



Impact of Notetaking on the Cognitive Level among BSBA Marketing Management Students at Gordon College

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ARTICLE INFO

Keywords: Notetaking, Retention, Cognitive, Comprehension, Working Memory Capacity

Received : 16, July

Revised : 30, July

Accepted: 28, August

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ABSTRACT

This study aims to examine the impact of notetaking on cognitive level measuring through comprehension and retention among BSBA Marketing Management Students at Gordon College. The data gathered from 100 respondents were collected using a quantitative method. Stratified random sampling was used. The findings showed that while stock knowledge had a significant impact on retention, prior knowledge still strongly influenced retention. Metacognitive awareness and working memory capacity did not show substantial impacts. Although the notetaking format by itself does not ensure better cognitive outcomes, learning can be maximized by inputting strategies that increase engagement and activate past knowledge. To improve students' comprehension and memory retention in various academic settings, the study recommends incorporating interactive, structured notetaking techniques into education.

INTRODUCTION

In the academic landscape, notetaking has been acknowledged for a long time as a key academic ability, especially for college students who are constantly expected to absorb, understand, and recall vast amounts of information. Of the many skills that help students manage information, notetaking remains one of the most valuable. It is more than just a way of recording what is said in class and also a mental process that helps organize ideas, strengthen understanding, and improve memory retention over time. Practical notes cultivate efficiency by saving students time while maintaining organization and focus during study sessions. Notes also provide an excellent resource for creating outlines or other study tools (McPherson, 2018).

This research examines the impact of different notetaking techniques on students' comprehension and retention of scholarly material. Students enrolled in Marketing Management courses frequently engage with complex ideas that demand analytical reasoning and real-world implementation. Recognizing the best notetaking techniques can significantly improve their academic success and preparedness for real-world obstacles.

The educational research extensively documents the cognitive advantages of taking notes. Organized digital notetaking systems can enhance students' comprehension and memory of course material. This context reinforces the idea that the technique of notetaking, rather than just the action itself, significantly influences learning results (Bui et al., 2013). Likewise, research has shown that collaborative notetaking improves memory retention and also elevates the quality of writing and idea progression (Luo et al., 2021).

The significance of notetaking in digital and hybrid learning environments. Their study concluded that students who employed specific notetaking strategies performed better in comprehension and memory-based assessments. This idea underscores the universal applicability of notetaking techniques, regardless of the learning format or geographical location (Benavidez et al., 2022).

Besides being a study technique, notetaking can act as a tool for individualized learning. It allows students to arrange information in significant ways, motivating them to integrate ideas through their comprehension. This concept is essential for Marketing Management students, who need to learn to assess, interpret, and implement business theories in evolving and frequently uncertain market conditions. Skillful notetaking can act as a link connecting theoretical understanding to practical use, equipping students for various academic and career challenges.

In alignment with the United Nations Sustainable Development Goal 4 (Quality Education), which aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" by the year 2030, this study contributes to the global mission of enhancing educational quality through evidence-based practices. Access to quality education goes beyond physical availability; it requires effective learning strategies that empower students to maximize their academic potential. Notetaking, as a cognitive and academic skill, plays a crucial role in this vision by promoting critical thinking,

active engagement, and independent learning. By identifying and promoting effective notetaking methods, this research helps build foundational learning skills that not only improve immediate academic outcomes but also develop lifelong learning habits. In addition, the study reinforces the importance of equipping students with tools that adapt to diverse learning environments, including digital and hybrid settings, which are increasingly relevant in today's educational landscape.

This study aims to evaluate the cognitive effectiveness of different notetaking methods and how these influence comprehension and retention among Bachelor of Science in Business Administration Major in Marketing Management students at Gordon College. By examining which strategies most effectively support understanding and memory retention, the research seeks to offer valuable insights for both students and educators. The findings are expected to contribute to improved academic practices and inform instructional approaches that enhance learning outcomes, particularly in Marketing Management.

LITERATURE REVIEW

Handwritten Notetaking is an essential skill for all people, not just for students, because it is the very first thing that people must learn to be able to study. It helps in organizing information, improving comprehension, and enhancing memory retention. With the advancements in technology today, students have multiple options to take their notes either by hand or digitally using various digital tools. These two sparked a debate on which is more effective when it comes to students comprehending and retaining the knowledge.

