Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal
of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 9 (2026)

Students' Instructional Time Management and Academic Performance in College and Advanced Algebra

James S. Amaro [1]
james.amaro616@gmail.com
0009-0001-6995-0579

Renith S. Guanzon [1]
renithguanzon10@gmail.com
0000-0003-3425-1521

1 – STI West Negros University

Publication Date: September 8, 2026
DOI: **10.5281/zenodo.22654455**

Abstract

Effective management of instructional time is important in mathematics learning because students need to prioritize and allocate their available time according to the demands of their academic tasks. This study examined the relationship between instructional time management and academic performance in College and Advanced Algebra among 98 first-year Bachelor of Secondary Education major in Mathematics students during the first semester of School Year 2025-2026. A descriptive-correlational research design was employed, using a validated, researcher-made questionnaire and students' final grades in College and Advanced Algebra. Findings revealed that the level of instructional time management across all four domains was high, with assessment and feedback obtaining the highest mean score. The respondents demonstrated satisfactory performance in College and Advanced Algebra, with an overall mean interpreted as Thorough level. When respondents were grouped according to their profile variables, a significant difference in instructional time management was found only for concept development based on parents' highest educational attainment. In contrast, no significant differences were observed across the other profile variables. Likewise, academic performance did not significantly differ across the respondents' profile variables. Furthermore, no significant relationship was found between instructional time management and academic performance. These findings suggest the need for further investigation into factors underlying differences and concept development according to parents' highest educational attainment and other factors that may contribute to students' academic performance.

Keywords: *Instructional Time Management, Academic Performance, Algebra,Mathematics Education, Concept Development*

Introduction:

Nature of the Problem

Instructional time management is an important aspect of students' learning, as effectively prioritizing and allocating available time among academic tasks can help learners make purposeful use of their learning opportunities. Xu (2020) recognized effective time management as an important factor in students' academic success, noting that students with stronger time-management skills tend to demonstrate better short-term and long-term academic development. For Bachelor of Secondary Education students, the outcomes-based education framework emphasized in CHED Memorandum Order No. 75, Series of 2017, focuses on developing competencies expected of future teachers. In this regard, understanding how students manage their instructional time provides an important perspective on their learning experiences within the program. This supports the institution's commitment to educational quality and aligns with Sustainable Development Goal 4 (Quality Education), which promotes inclusive and equitable quality education and lifelong learning opportunities for all.

Academic performance is an essential measure of students' progress and achievement in higher education, enabling faculty and administrators to evaluate student learning across courses and semesters (Al Husaini & Shukor, 2022). Examining academic performance in mathematics is particularly important given the continuing concern over mathematics achievement in the Philippines. In PISA 2022, the Philippines obtained an average mathematics score of 355, substantially lower than the OECD average of 472, placing the country among the lowest-performing education systems in mathematics (OECD, 2023). Local studies have reported similar concerns, as Rodrigo and Alave (2021) found that Filipino public high school students demonstrated low achievement in algebra.

Several studies have identified various factors associated with students' mathematics performance. Tablate (2025) reported factors including attitudes, motivation, teacher-related factors, instructional strategies, institutional support, study habits, learning styles, classroom conditions, school facilities, and prior academic achievement. Derio et al. (2022) identified student-, teacher-, parent-, and environment-related factors, while Ragaza (2024) identified study habits, learning problems, and mathematics anxiety as factors associated with mathematics performance. However, limited local research has examined the relationship between students' instructional time management and academic performance in College and Advanced Algebra, particularly among first-year Bachelor of Secondary Education Major in Mathematics students in Philippine state universities. This prompted the researcher to pursue the study based on experience as a mathematics instructor.

