

DISCUSSION

The results showed that students typically believe they can control their study behavior under modular learning, with an overall composite mean of 4.01 (SD = 0.74) for self-discipline and time management, interpreted as "Agree." This outcome, in my opinion, shows how flexible the students are in autonomous learning settings. Because traditional classrooms lack the organized daily supervision that modular learning provides, students are forced to strengthen their self-regulation skills. The comparatively high mean (M = 4.12) for preparing work to complete modular tasks ahead of schedule without hurrying indicates that students are aware of the negative effects of inadequate preparation. This suggests that a sense of academic responsibility has grown in many people.

However, I think that a realistic academic pressure threshold is highlighted by the somewhat lower mean for effectively managing time even with numerous modules (M = 3.93). Even if students are good planners, they may still become overwhelmed by managing several deadlines. This implies that students' executive functioning abilities are put under more strain by modular learning, particularly during periods of high submission volume. To avoid burnout, I believe that universities should think about redistributing the effort more effectively or coordinating deadlines for different subjects.

Furthermore, these self-reported metrics can represent perceived discipline rather than consistent conduct, even though students say that they avoid distractions and start assignments early. Since motivation and time management may vary based on stress levels and academic load, I think self-discipline in modular learning needs constant reinforcement.

Overall, the results indicate that even while students show admirable time management skills, institutional help is still needed for sustained discipline under conditions of high workload.

Students typically feel that learning resources are accessible and suitably structured, as indicated by the overall composite mean for this category of 3.96 (SD = 0.81), which is read as "Agree." The modules' good technological design is indicated by their high means for dependable module access and instruction clarity (both over 4.00). We think this is one of the modular learning system's main advantages. Students are less reliant on ongoing teacher assistance when modules are clear and well-structured. This encourages self-paced comprehension and supports independent learning.

The somewhat lower scores for teacher feedback (M = 3.84) and teacher contact ease (M = 3.85), however, suggest that academic support from peers might not be as strong as that provided by content. This difference, in my opinion, is crucial. Modules offer information, but feedback offers guidance, support, and

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correction. Without prompt feedback, students could keep using improper techniques or misunderstand concepts, particularly in CBA courses that require a lot of computation, like accounting and finance. Furthermore, I think that learning is psychologically impacted by teachers' accessibility. Students feel more confident and experience less academic anxiety when they are aware that assistance is available. Students may feel less supported academically even if modules are complete if instructors take their time responding. I think that improving communication channels, like planned consultations or organized feedback deadlines, could greatly improve students' academic performance and learning experiences.

While still good, the overall mean for motivation and attention was 3.86 (SD = 0.84), which is translated as "Agree." Out of the three areas, this group had the lowest composite mean. This implies that the most susceptible elements of modular learning might be motivation and sustained focus. Pupils expressed great perseverance in finishing challenging modules (M = 3.99) and sustaining self-motivation (M = 3.95). This, in my opinion, shows that the responders were resilient and goal-oriented. It implies that kids are aware of how crucial tenacity is to succeeding academically.

The lowest mean, however, was for maintaining motivation in the absence of in-person instruction (M = 3.71, SD = 1.08). Variability is shown by a higher standard deviation, which means that some pupils have far greater difficulties than others. This, in my opinion, emphasizes the social aspect of education. Peer engagement, impromptu conversation, and immediate support are all provided in face-to-face settings. Without these components, learning could feel lonely. Furthermore, retaining attention for prolonged periods of time during solo study (M = 3.80) indicates a moderate level of difficulty. I believe that home situations might not always support academic focus. Digital disruptions, unstructured schedules, and outside distractions can all progressively lower engagement.

In my view, deliberate reinforcement is necessary for motivation in modular learning. In contrast to conventional environments where educators may spot disengagement right away, modular learning mostly depends on internal drive. Thus, methods for tracking progress, collaborative components, and organized check-ins may aid in maintaining student engagement levels.

The majority of students concur, according to our findings, that modular learning aids in their understanding of the material. With an average score of 3.87, students are usually satisfied with how modules support their learning. The ability to communicate modular thoughts to others yielded the best results. If students are able to convey the lesson to someone else, it indicates that they truly grasp it. Being able to explain anything indicates that you truly understand it rather than only memorize it. Students also reported that modules assist them learn difficult subjects and that they help them understand classes properly. This demonstrates that the modules are sufficiently structured and understandable for pupils to follow independently.

The least successful outcome, however, was recalling the lesson after a few days. Students may comprehend the material today, but if they don't review, they may forget some of it later. Therefore, while modular learning aids in comprehension, students may still need to revisit in order to avoid forgetting. In general, modular learning aids in students' comprehension of the material; but, further practice and review are necessary to help them retain it over time.