Previous research (Kusumoto, 2022) conducted a cross-cultural study on Second Language (L2) notetaking habits and perspectives. The study aimed to examine how the students from different cultural backgrounds perceive and use digital notetaking methods when it comes to learning foreign languages. The outcome of the study by Kusumoto finds that the digital notetaking method offers advantages such as accessibility and can be easily organized. However, some students still prefer traditional handwritten notes because they help them retain information better. Research (Cabrera Maldonado et al., 2016) also confirmed that handwritten notes benefit college students in conceptual learning, while digital notes help them organize and review. The study concluded that the use of a hybrid approach or combining both methods could be the most effective strategy for maximizing their learning outcomes. In addition, Salame and Thompson's (2020) research suggested that students should be taught notetaking methods that focus on understanding rather than merely copying. Their study emphasized that just copying lectures is not sufficient. Students need to learn effective notetaking methods that prioritize understanding over mere transcription. This finding shows the importance of teaching structured notetaking to enhance students' retention and academic success. Shi et al. (2022) investigated the effects of different notetaking styles, such as collaborative, laptop, and traditional longhand, on college students' learning achievement and cognitive load. The findings conclude that students in the collaborative

notetaking group outperformed those in the other two groups in terms of learning achievement and experienced a significantly lower level of extraneous cognitive load. Notably, the collaborative group also achieved higher germane load levels, facilitating better information processing and retention. This finding is relevant in educational settings because a collaborative approach allows students to share the cognitive burden of note-taking, enabling them to focus more on understanding and processing the lecture contents.

Previous research by Gorospe et al. (2023) examines how high school students prefer and behave when taking notes by hand versus digitally. The results show that students who used pen and paper could express their ideas easily, rephrase key points, and summarize discussions quickly. On the other hand, students with tablet PCs liked the ease of organizing their notes but struggled with distractions from non-school apps. The study indicates that although digital note-taking can help with organization, it may also lead to more distractions, which could affect students' attention in class. At the same time, the study conducted by Calamlam (2023) investigated the effectiveness of electronic note-taking as a self-regulation strategy for enhancing the performance of Filipino learners in an online business mathematics course. It underscored the potential of integrating technology-based study habits to foster greater academic engagement. The results are that those students who work actively with digital notes exhibit improved learning outcomes and better self-regulated learning practices compared to other students who only use classical note-taking or are passively following learning paths. The investigation emphasizes how digital devices aid student interest, understanding, and overall achievement within online classes. Eslit (2023) investigates how writing tools have changed from classic pen and paper to digital formats, focusing on their effects on writing speed, teamwork, and access. The research points out the benefits of digital tools, including better productivity and easier sharing, but also notes issues like digital distractions, plagiarism, and the loss of handwriting skills. The conclusion indicates that although digital tools offer convenience, traditional handwriting is still important for brain development and memory. To further discuss, Salem (2020) emphasized that no single notetaking method is inherently superior, as all improved the students' conceptual understanding.

The study stands on the notion that note-taking helps in retaining information and organizing thoughts and concepts. It states that structured and camera-captured notes have the potential to surpass conventional handwritten notes. One drawback of the camera-captured notes is that they face criticism from educators due to the perceived laziness. However, they work just as well as other methods. Overall, the effectiveness of notetaking largely hinges on the individual student and how they apply their notes. A prior study by Pacaanas (2024) investigated metacognitive notetaking—an advanced strategy that emphasizes active processing and self-monitoring. This research revealed that this approach significantly boosted test scores, with 86% of participants experiencing a moderate to high enhancement in their reading comprehension. Conversely, Dinagsao (2022) presented opposing findings, contending that there is no direct link between time management, notetaking skills, and academic performance.