Current State of Knowledge

Recent studies generally support the importance of time management and instructional time in students' academic outcomes, although the strength of the relationship varies across contexts. Romero et al. (2024), using objective measures among 120 university students, found that time management was positively related to grades in mathematics, physics, and chemistry, while fluid intelligence was particularly related to mathematics grades. Similarly, Ganzon and Edig (2022), in a Philippine study involving Grade 9 students, examined time management and self-directed learning as predictors of mathematics performance and demonstrated the relevance of students' ability to manage learning demands to their mathematics outcomes. More recently, a meta-analysis synthesizing 31 studies and 13,506 college students found a significant moderate positive relationship between time management and learning outcomes, with the effects particularly evident among undergraduate students. Collectively, these findings establish time management as an important component of self-regulated learning but also suggest that its influence on academic performance may depend on learner characteristics, measurement approaches, and educational contexts.

Evidence specifically concerning the amount and use of instructional or study time likewise indicates its potential contribution to mathematics achievement. Spitzer (2022), using longitudinal data from more than 6,000 students in three countries and over 1.1 million mathematics problem sets, found that increased study time resulted in higher mathematics performance. More recent evidence further demonstrates that the effects of instructional time may not be uniform across learners. A 2026 study using nationally representative data from more than 15,000 first-grade students found that greater mathematics instructional time was generally positively associated with achievement, but the magnitude of its benefit differed according to students' mathematics and behavioral risk profiles. These findings suggest that it is not merely the availability of instructional time but also how effectively such time is organized, utilized, and aligned with learner needs that may contribute to mathematics achievement.

Within the Philippine mathematics context, Galas and Guanzon (2026) provide particularly relevant evidence. Their study of 165 Senior High School STEM students examined study habits in terms of motivation, learning techniques, and learning environment alongside students' performance in General Mathematics. Although respondents demonstrated high study habits and favorable mathematics performance, no significant relationship was found between study habits and academic performance. Moreover, academic performance did not significantly differ according to sex, grade level, intended college course, or average family monthly income, although income produced differences in some dimensions of study habits. The study is closely related to the present investigation because both examine students' learning-related behaviors alongside mathematics performance. More importantly, its nonsignificant relationship provides evidence that favorable academic behaviors may not automatically result in higher mathematics grades, suggesting that other instructional, cognitive, and contextual factors may intervene.

Abaniel and Guanzon (2026) offer an even more direct connection to the present study because they investigated College and Advanced Algebra among 126 teacher education students. Mathematical competence was examined in algebraic expressions, exponents and radicals, equations and inequalities, systems of linear equations and inequalities, relations and functions and their graphs, and exponential and logarithmic functions. Differences in competence were particularly evident according to year level, whereas several areas did not significantly differ according to age, sex, and family income. Their findings demonstrate that students' competence in College and Advanced Algebra is multidimensional and may vary according to educational experience rather than consistently according to demographic characteristics. For the present study, this evidence is important because it supports examining academic performance in College and Advanced Algebra while recognizing that students' achievement may be shaped by factors beyond their personal profile, including the ways in which instructional opportunities and learning time are utilized.

Additional evidence from Para and Guanzon (2026) highlights the complexity of mathematics learning by showing that learners' difficulties may arise from cognitive, affective, motivational, and learning-environment factors. Their investigation of Grade 7 mathematics learners considered profile characteristics that included sex, average monthly family income, parents' highest educational attainment, and number of siblings. Differences were observed in some dimensions of mathematics difficulty according to learner characteristics, including income and sex. Although the participants and mathematics level differ from those of the present study, the findings are relevant because they demonstrate that mathematics performance and learning experiences cannot necessarily be explained by a single behavioral factor. Thus, even when students effectively manage instructional time, cognitive, motivational, environmental, and family-related conditions may contribute to variations in mathematics learning.

Likewise, Villaluz et al. (2026), examined learner engagement and academic performance among 373 secondary school learners. Despite learners demonstrating high academic, social, and emotional engagement, no significant relationship was found between engagement and academic performance. Parents' highest educational attainment and number of siblings, however, influenced learner engagement, while family income significantly affected academic performance. This finding is particularly useful in interpreting the present study's result concerning parents' highest educational attainment and concept development, as it reinforces the possibility that family educational background may be associated with particular dimensions of students' learning experiences even when it does not uniformly translate into differences in overall academic performance. It also supports the proposition that positive learning behaviors do not necessarily have a direct statistical relationship with grades.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 9 (2026)

Finally, Rubica and Guanzon (2025) examined the effects of Project IDEAL on learners' arithmetic performance in Key Stage 2 Mathematics through a quasi-experimental approach involving pretest and posttest performance. Although the study focuses on younger learners and arithmetic rather than College and Advanced Algebra, it contributes to the current knowledge by emphasizing the importance of structured and purposeful instructional interventions in improving mathematical performance.

