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Cracking the Codes: Students' Preferred Strategies to Enhance Exam-Based Academic Achievement in Higher Education

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Abstract

Identifying students' preferred learning strategies plays a substantial role in enhancing academic achievement in higher education. This article investigates students' preferred strategies for enhancing exam-based academic achievement in higher education. A cross-sectional survey design was employed, utilizing a structured questionnaire consisting of 10 multiple-choice items measured on a nominal scale. The total population comprised 516 BBA and BBM first, third, fifth, and seventh semester students studying at Makawanpur Multiple Campus, Hetauda, Nepal. A sample of 221 students was determined using a sample size calculator with a 95% confidence level and a 5% margin of error. Proportionate stratified sampling was employed to ensure adequate representation across academic strata. A pilot study was conducted among 22 (10 % of the sample size) students. Fleiss's multi-rater Kappa showed an acceptable reliability of instrument, 0.614 in the pilot study and 0.663 in the main study. Primary data were collected through the questionnaire in 2025 after obtaining written consent from the students to ensure confidentiality, whereas secondary data were reviewed from scholarly journals, academic books, and credible websites published between 2021 and 2025. Descriptive statistics (frequencies and percentages) and Monte Carlo simulation of the Chi-square test were used to analyze the primary data and examine any association between students' strata and their preferred strategies. The findings indicate that students favored a range of strategies, including collaborative learning, structured daily study routines, key point reviews, interactive classes, the use of online platforms, continuous assessments, and personalized feedback. Moreover, students valued innovative teaching methods, access to well-equipped libraries and study materials, regular revision sessions, academic discussions, and student support services such as advising and counseling. Monte Carlo chi-square p-value ($p > .05$) showed no statistically significant association between students' strata and their preferred study strategies at the 0.05 level. These findings can guide teachers and educators in refining instructional methods and inform policies that enhance student learning outcomes in higher education.

Keywords: academic achievement, cross-sectional survey, higher education, learning strategies, Monte Carlo chi-square, stratified sampling

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1. Introduction

Academic achievement in higher education is closely linked to exam performance, prompting students to adopt diverse strategies such as time management active learning techniques (Temel et al., 2023; Eltahir & Alsalhi, 2025). These strategies, shaped by personal learning styles and institutional contexts are further enhanced by peer collaboration and stress management practices like mindfulness (Wang et al., 2022). Motivational factors and goal orientation also drive strategic behaviors, such as help-seeking and reflective journaling, which bolster academic resilience (Schunk & DiBenedetto, 2020; Killen & O'Toole, 2023).

Aligning academic support services with these preferences improves outcomes and reduces stress. By synthesizing these domains—time management, cognitive/metacognitive techniques, academic resources, peer networks, and well-being practices—this research offers actionable insights to design student-centered interventions, fostering exam success and adaptive learning environments (Virkola, 2025).

Academic achievement in higher education, closely tied to exam performance drives students to adopt multifaceted strategies such as cognitive (e.g., rehearsal, elaboration) and metacognitive techniques alongside motivational factors like self-efficacy. These strategies are shaped by personal traits, institutional resources, and cultural contexts as students balance pressures from high-stakes exams that determine career trajectories. Despite evidence supporting methods like spaced repetition, students often prioritize convenience or habit (with contextual constraints—such as part-time work or caregiving—favoring time-efficient tactics like cramming Digital tools further reshape study habits while exam-related stress necessitates anxiety-management practices Grounded in self-regulated learning theory , this study explores the interplay of preferences, constraints, and psychological factors in students' exam strategies, aiming to align institutional support with evidence-based practices to enhance academic resilience and success.

Higher education, offered by universities and colleges, involves advanced knowledge transmission, professional training, and critical inquiry (Stentiford & Koutsouris, 2021; Doherty & Stephens, 2023). It serves functions such as preparing individuals for careers, fostering citizenship, promoting research and innovation and supporting social mobility, though often constrained by inequality globalization, and digital shifts, it faces growing pressure to enhance student outcomes, including exam-based performance.