We think that modular learning works well for lesson comprehension. The findings demonstrate that students can effectively express ideas and comprehend subjects, indicating that learning is indeed taking place. Students demonstrate that they have a thorough understanding of a subject rather than only memorizing it when they are able to communicate it to others. But we found that recalling teachings after a few days resulted in a little lower score. This indicates to us that while modular learning aids in short-term comprehension, student practice and review are key factors in long term retention. Some students may forget portions of the lecture if they don't review the material because there is less in-person interaction.

The total mean for evaluative and analytical thinking is 4.05, indicating that students strongly agree that modular learning improves their ability to think. The most significant finding was that critical thinking is necessary for modular activities. This indicates that students believe that modules force them to think

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more deeply than just provide answers to straightforward queries. They must examine circumstances, particularly those pertaining to business. Additionally, students concur that modules help them become more analytical. Since they complete tasks independently, they must comprehend the issue and come up with a solution on their own. This improves their ability to think. Answering case study questions had the lowest result, although students were still in agreement. This merely demonstrates that case studies are a little more challenging because they call for greater thought and concept fusion. All things considered, modular learning encourages pupils to think more carefully and thoroughly. It forces kids to think critically and assess circumstances in addition to memorization.

We think that modular learning is a great way to develop critical and analytical thinking abilities. According to the findings, students overwhelmingly concur that critical thinking is necessary for these classes. This indicates that modular activities are more than just straightforward questions; they force students to consider scenarios thoroughly and provide thoughtful answers. Students are compelled to solve difficulties on their own since they work alone. This can enhance reasoning and decision-making abilities, particularly in business related courses. Answering case studies demonstrates that students are exposed to higher level thinking activities, even though they can still be difficult.

Students agree that modules help them apply what they learn in real life, as seen by the overall mean of 3.96 for real-world problem solving. Understanding how module principles relate to business tasks was the best outcome. This indicates that students understand the link between their studies and actual business scenarios. Additionally, students concur that modules enhance decision making. As in real life, they must select the best answer when responding to activities. The least favorable outcome, meanwhile, concerned confidence in handling actual business challenges. Despite their understanding of the lessons, students could still be apprehensive about using them in real-world scenarios.

In general, modular learning aids students in relating lessons to their everyday experiences. It enables them to understand how subjects apply beyond the classroom setting. However, to boost their confidence, they might require additional practice and support.

Actually, given the findings, I believe that modular learning is beneficial, if not flawless. We saw that pupils comprehend their lessons and are even able to articulate them to others. That's encouraging because it shows they understand the subject and aren't just copying responses. However, the score is somewhat lower when it comes to recalling lessons after a few days. That makes logic to me. You risk forgetting some things if you study by yourself without reviewing or talking about it with someone. Therefore, while modular learning aids in understanding, it still requires work to retain.

We think that students are better able to relate teachings to actual business scenarios when they are learning in modules. The findings demonstrate that students can recognize the real-world application of what they are learning since they comprehend how ideas connect to commercial operations. Confidence in handling real world issues, however, received a somewhat lower score. Since real world circumstances are more complicated than prescribed module activities, we believe this to be typical. Even if students comprehend the idea, they may still find it difficult to implement in practical settings.

According to the results, total mean scores for student-teacher communication under modular learning were 3.84 (Agree), suggesting that students' opinions of instructional interaction were usually favorable. Teachers who gave clear directions for modular assignments had the highest mean of all the metrics ($M = 3.94$, $SD = 0.86$), indicating that students understand the value of structured learning in modular settings. One effective communication strategy that helps students comprehend academic requirements is clear task direction. Teachers who answered questions rapidly, however, had the lowest mean ($M = 3.78$, $SD = 1.00$). The bigger standard deviation indicates variation in student experiences, even if it is still understood as "Agree." This suggests that even while there is assistance, not all kids may always feel responsive.

These findings suggest that while communication is viable under modular learning, it is not yet at its best. Timely feedback is particularly important in maintaining academic engagement because modular

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learning reduces in-person interaction. Response delays may have an impact on students' task efficiency, clarity, and confidence. From an analytical perspective, communication encompasses both the quality of interactions and the delivery of education. Feedback loops and the clarity of instruction are closely related to academic performance. Students may find it difficult to solve problems on their own if lecturers offer structured modules but are unresponsive to follow-up inquiries.

I think that established channels of communication, like regulated feedback deadlines, prompt messaging platforms, and regular consultation hours, should be given priority in modular learning systems. Students' academic confidence and output quality could be greatly increased by teachers being more responsive.