Theoretical Underpinnings

The present study, "Students' Instructional Time Management and Academic Performance in College and Advanced Algebra," is anchored on John B. Carroll's Model of School Learning and Herbert J. Walberg's Theory of Educational Productivity. Carroll's Model of School Learning (1963) provides the theoretical foundation for students' instructional time management, emphasizing the importance of time available and time actually spent on learning. Meanwhile, Walberg's Theory of Educational Productivity (1982) serves as the foundation for academic performance, explaining educational achievement as an outcome influenced by learner characteristics, instruction, and learning environments. Together, these theories provide a framework for understanding how students' effective use of instructional time may be associated with their performance in College and Advanced Algebra.

Carroll's Model of School Learning proposes that the degree of learning is largely determined by the relationship between the time a learner actually spends on a learning task and the amount of time needed to master it. The model identifies aptitude, ability to understand instruction, perseverance, opportunity to learn, and quality of instruction as important determinants of learning. In particular, opportunity to learn concerns the amount of time provided for learning, while perseverance represents the amount of time students are willing to spend learning (Carroll, 1963, 1989). In contrast, Walberg's Theory of Educational Productivity explains academic performance through the interaction of student aptitude, instructional factors, and environmental influences. The theory recognizes prior achievement, motivation, development, quantity and quality of instruction, and home, classroom, and peer environments as factors contributing to educational outcomes (Walberg, 1982).

These theories are relevant to the present study because Carroll's model explains how students' management of time for instructional activities, concept development, practice and application, and assessment and feedback may facilitate learning in College and Advanced Algebra. Effective allocation and utilization of instructional time can provide students with greater opportunities to understand mathematical concepts, practice problem-solving skills, and respond to assessment and feedback. On the other hand, Walberg's theory provides a basis for understanding students' academic performance as an outcome that may be influenced not only by instructional time management but also by prior mathematical knowledge, motivation, instructional quality, family background, and other environmental conditions. Thus, the two theories complement each other in examining the relationship between students' instructional time management and their academic performance while recognizing that mathematics achievement may result from the interaction of multiple factors.

Objectives of the Study

This study aimed to determine the levels of students' instructional time management and academic performance in College and Advanced Algebra of a state university in the Negros Island Region during the first semester of the School Year 2025-2026. Specifically, it aimed to determine the profile of respondents according to the variables school campus, average family monthly income, and parents' highest educational attainment; level of students' instructional time management according to the areas concept development, guided and independent practice, assessment and feedback, and time on task; whether a significant difference exists between the levels of students' instructional time management when grouped and compared according to the variables; and whether a significant relationship exist between the levels of students' instructional time management and academic performance.

Research Methodology:

This portion presents a discussion of the research methodology used, the subject-respondents of the study, the research instrument used, the validity and reliability of the instrument, the procedure for data gathering, conduct of the study, and the statistical tools and procedures for data analysis.

Research Design

A descriptive design was employed in this study. According to McCombes (2023), a descriptive research design aims to precisely and fully describe a population, situation, or phenomenon. It answers what, where, when, and how questions, but not the why question. It utilizes a wide variety of research designs to examine a single or multiple variables. Unlike in an experimental study, the researcher does not control or manipulate any of the variables but only observes and measures them.

In this study, the focus was on the students' instructional time management. Therefore, the descriptive design is appropriate to answer this inquiry because it helped describe the levels of students' instructional time management in College and Advanced Algebra.