In higher education, strategies for enhancing exam-based achievement are deliberate, goal-oriented methods aimed at mastering content and improving performance. These include cognitive, metacognitive, and resource management techniques, marked by intentionality and adaptability (Islam & Aldaihani, 2022). Strategic learners using self-testing and spaced repetition tend to outperform others though implementation often falters due to motivational or cognitive barriers (Tirado-Olivares et al., 2021).

The primary objective of this research is to identify and analyze students' preferred strategies for enhancing exam-based academic achievement in higher education, evaluate their alignment with evidence-based learning techniques, and propose actionable recommendations to bridge gaps between student practices and pedagogical best practices.

Understanding students' preferred strategies for exam-based academic achievement is vital to aligning teaching practices and institutional support with learner needs, enhancing self-regulated learning and reducing exam-related stress (Fuchs, 2021; Lynam & Cachia, 2024). For stakeholders, such as students, educators, and policymakers, these insights inform targeted interventions, such as training programs and academic counseling, to foster effective study habits and resilience. Despite evidence endorsing techniques like retrieval practice, students often default to suboptimal methods (e.g., cramming) due to time constraints, resource accessibility, or stress. Addressing this gap, the study identifies drivers of strategy choices, advocating for metacognitive workshops and stress-management support to bridge theory and

practice. Such efforts aim to enhance academic success, mitigate inequities, and cultivate equitable learning environments in higher education (Ardhaoui et al., 2021).

Examinations, central to evaluating academic performance in higher education, often challenge students due to ineffective preparation strategies and time management (Flake& Gabriel, 2023; Hassan, 2023). While cognitive and metacognitive strategies enhance achievement, a gap persists in understanding students' preferred approaches, limiting institutional interventions. Despite evidence endorsing techniques like spaced repetition students often prioritize suboptimal methods (e.g., cramming) due to time constraints, stress, or misconceptions). These choices, influenced by competing responsibilities and psychological barriers, misalign with pedagogical best practices, exacerbating academic inequities. This study investigates these disconnects, exploring students' strategy preferences and contextual challenges to propose actionable solutions that bridge theory and practice, fostering equitable exam-based success.

This study was delimited to undergraduate students in a selected higher education institution, Makawanpur Multiple Campus, Hetauda, Nepal, focusing exclusively on exam-based academic achievement.

This study offers academic and practical value by identifying students' preferred exam strategies, enabling educators to align support services with learners' needs and foster self-regulated learning for improved outcomes. It addresses the gap between evidence-based practices (e.g., spaced repetition; and students' use of suboptimal methods, providing insights into barriers like time constraints or stress. These findings empower institutions to design targeted interventions that bridge theory and practice, enhancing academic success and equity.

1.1 Literature Review

Enhancing exam performance in higher education necessitates a comprehensive, strategic approach that transcends rote memorization, centering on students' preferred academic practices grounded in self-regulated learning (SRL). This literature review synthesizes theoretical and empirical research to identify key SRL-aligned strategies underpinning exam success. Proven study techniques like active recall and spaced repetition enhance long-term retention, while strategic time management and planning promote efficient resource allocation and reduce anxiety. Effective note-taking methods (e.g., Cornell, mind mapping) and academic resource utilization (e.g., tutoring, digital tools) support comprehension and clarification.

Crucially, holistic exam preparation integrates content mastery, critical thinking development, and well-being (physical/mental readiness). Continuous improvement through self-assessment, reflection, and feedback integration allows students to adapt strategies. Peer support via collaborative learning fosters motivation and knowledge reinforcement. Central to these practices is SRL, empowering students to actively monitor and control their cognitive, motivational, and behavioral processes, setting goals and adapting techniques. Within undergraduate contexts, students' self-reported, deliberate adoption of these SRL strategies—rather than external pressures—drives deeper cognitive engagement and academic achievement. While acknowledging broader influences like motivation and institutional support, this review emphasizes these student-directed practices as the primary catalysts for exam success.