METHODOLOGY

This study employs a quantitative correlational research design, a non-experimental form of research in which investigators use the correlational statistic to describe and measure the degree of relationship between two or more variables (Devi et al., 2022; Asio, 2021). Since no intervention or experimental control is involved, a correlational approach enables the researchers to measure naturally occurring differences and explore significant associations between notetaking practices and cognitive outcomes (Curtis et al, 2016). This study only covers the students enrolled in the Bachelor of Science in Business Administration, primarily in Marketing Management (BSBA-MM) at Gordon College, with a total of 363 students currently enrolled. To ensure proportional representation across academic levels, the population will be stratified according to year level—ranging from first year to fourth year; hence, the total of 100 students needs to be surveyed. The smallest sample size is 100; most statisticians concur that a minimum sample size of 100 is necessary to obtain any significant results (Memon et al, 2020). This study uses primary data collected directly from the respondents using a questionnaire with a 4-point Likert scale. To analyze the data, the researchers utilized the Statistical Package for the Social Sciences (SPSS) Version 27 and Microsoft Excel 2019 for data encoding, tabulation, and statistical computation.

RESEARCH RESULTS

Table 1. Profile of the Respondents According to Year Level

Level	Frequency	Percent
First Year	32	32.0
Second Year	31	31.0
Third Year	22	22.0
Fourth Year	15	15.0
Total	100	100.0

Table 1 presents the profile of the respondents based on year level in the BSBA Marketing Management program at Gordon College. Out of the 100 respondents, the most significant proportion consists of first-year students, accounting for 32.0% (n = 32) of the total sample. Second-year students closely follow this at 31.0% (n = 31). Third-year students comprise 22.0% (n = 22), while the smallest group comprises fourth-year students, representing 15.0% (n = 15).

These results indicate that the sample is fairly distributed across different year levels, with a slight concentration among students in their earlier years of study. The presence of respondents across all year levels ensures a diverse range of academic experiences and exposure to notetaking strategies. This distribution is relevant to the study as it provides insights into how notetaking practices may vary across academic progression and influence cognitive development, such as comprehension and retention, as students advance through the program.

Table 2. Profile of the Respondents According to Preferred Notetaking Method

Category	Frequency	Percent
Digital	55	55.0
Traditional	45	45.0
Total	100	100.0

Table 2 shows the distribution of respondents based on the preferred notetaking method. Among the 100 BSBA Marketing Management students surveyed at Gordon College, a slight majority, 55.0% (n = 55), reported preferring digital notetaking methods. However, 45.0% (n = 45) indicated a preference for traditional (handwritten) notetaking.

This nearly balanced distribution suggests that students are divided in their approach to recording and organizing information, with a slight inclination toward digital tools such as laptops, tablets, or mobile devices. This result is essential in the context of the study, as it allows for a comparative analysis of how different notetaking methods may influence cognitive factors such as comprehension, retention, and overall learning engagement. The diversity in notetaking preferences also reflects varying levels of technological adaptability and learning strategies among students across different year levels.

Table 3. Perceived Notetaking as Learning Method in Terms of Cognitive Engagement

	Indicators	Mean	Descriptive Interpretation
1.	I concentrate better in class when I take notes.	3.29	Highly Evident
2.	I think carefully about the lesson while writing notes.	3.30	Highly Evident
3.	I feel more interested in the topic when I'm taking notes.	3.30	Highly Evident
4.	I clearly understand what is being discussed when I take notes.	3.31	Highly Evident
Composite Mean		3.30	Highly Evident

Legend: 3.25 - 4.00 = Highly Evident, 2.50 - 3.24 = Evident, 1.75 - 2.49 = Slightly Evident, 1.00 - 1.74 = Not Evident.

Table 3 shows students' perceptions of notetaking and cognitive engagement. The highest mean (M = 3.31) indicates note-taking improves comprehension by deep processing, consistent with Wang (2021).

Two items (M = 3.30) reveal that notetaking fosters reflection and interest.

The lowest mean (M = 3.29) shows notetaking aids focus. Bui et al. (2013) noted structured notes improve retention, while Ravizza et al. (2017) warned laptop distractions reduce attention.

The composite mean ($M = 3.30$) confirms notetaking as cognitively engaging. Piolat et al. (2005) emphasized it enhances comprehension and organization.