The findings indicate that students exhibit great participation and completion behaviors in modular learning, as evidenced by the high overall mean of 4.19 (Strongly Agree). The completion of all mandatory modular tasks had the highest mean (M = 4.25, SD = 0.76), closely followed by timely module submission (M = 4.24, SD = 0.83) and pre-submission output review (M = 4.23, SD = 0.72). These results imply that under modular learning, pupils retain good compliance and task-management skills. Modules' structured format seems to promote accountability and responsibility, which enhances academic achievement.

On the other hand, actively engaging in group activities pertaining to module subjects had the lowest mean (M = 4.08, SD = 0.79). This study indicates that collaborative engagement is marginally poorer than individual task completion, despite the fact that it is still high. This trend suggests that while modular learning may restrict opportunities for collaborative learning, it also improves individual discipline and output completion. Therefore, rather than reflecting interactive or collaborative learning growth, academic achievement in modular contexts may show great compliance and task efficiency.

Although completing assignments well is a sign of good academic achievement, I believe that education shouldn't only emphasize compliance and submission. Critical thinking, communication, and teamwork are all developed through collaborative learning skills necessary for sustained academic and professional success. To strike a balance between peer contact and individual learning, schools can think about using structured group based modular tasks.

The results show that feedback interaction significantly boosts student motivation under modular learning, with an overall mean of 4.22 (Strongly Agree). Feeling confident when professors recognize students' achievements had the highest mean (M = 4.33, SD = 0.74), followed by feedback encouraging students to get better (M = 4.27, SD = 0.75). This implies that sustaining academic motivation depends heavily on acknowledgment and helpful criticism. Feedback is interpreted as encouragement rather than criticism by students, who seem to seek recognition.

Although they both remained within high agreement levels, the lowest means were found in asking for feedback when necessary (M = 4.14) and feeling motivated when outputs are given with comments (M = 4.14). This suggests that although students value feedback, proactive feedback seeking behavior might not be as strongly stressed. Overall, there is considerable agreement that feedback contact greatly improves academic achievement by boosting confidence, directing development, and rewarding effort. When students work autonomously in modular learning settings, feedback becomes a crucial source of incentive.

In my view, feedback in modular learning serves as both a psychological support system and an academic instrument. Recognizing teachers helps keep students motivated and persistent because modular learning might make them feel alone. Therefore, in order to maintain motivation and enhance performance outcomes, institutions had to implement systematic feedback methods.

The study's findings indicate that modular learning generally improves students' comprehension, critical thinking, practical application, and academic achievement. The majority of the composite means fall between "Agree" and "Strongly Agree," indicating that students believe modular learning supports their learning process. Analytical and evaluative thinking, task completion and involvement, and motivation from instructor feedback seem to be the strongest areas. These results imply that students' independence, accountability, and critical thinking are enhanced by modular learning.

The findings do, however, also indicate somewhat lower scores in areas including teacher response time, confidence in resolving real-world issues, and long-term lesson recall. This suggests that although modular learning aids in the development of understanding and skills, it might not provide the same instantaneous engagement and reinforcement as traditional face-to-face learning settings.

We think that while modular learning is useful, it is not comprehensive on its own. It is effective in fostering self-control, critical thinking, and task completion abilities, but it gains greater potency when paired with opportunities for practical application, clear communication, and constructive criticism from teachers. As a result, in addition to providing information, modular learning should emphasize bolstering support networks that aid in knowledge retention, confidence building, and better application of learning in practical contexts.

CONCLUSION

The primary purpose of this study was to examine the Effects of Modular Learning on the Academic Performance and Skills of CBA Students. Survey data collected from the participants in this study indicated that there is no significant effect for modular learning on CBA students' total academic performance and skill development. While students reported some positive effects on their motivation, understanding, time management, critical thinking, and communication skills using modular learning; however, the positive effects of the modular learning approach were not large or strong enough to have a direct impact on the students' total academic performance and skill development. Some of the students who participated in the study reported an increase in their self-discipline, independence, and sense of responsibility because they had to learn how to be independent and to use their own time management to complete the assigned tasks and responsibilities. The students also developed their ability to think analytically and critically when completing each of the learning modules. In spite of observing changes in the students, the study indicates that the students' total academic performance and skill development were not impacted by the students using modular learning. In addition, the study emphasized that while modular learning can provide opportunities for students to experience personal growth and learning experiences, it will not determine the students' academic performance and skill development.

Therefore, based on the results of this study, it can be concluded that modular learning does not have a significant impact on the academic performance and skills of CBA students. It would appear that additional factors are at work in determining whether students achieve academic success and develop their skills.

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