Research indicates that higher education students express a preference for integrated, evidence-based learning strategies, including active learning, structured planning, note-taking, critical thinking, and peer collaboration, to enhance their exam performance (Kuleto et al., 2021; Akour & Alenezi, 2022). However, a significant disconnect exists between this stated preference and actual practice; students often default to less effective, easier methods like rereading and cramming due to misconceptions or time constraints. In contrast, a robust body

of research from 2021 to 2025 demonstrates that more cognitively demanding strategies, such as practice testing, spaced repetition, and metacognitive planning—consistently yield superior long-term retention and exam results, though students frequently lack the awareness or training to use them effectively.

A comprehensive framework for exam-based academic achievement encompasses several key strategies: study techniques, time management, strategic study plans, note-taking skills, use of educational resources, exam preparation strategies, critical thinking skills, continuous improvement tasks, and peer supports. Foremost among study techniques are active methods like retrieval practice, spaced repetition, and self-testing, which have been shown to significantly enhance exam success by promoting durable long-term retention over passive methods such as rereading (Alshumaimeri & Alhumud, 2021; Su, 2024). Further techniques such as interleaving (Hamdoune & Gantare, 2022), mnemonics, and concept mapping improve conceptual mastery, while metacognitive strategies like self-monitoring and goal-setting are crucial for fostering autonomous learning (Rayaginansih et al., 2023).

Effective time management, involving goal-setting, scheduling, and prioritization aligned with self-regulated learning principles, is vital for navigating academic demands (Wolters & Brady, 2021; Trentepohl et al., 2022). Nonetheless, procrastination and external pressures like part-time work often disrupt students' planning. While digital tools can aid organization, they also require self-discipline, pointing to a clear need for institutional support through targeted training and flexible resources (Aeon et al., 2021; Flegenheimer & Scherf, 2022; Zimmerman et al., 2023). This aligns with the development of a strategic study plan, where goal-setting and structured schedules promote metacognitive awareness and efficient study, particularly when combined with active techniques like self-testing (Zimmerman et al., 2023). Yet, unrealistic timelines and external demands often challenge consistency, suggesting that adaptive goal-setting and institutional skill-building workshops are necessary to address these barriers (Ariffin et al., 2021; Babicka-Wirkus et al., 2021).

The skill of note-taking is another critical component. Methods such as the Cornell system and outlining improve comprehension and recall, while generative strategies like paraphrasing and concept mapping deepen cognitive engagement with the material (Chakraborty et al., 2021; Ratama et al., 2021; Wisniawati et al., 2022). However, passive note-taking limits retention, and many students lack formal training in effective techniques. Furthermore, digital distractions can reduce note quality, underscoring the need for institutional workshops and clear guidance (Grema et al., 2021; Halim et al., 2023; Kovalenko, 2024). Complementing this, access to and use of educational resources, including libraries, academic databases, and digital platforms, is critical for synthesizing information and refining study strategies (Rodríguez & Pulido-Montes, 2022; Alenezi, 2023). Personalized supports like tutoring are highly beneficial for achievement, though disparities in access hinder equity, requiring institutions to ensure these resources are distributed equitably to all students (Herrera-Pavo, 2021; Miranda et al., 2021; Basilotta-Gómez-Pablos et al., 2022; Mohamed Hashim et al., 2022).

Specific evidence-based exam preparation strategies, including spaced repetition, active recall, mock testing, goal-setting, and stress management, have been directly linked to improved performance and confidence (Zerdani & Lotfi, 2021; Jenifer et al., 2022; Gallegos et al., 2022). Similarly, peer collaboration through study groups or peer instruction enhances understanding, motivation, and critical thinking, making institutional support for such structured interventions essential (Zepeda & Nokes-Malach, 2021; Gallegos et al., 2022; Alkhateeb et al., 2025).

Underpinning many of these strategies is the development of critical thinking, defined as purposeful, self-regulatory judgment that includes analysis, evaluation, and inference. This skill is key to mastering complex exam questions (Liu & Pásztor, 2022; Indah et al., 2022;

Sarwari & Kakar, 2023). Active learning methods and scaffolded assignments can enhance these skills (Hart et al., 2021; Sutiani, 2021; Alberida et al., 2022), though opportunities to practice them remain limited in many traditional curricula. Furthermore, continuous improvement tasks (CITs), such as self-assessment, reflection, feedback use, and peer review—foster the metacognitive awareness necessary for iterative learning and adaptation (Chuang, 2021; Alqahtani et al., 2023). These tasks enhance self-regulation, subject mastery, and overall exam readiness (De Wit & Altbach, 2021; Mohamed Hashim et al., 2022; Chan, 2023; Chan & Hu, 2023).