Table 4. Perceived Notetaking as Learning Method in Terms of Metacognitive Awareness

	Indicators	Mean	Descriptive Interpretation
1.	I plan my notetaking based on what I expect to learn.	2.98	Evident
2.	I regularly review my notes to improve them.	2.83	Evident
3.	I improve my notetaking strategies when needed.	3.01	Evident
Composite Mean		2.94	Evident

Legend: 3.25 - 4.00 = Highly Evident, 2.50 - 3.24 = Evident, 1.75 - 2.49 = Slightly Evident, 1.00 - 1.74 = Not Evident.

Table 4 shows students' perceptions of notetaking in terms of metacognitive awareness. The highest mean ($M = 3.01$) indicates students adjust their strategies when needed.

The second highest mean ($M = 2.98$) shows students plan their notetaking, though not consistently.

The lowest mean ($M = 2.83$) shows limited review of notes. Kiewra (1989) found reviewing notes boosts retention, while Carrier and Titus (1979) reported systematic review improves exam performance, though often underused.

The composite mean ($M = 2.94$) suggests moderate awareness. Teng (2016) found metacognitive instruction improves performance, while Zimmerman (2002) stressed training helps learners monitor and adjust strategies effectively.

Table 5. Perceived Notetaking as a Learning Method in Terms of Working Memory Capacity

	Indicators	Mean	Descriptive Interpretation
1.	I prefer breaking down tasks into smaller parts to remember them better.	3.19	Evident
2.	I rely on notetaking when I need to remember many details.	3.25	Highly Evident
3.	I quickly recall important information from memory when needed.	3.14	Evident
4.	I am able to concentrate on tasks without losing track of what I am doing.	3.06	Evident
5.	I remember what I just read or heard without needing to reread or rewind.	3.00	Evident
Composite Mean		3.13	Evident

Legend: 3.25 - 4.00 = Highly Evident, 2.50 - 3.24 = Evident, 1.75 - 2.49 = Slightly Evident, 1.00 - 1.74 = Not Evident.

Table 5 shows students' perceptions of notetaking and working memory. The highest mean ($M = 3.25$) indicates reliance on notes for remembering details. The lowest mean ($M = 3.00$) shows limited reliance on memory without rereading. The composite mean ($M = 3.13$) suggests moderate recognition of notetaking's role in supporting working memory.

Table 6. Perceived Notetaking as a Learning Method in Terms of Prior Knowledge

	Indicators	Mean	Descriptive Interpretation
1.	I find it easier to understand new topics when I already know something about them.	3.29	Highly Evident
2.	I try to recall what I already know about it, before starting a new topic.	3.15	Highly Evident
3.	I learn more effectively when I can relate new content to familiar concepts.	3.30	Highly Evident
4.	I find it easier to understand complex ideas when I have background knowledge.	3.30	Highly Evident
5.	I learn better when I relate lessons to my own experiences.	3.30	Highly Evident
Composite Mean		3.27	Highly Evident

Legend: 3.25 - 4.00 = Highly Evident, 2.50 - 3.24 = Evident, 1.75 - 2.49 = Slightly Evident, 1.00 - 1.74 = Not Evident.

Table 6 shows that students enrolled in the BSBA Marketing Management program prioritize utilizing prior knowledge while taking notes, attaining the highest means ($M = 3.30$) for connecting new information with known concepts, drawing on background knowledge for comprehension, and relating lessons to real-world situations.

The lowest mean ($M = 3.15$) associated with recalling prior knowledge before starting a topic, still classified as "Highly Evident," suggests that students may not regularly practice active recall (McCarthy & McNamee, 2009).

The average score ($M = 3.27$, "Highly Evident") highlights the importance of prior knowledge for effective note-taking.