Ultimately, the most effective approach integrates these strategies into structured activities: combining retrieval practice, spaced and interleaved practice, elaboration, deliberate practice with feedback, and metacognitive regulation to build a strong foundation for exam success (Sokhanvar et al., 2021; Malik et al., 2023; Dempere et al., 2023; Gallagher & Savage, 2023; Sullivan et al., 2023). Peer supports facilitate this by enabling knowledge sharing, providing motivation, and honing critical thinking, all of which contribute to academic achievement (De Bie, 2022; Osborn et al., 2022; Pointon-Haas et al., 2024; Schmid et al., 2024). Peer tutoring and structured groups offer both academic and emotional support, significantly boosting accountability and persistence (Yeung & Yau, 2022; Radó et al., 2024). Despite the clear recognition of these effective strategies, notable gaps remain in the literature. Few empirical studies have examined integrated models that combine all ten strategy dimensions, and longitudinal data on their sustained impact is limited. Qualitative insights into student preferences and lived experiences are scarce, as are cross-cultural validations of strategy effectiveness. There is also limited research on how well students align their strategies with specific exam types (e.g., essays versus multiple-choice) and on assessing the quality of strategy implementation beyond self-report data. The evolution of strategy use across academic years and disciplines lacks sufficient exploration, and although digital tools are ubiquitous, research on their optimal integration for exam success is still emerging (Alenezi et al., 2023; Thelma et al., 2024). Finally, further investigation is needed into how motivation and self-efficacy influence the selection and persistent application of effective strategies.

In conclusion, while each strategy is individually linked to improved exam performance, integrated approaches, which combine time management, active study techniques, and metacognitive reflection, yield the most effective outcomes (Cogliano et al., 2021; Mefferd & Bernacki, 2023). The persistent challenge is that students often know about effective strategies but struggle to apply them consistently due to limited metacognitive awareness, time constraints, or a lack of proper training. Therefore, higher education institutions should proactively integrate evidence-based learning strategies into curricula and faculty development programs (Chankseliani & McCowan, 2021; Fischman & Gardner, 2022). This involves educators explicitly teaching the science of learning, designing assessments that reward deep understanding, and encouraging resource use and collaboration. Concurrently, students should be encouraged to practice active recall, spaced repetition, and metacognitive reflection while fully engaging with materials and peers. Institutional support in providing accessible resources and fostering a culture that values effective learning over mere grades is essential (Carpenter et al., 2022; Sridevi et al., 2024). Future research should focus on randomized controlled trials (RCTs), longitudinal studies, qualitative inquiries, and cross-cultural comparisons to explore strategy integration, digital tools, motivational factors, and neurocognitive correlates. Ultimately, developing scalable technological and pedagogical interventions is crucial for fostering the lasting study habits that lead to academic success.

This review concludes that exam success relies on integrated, evidence-based strategies rather than isolated methods, with institutions playing a key role. Bridging the gap between student preferences and effective techniques requires educational interventions that build skills

and motivation. Empowering students with these strategies support both exam performance and lifelong learning.

2. Materials and Methods

This section encompasses the following aspects:

2.1 Research Design

This study employed a cross-sectional survey design to explore the strategies preferred by students to enhance their exam-based academic achievement. The design was appropriate for obtaining data at a single point in time from a representative group of students, enabling a comprehensive understanding of their current preferences and practices.

2.2 Area of Study

The research was conducted at Makawanpur Multiple Campus, located in Hetauda, Nepal**.** This campus was selected as a representative higher education institution within the region, offering diverse academic programs across various disciplines.

2.2 Population and Sample

The target population comprised 2,221 students enrolled at Makawanpur Multiple Campus in the academic year 2025. To ensure representativeness, a stratified sampling design was employed, with strata based on faculty and academic level. A sample of 221 students was selected, representing approximately 10% of the total population. This approach facilitated proportional inclusion from different academic groups and ensured diversity in the student responses.