Table 7. Cognitive Level of Students in Terms of Comprehension

	Indicators	Mean	Descriptive Interpretation
1.	I understand lessons better when I take notes.	3.39	Highly Evident
2.	I can explain the topic clearly after reviewing my notes.	3.24	Evident

3.	I understand new concepts more easily through my notes.	3.18	Evident
4.	I deepen my understanding of the lesson when I review my notes.	3.23	Evident
5.	I focus better on the main points of the topic when I take notes.	3.28	Highly Evident
Composite Mean		3.26	Highly Evident

Legend: 3.25 - 4.00 = Highly Evident, 2.50 - 3.24 = Evident, 1.75 - 2.49 = Slightly Evident, 1.00 - 1.74 = Not Evident

Table 7 shows that BSBA Marketing Management students perceive notetaking as a valuable strategy for improving their understanding of classroom content. Students associate notetaking with active listening and mental processing, leading to better conceptual understanding. According to Khan et al. (2020), learners who took notes by voice demonstrated greater conceptual understanding than those who only typed their notes, indicating that notetaking mode and cognitive investment are important. Siegel (2022) also noted that systematic notetaking techniques, including logically structuring the material, significantly enhanced understanding, especially in rigorous lecture settings. The lowest mean value (3.18) suggests that students understand new concepts more easily through notes, which may depend on the structure and review of the notes.

Overall, students believe that notetaking enhances their memory, comprehension, and academic achievement, with realistic grade results supporting these beliefs. Digital note-taking also enhances students' motivation and belief in the importance of note-taking for learning. The majority of college students firmly feel that taking notes enhances their memory, comprehension, and academic achievement; realistic grade results support these beliefs.

Table 8. Cognitive Level of Students in Terms of Retention

	Indicators	Mean	Descriptive Interpretation
1.	I remember lessons better when I take notes.	3.31	Highly Evident
2.	I can still recall important details from my notes after some time.	3.21	Evident
3.	I retain information longer in my memory because of my notetaking.	3.23	Evident
4.	I remember lessons more clearly when I review my notes.	3.29	Highly Evident
5.	I find it easier to recall information when I consistently use my notes.	3.40	Highly Evident
Composite Mean		3.29	Highly Evident

Legend: 3.25 - 4.00 = Highly Evident, 2.50 - 3.24 = Evident, 1.75 - 2.49 = Slightly Evident, 1.00 - 1.74 = Not Evident.

Table 8 describes the perceptions of Marketing Management students regarding their cognitive level in terms of retention. The highest mean value ($M = 3.40$) corresponds to the statement, "I find it easier to recall information when I consistently use my notes," which is interpreted as "Highly Evident." This indicates consistent note review strengthens memory consolidation and retrieval accuracy (Khan et al., 2020).

The lowest mean ($M = 3.21$) was for "I can still recall important details from my notes after some time," which, though "Evident," suggests that long-term retention may depend on review frequency and note quality.

Overall, the composite mean ($M = 3.29$, "Highly Evident") confirms that structured note-taking enhances long-term recall and learning (Bui et al., 2022).

Table 9. Impact of Notetaking Method on Cognitive Level of Students in Terms of Comprehension

Variable	B Coefficients	SE	Sig.	95% Confidence Interval		Conclusion
				Lower	Upper	
(Constant)	.678	.247	.009	.243	1.213	Significant
Cognitive Engagement	.389	.107	<.001	.183	.589	Significant
Meta Cognitive Awareness	.094	.075	.218	-.044	.250	Not Significant
Working Memory Capacity	.127	.109	.238	-.103	.333	Not Significant
Prior knowledge	.191	.106	.077	-.017	.399	Not Significant

Note. Adjusted $R^2 = .499$ ($n = 100$, $df = 4$, $F = 25.625$, $p = <.001$); 5000 sample bootstrapped.

Table 9 shows regression results on notetaking dimensions predicting comprehension. The model is significant (Adjusted $R^2 = .499$, $p < .001$), explaining 49.9% of variance.

Cognitive engagement was the only significant predictor ($B = .389$, $p < .001$), showing attentive note-taking improves comprehension.

Metacognitive awareness, working memory, and prior knowledge were not significant predictors.