2.3 Data Collection Tools

Data were collected using a structured questionnaire comprising 10 closed-ended multiple-choice questions. These questions were designed to cover various dimensions related to students' preferred strategies for exam preparation, including study techniques, time management, learning tools, and exam-taking approaches.

2.4 Tool Reliability

The reliability of the questionnaire was evaluated using Fleiss' Kappa, which is suitable for assessing inter-rater agreement for categorical variables. The overall Fleiss' Kappa value indicated substantial agreement among raters, affirming the consistency of the instrument. The Monte Carlo Chi-square test was used to examine associations between demographic variables and students' strategy preferences.

2.5 Data Collection Procedure

Data collection was carried out in 2025, after obtaining written informed consent from each participating student. Respondents were briefed on the study's purpose, and confidentiality of their responses was strictly maintained. The survey was administered in a classroom setting under the supervision of the researcher.

2.6 Analysis and Interpretation of Data

The 10 multiple choice questions retaining 10 aspects were employed in this research. Each question had four options. The questions aimed to explore the students' most preferred strategy for enhancing exam-based academic achievement in higher education. The data presented in the table reveal the highest percentage option for each aspect.

Table 1: *Preferred Strategy with Percentage*

Aspect	Most Preferred Strategy	Percent of Respondents
Study Technique	Collaborative learning	81.4%
Time Management	Creating and adhering to a daily study schedule	91.0%
Strategic Study Plan	Focusing on high-priority exam content	81.0%
Note-Taking Skill	Highlighting and annotating key points	86.0%
Use of Educational Resource	Access to up-to-date textbooks and reference materials	88.7%
Exam Preparation Strategy	Creating a structured revision schedule	85.5%
Critical Thinking Skill	Synthesizing ideas from multiple sources	88.2%
Continuous Improvement Task	Seeking consistent feedback from instructors	82.4%
Academic Task of Student	Participating actively in academic discussions	90.5%
Peer Support	Reviewing and explaining difficult topics to each other	87.3%

The overall highest-rated strategy is "creating and adhering to a daily study schedule" (91.0%), reflecting students' strong preference for structured time management. This is closely followed by "participating actively in academic discussions" (90.5%) and "access to up-to-date textbooks and reference materials" (88.7%), highlighting the value students place on active engagement and quality learning materials.

Collaborative and peer-based approaches are also strongly preferred, with "reviewing and explaining difficult topics to peers" (87.3%) and "collaborative learning" (81.4%) receiving substantial support, indicating the perceived importance of social learning. Similarly, "synthesizing ideas from multiple sources" (88.2%) and "creating a structured revision schedule" (85.5%) point to students' emphasis on critical thinking and organized preparation. Other notable strategies include "highlighting and annotating key points" (86.0%) under note-taking, and "identifying and focusing on high-priority exam content" (81.0%), which suggest a clear preference for efficiency and focus in studying. Furthermore, "seeking consistent feedback from instructors" (82.4%) reinforces the value students place on continuous improvement through external input. All ten strategies were endorsed by over 80% of respondents, with four exceeding 88% and two surpassing 90%, indicating a strong and consistent consensus among students regarding the most effective approaches to enhancing exam-based academic achievement.

The findings suggest that higher education institutions should integrate collaborative and discussion-based learning into their curricula, as 90.5% of students prioritize active participation in academic discussions and 87.3% value peer explanation of difficult topics. The strong preference for collaborative learning (81.4%) indicates that social interaction is a critical component of students' academic success.

Access to updated educational resources is also a clear institutional responsibility, with 88.7% of respondents emphasizing the importance of current textbooks and reference materials. To support students' preference for structured academic habits, institutions should offer targeted support in time management and planning, especially considering that 91.0% of students favor creating and following daily study schedules and 85.5% endorse structured revision planning.

Moreover, academic support services should include training in note-taking techniques (86.0%), strategic prioritization of exam content (81.0%), and critical thinking through

synthesizing ideas from multiple sources (88.2%), reflecting students' desire for depth and efficiency in learning. Instructor involvement is also vital, with 82.4% of students seeking consistent feedback, indicating a need for formative assessment practices and regular guidance.

These implications reinforce the value of a balanced academic approach that combines personal discipline, resource access, strategic study habits, peer collaboration, and instructor engagement. Institutions should align teaching practices, support services, and assessment formats with these student-endorsed strategies to enhance exam-based academic achievement effectively (Heinz et al., 2025; Pageh et al., 2025).

2.7 Null Hypothesis

There were two categorical variables in the study: student status and preferred strategy. Student status included eight levels: BBA 1st Semester, BBA 3rd Semester, BBA 5th Semester, BBA 7th Semester, BBM 1st Semester, BBM 3rd Semester, BBM 5th Semester, and BBM 7th Semester**.** Preferred strategy consisted of four response options for each of ten different aspects. The Monte Carlo Chi-Square test was executed to assess the association between two categorical variables.

Table 2: *Hypothesis Test*

Variable I	Variable II	Class-Interval	Monte Carlo Chi-Square Test
Student Status	Study Technique	(95% CI: .987- 1.000)	P=1.000
Student Status	Time Management	(95% CI: .655- .774)	p = .715
Student Status	Strategic Study Plan	(95% CI: .856- .936)	p = .896
Student Status	Note-Taking Skill	(95% CI: .987- 1.000)	P=1.000
Student Status	Use of Educational Resource	(95% CI: .922- .979)	p = .950
Student Status	Exam Preparation Strategy	(95% CI: .987- 1.000)	p = .995
Student Status	Critical Thinking Skill	(95% CI: .987- 1.000)	p = .995
Student Status	Continuous Improvement Task	(95% CI: .971- 1.000)	p = .986
Student Status	Academic Task of Student	(95% CI: .486- .618)	p = .552
Student Status	Peer Support	(95% CI: .987- 1.000)	P=1.000

The study investigated whether student status categorized into eight levels across BBA and BBM programs had a significant relationship with students' preferred strategies in ten academic areas, each offering four response options. The Monte Carlo Chi-Square Test indicated no statistically significant association between student status and preferred learning strategies. The results consistently supported the null hypotheses. All p-values exceeded the conventional significance level of 0.05, and most confidence intervals were tightly clustered near 1.000, suggesting highly stable outcomes. These findings demonstrate that students from various academic levels exhibited remarkably similar patterns in their strategic preferences. Academic standing, therefore, did not appear to influence how students approach study techniques, time management, planning, resource use, or other examined strategies.

Possible reasons for the findings include a homogeneous academic environment, where the curriculum, teaching methods, or institutional culture encourage similar strategies across all student groups (Alam & Mohanty, 2023; Afriyanto & Anandari, 2024). Moreover, shared access to academic resources and uniform guidance may contribute to the consistent preferences observed.

3. Implication

Educational interventions can be designed at the program-wide level rather than tailored by semester. The consistent preferences suggest a shared academic culture or standardized curriculum influencing all student groups similarly.

4. Result and Discussion

The findings of this study revealed that students demonstrated strong preferences for specific strategies aimed at enhancing their exam-based academic achievement. A majority of respondents favored collaborative learning as a key study technique, with 81.4% indicating its effectiveness. This aligns with earlier research highlighting the value of peer interaction and structured group study in promoting comprehension and improving exam outcomes (Li & Zhang, 2021; Tin et al., 2022).

Time management emerged as another critical component, with 91.0% of students adhering to a daily study schedule, reflecting the importance of self-discipline and routine. These findings are supported by Wang and Luo (2024), and Juo and Zhou (2024) who emphasized self-regulated learning and robust time management as strong predictors of academic success, particularly in online and blended learning environments.

Regarding strategic study planning, 81% of students reported prioritizing high-value content for exams, suggesting a targeted and efficient approach to learning. This corresponds with Almoslamani (2022) and Dekker et al.'s (2024) identification of micro-strategies such as goal-setting and content prioritization as practices linked to higher academic performance, particularly among female students.