Table 10. Impact of Notetaking Method on Cognitive Level of Students in Terms of Retention

Variable	B Coefficients	SE	Sig.	95% Confidence Interval		Conclusion
				Lower	Upper	
(Constant)	.909	.319	.007	.327	1.599	Significant
Cognitive Engagement	.062	.097	.544	-.128	.251	Not Significant
Meta Cognitive Awareness	.041	.084	.633	-.129	.202	Not Significant
Working Memory Capacity	.122	.142	.400	-.143	.417	Not Significant
Prior knowledge	.513	.126	<.001	.254	.749	Significant

Note. Adjusted $R^2 = .396$ ($n = 100$, $df = 4$, $F = 17.208$, $p = <.001$); 5000 sample bootstrapped.

An analysis using multiple linear regression on 5,000 bootstrapped samples indicated that cognitive engagement, metacognitive awareness, working memory capacity, and prior knowledge contribute to about 39.6% of student retention. The only statistically significant variable was prior knowledge, indicating that students who utilize relevant background knowledge while notetaking retain new information better. This indicates that metacognitive strategies are most successful when clearly taught and regularly utilized, and that when supported by reflective practices or instructional scaffolding, they can greatly improve learning results. Likewise, McNamara and Magliano (2009) pointed out that students frequently do not engage metacognitive strategies on their own, needing organized prompts to take advantage of them. In contrast, Chi (2009). The absence of importance in the present study might suggest a necessity for a clearer incorporation of metacognitive and cognitive techniques in educational practices

Table 11. Difference in the Cognitive Level of Students According to Year Level

Variable	Level	n	Md	H	Asymp. Sig	Conclusion
Comprehension	First Year	32	3.00	4.536	.209	Not Significant
	Second Year	31	3.40			
	Third Year	22	3.20			
	Fourth Year	15	3.20			
Retention	First Year	32	3.10	3.926	.270	Not Significant
	Second Year	31	3.40			
	Third Year	22	3.20			
	Fourth Year	15	3.40			

Note. $df = 3$; Md = Median.

Table 11 explores about the year level differences where the Kruskal-Wallis H test showed no significant differences in comprehension [$H(3) = 4.536$, $p = .209$] and retention [$H(3) = 3.926$, $p = .270$] across year levels.

Despite minor shifts in medians, students across all levels demonstrated similar comprehension and retention linked to notetaking. This suggests that year level does not affect how students process and retain information through notes. One reason may be their common exposure to similar notetaking strategies and teaching approaches across the program.

Students, regardless of academic standing, appear to adapt equally to structured or digital learning practices. The finding that year level alone does not explain differences in comprehension and retention.

Table 12. Difference in the Cognitive Level of Students According to Preferred Notetaking Method

Variable	Method	Md	U	z	Asymp. Sig	Conclusion
Comprehension	D	3.20	1166.000	-.504	.614	Not Significant
	T	3.20				
Retention	D	3.20	1139.000	-.695	.487	Not Significant
	T	3.20				

Note: D = Digital ($n = 55$); T = Traditional ($n = 45$); Md = Median

Table 12 explores the notetaking method differences where the Mann-Whitney U test found no significant difference in comprehension [$U = 1166.000$, $p = .614$] or retention [$U = 1139.000$, $p = .487$] between digital and traditional notetakers. Both groups shared the same median scores ($Md = 3.20$).

This means the format, digital or handwritten does not shape learning outcomes by itself. What matters more is the strategy behind the notes.

In short, comprehension and retention depend on how notes are taken, not what medium is used. The findings highlight that effective engagement with content, rather than tool choice, drives learning.

DISCUSSION

Cognitive engagement significantly improves students’ interest, understanding, and reflection, confirming findings by Singh and Rajendran (2024) who identified cognitive engagement as a key predictor of learning, not only in Python programming but across disciplines.

Moderate metacognitive awareness was observed, as students showed varied ability to plan, review, and adjust learning strategies. This aligns with Hidayat et al. (2024), who emphasized the importance of metacognitive awareness in extracting meaning from lessons.

Working memory support through notetaking was present but moderate, indicating that while students use notes to aid memory, self-reported memory capacity remains average. Salame et al. (2024) found that notetaking enhances both academic performance and knowledge retrieval, highlighting the importance of working memory in learning processes.

Prior knowledge played a strong role, with students recognizing the value of connecting new information to existing knowledge, a finding consistent with McCarthy et al. (2023), who demonstrated the multidimensional impact of prior knowledge on comprehension.

The benefits of notetaking on comprehension and retention were supported by Bao (2020) and Lichty (2022), who linked effective notetaking, particularly through paraphrasing, to improved understanding and recall over time.

Regression analysis identified cognitive engagement as the sole significant predictor of comprehension, reinforcing the findings of Singh and Rajendran (2024), while prior knowledge predicted retention, consistent with Dong et al. (2020).

Notably, comprehension and retention did not vary significantly by year level, indicating that the advantages of notetaking are stable across student groups (Salame et al., 2024). Similarly, cognitive outcomes were comparable between digital and traditional notetaking formats, suggesting that strategy use is more critical than the medium itself (Siegel, 2022).

Overall, these findings underscore the essential role of cognitive engagement, prior knowledge, and effective notetaking strategies in fostering academic success across diverse learning environments.

CONCLUSION

This research study shows that notetaking effectively enhances the understanding and memory of BSBA Marketing Management students. Note-taking is about strategy more than it is about one's preferred note-taking method. How one mentally engages with their notes matters more than what kind of notetaking method they use.

Students who demonstrated higher levels of mental involvement while taking notes (cognitive engagement) demonstrated a stronger understanding of lessons. In contrast, those who connected new information with their existing knowledge (prior knowledge) exhibited an enhanced capacity to retain information effectively. Nonetheless, many students continued to lack efficient methods for structuring or reviewing their notes, signifying a need for further support in developing metacognitive strategies.

Moreover, the research discovered no meaningful cognitive benefit related to the student's grade level or chosen notetaking method. This demonstrates that notetaking can be beneficial for any student if performed intentionally and thoughtfully.

In conclusion, successful notetaking enhances learning not through the tool utilized, but through how it engages the brain. Teachers and schools should

guide students in developing better notetaking strategies, helping them become more self-aware and intentional learners.

RECOMMENDATION

Students. Students should be encouraged to actively interact with their notes rather than just taking notes. For better comprehension and retention, this requires going over, classifying, and applying past knowledge. Depending on diverse learning styles and cultural contexts, workshops or orientations can be offered to teach students efficient notetaking techniques for both digital and traditional formats.

Instructors. It is advised to have instructors specifically teach notetaking techniques that improve students' cognitive involvement and metacognitive awareness. To improve students' learning habits, teachers should incorporate organized notetaking exercises into their lectures and highlight strategies like visualization, summarizing, and self-questioning. During class, minimizing distractions from electronic devices and effectively using them are key.

Future Researchers. Future researchers are urged to investigate additional behavioral and cognitive elements, such as motivation or attention span, that affect academic achievement.

Cross-cultural and multidimensional studies highlight note-taking behaviors and their effectiveness across diverse educational settings.

Educational Institutions. Programs, seminars, or learning modules that encourage notetaking and other productive study techniques may be created by the administration. Students can maximize their learning capacity by establishing a learning center or support system that provides academic skills training.

ADVANCED RESEARCH

The scope of this study is limited to BSBA Marketing Management students from Gordon College during the academic year 2024–2025, which means the findings may not fully represent students from other programs, schools, or locations. It only examines two notetaking methods—handwritten and digital—while excluding hybrid or mixed approaches that many students may use in real-life settings. The research utilizes exclusively quantitative methods, including surveys and statistical analysis, which yield measurable outcomes but may neglect profound personal experiences, intrinsic motivations, and challenges in notetaking. Considering these limitations, to have a more comprehensive understanding, future research could expand the pool of participants to students from different programs, universities, or even regions. Work is in progress to investigate hybrid notetaking approaches to discover how instruction might be improved by using both analog and digital techniques. Mixed-methods research methodologies, including focus groups and interviews, may be able to capture more closely students' views and motivations behind note-taking. Studies with repeated measurement of comprehension and retention over multiple semesters to help better understand the longitudinal

effects are maintained. This may be another topic for future research: how note-taking affects these key skills.

ACKNOWLEDGMENT

The author's professor guides this work, and the author extends their gratitude for their unwavering guidance, insightful feedback, and encouragement. The authors would like to thank all the participants for their support in this study.

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