In terms of note-taking strategies, 86.0% of respondents preferred highlighting and annotating key points, indicating an active engagement with study materials. The importance of systematic note-taking was similarly emphasized in earlier studies (Guarochico-Moreira et al., 2024; Gao et al., 2025), which found that such strategies positively influenced GPA when consistently applied.

The use of educational resources was also prominent, with 88.7% of students emphasizing the value of up-to-date textbooks and references. This preference aligns with findings from Mushtaq et al. (2021), and Aithor.com (2025), who noted that resource accessibility and effective material use significantly impact exam readiness. Furthermore, 85.5% of students reported that having a structured revision schedule was the most effective preparation strategy. This supports prior evidence that distributed study sessions and planned retrieval practice correlate with improved academic performance (Cogliano et al., 2021; Trumble et al., 2024).

Critical thinking skills were highlighted by 88.3% of students who valued synthesizing ideas from multiple sources. This is consistent with recent literature (McCombes, 2023; Joseph & Sivamani, 2024), which emphasized synthesis and integration of information as core elements of deeper learning and academic achievement.

In addition, 82.4% of students found that consistent feedback from instructors contributed to their academic growth. Feedback, especially when timely and constructive, has been widely recognized as a driver of motivation and critical engagement (Malecka & Boud, 2023; Ryan, 2025).

Engagement in academic discussions was also widely adopted, with 90.5% of students actively participating. This aligns with Maani and Shanti (2023), and Fidan and Fidan (2024) who observed that discussion-based learning fosters higher-order thinking, especially when supported by video-based and interactive resources.

Finally, peer support was seen as a crucial factor by 87.3% of students, who reported that reviewing and explaining difficult concepts to peers enhanced their understanding. This mirrors the benefits of collaborative and cooperative learning highlighted by Mozaffari et al.

(2020), and Dmoshinskaia et al. (2022) where learning styles such as aural and kinesthetic approaches were effectively integrated in group settings.

Taken together, these results underscore the effectiveness of student-centered strategies—particularly those involving active engagement, self-regulation, feedback, and collaboration—in enhancing academic achievement in exam-based contexts. The consistency of these findings with prior empirical studies suggests that strategic alignment between learning behaviors, resource use, and instructional support plays a vital role in fostering success across diverse educational settings.

5. Conclusion

This study reveals a strong, unified student preference for an integrated approach to exam-based academic achievement, one that blends structured self-regulation, collaborative engagement, and critical resource use. With over 80% of students endorsing strategies such as daily scheduling (91.0%), structured revision (85.5%), academic discussions (90.5%), peer explanation (87.3%), and synthesis of ideas (88.2%), the findings signal a decisive move away from passive or last-minute learning. Instead, students advocate for disciplined, socially interactive, and resource-supported practices. The Monte Carlo Chi-Square Test revealed no statistically significant association between student status (with eight levels across BBA and BBM programs) and preferred learning strategies across ten academic areas, as all p-values exceeded the 0.05 threshold and supported the null hypotheses, indicating that academic standing did not influence students' strategic preferences. These insights call for higher education institutions to embed these validated strategies into curriculum design, academic support services, and resource planning. Aligning institutional practices with these student-endorsed approaches can foster deeper learning, greater academic resilience, and more sustainable exam success.

6. Recommendations

Based on the findings regarding students' preferred strategies for exam-based academic achievement, the following recommendations have been made:

- Future research should employ longitudinal and experimental designs, as well as replicate studies across diverse cultural and institutional contexts, to establish stronger causal evidence.
- Researchers should examine student-related factors, including workload, motivation, and support systems, while also incorporating students' own reflections and perspectives on their use of learning strategies.
- Studies should explore the dynamics of strategy use**,** focusing on how preferences vary across disciplines, demographics, and institutional settings, and how combinations of strategies (e.g., time management and collaboration) influence learning outcomes.
- Further investigation is needed into feedback and learning support mechanisms, particularly the types, sources, and timing of feedback that best facilitate student learning, along with insights from faculty and administrators.
- Future work should prioritize technology and innovation, by designing and testing scalable programs, tools, and digital platforms—including AI-based applications—that enhance the implementation of effective learning strategies.

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