Study-Respondents

The respondents of the study were 98 first-year students enrolled in the Bachelor of Secondary Education major in Mathematics program from four campuses of an agricultural university in Negros Island Region. Since the population was manageable, total enumeration was considered, and purposive sampling was employed. Purposive sampling was employed by intentionally selecting first-year education students majoring in Mathematics currently enrolled in College and Advanced Alegebra. Purposive sampling is a non-probability technique in which participants are deliberately chosen because they possess specific characteristics relevant to the research purpose (Creswell & Poth, 2018).

Instrument

The researcher gathered the necessary data for this study by developing a researcher-made questionnaire to determine the relationship between students' Instructional Time Management and their Academic Performance in College and Advanced Algebra for the School Year 2025–2026.

The questionnaire was divided into two parts, with part I dealing with the profile of respondents in terms of school campus, average monthly family income, and parents' highest educational attainment. Part II of the questionnaire consists of 40 items measuring Instructional Time Management, with 10 items allocated to each of four areas: Concept Development, Guided and Independent Practice, Assessment and Feedback, and Time on Task. Each item was rated on a 5-point Likert scale, with 5 as always, 4 as often, 3 as sometimes, 2 as rarely, and 1 as almost never.

The validity of the instrument was established with three expert validators who are recognized education professionals, including a dean of the college of education, a program chair, and a research ethics committee member. Validation followed the criteria of Good and Scates, with interpretation ranges from Poor to Excellent. The instrument obtained a validation mean of 4.70, interpreted as Excellent, indicating high validity.

Reliability was determined using Cronbach's alpha to assess internal consistency. A pilot test was conducted among 30 BSED Mathematics students in another state university in Negros Island Region. It obtained a reliability coefficient of 0.972, interpreted as Excellent, confirming that the research instrument is reliable.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 9 (2026)

Data Gathering and Procedure

After administering the validity and reliability tests, and upon approval of the schools division superintendent and the school head, the questionnaires were administered to the target respondents. The questionnaires were gathered, recorded, and analyzed. The data gathered from the responses of the respondents were tallied and tabulated using the appropriate statistical tools. The encoded data were processed using SPSS.

Data Analysis and Statistical Treatment

Objectives 1 and 2 employed a descriptive analytical scheme, using frequency counts and percentages as statistical tools to assess the profile of respondents, mean to assess the level of students' instructional time management across the three areas. Objective 3 utilized a comparative analytical scheme, applying the Mann-Whitney U test to determine if a significant difference exists between the levels of students' instructional time management when grouped and compared according to the variables. And, Objective 4 employed a relational analytical scheme, using Spearman rho to determine if a significant relationship exists between the levels of students' instructional time management and academic performance.

Ethical Consideration

The respondents' participation was voluntary. The learners were given the option to participate or not, depending on their own volition and free will. Additionally, all respondents were informed in advance of the study's purpose and mechanics, and the researcher ensured they were fully informed. The researcher ensured that all participants were not harmed or put in a precarious situation by maintaining the confidentiality of their responses and information. Informed consent forms were provided to the learners. The anonymity protocol for respondents' identities was strictly followed, and the raw data, after appropriate treatment, were destroyed. The data and the results were for the sole purpose of this study, nothing else.

Results and Discussion:

This section presents, analyzes, and interprets the data gathered to carry out the predetermined objectives of this study.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 9 (2026)

Profile of Respondents

Table 1
Profile of the Respondents

Variables	Categories	Frequency	Percentage
	Main Campus	26	26.53
School Campus	Extension Campuses	72	73.47
	Total	**98**	**100.00**
Average Family Monthly Income	Lower (below Php 10,000)	46	46.94
	Higher (Php 10,000 and above)	52	53.06
	Total	**98**	**100.00**
Parents' Highest Educational Attainment	Lower (Elementary Graduates)		
	Higher (High School or College)	31	31.60
	Total	67	68.40
		98	**100.00**

Table 1 presents the profile of the respondents by school campus, average family monthly income, and parents' highest educational attainment.

For the campus, 26 or 26.53% of respondents are from the Main Campus, whereas 72 or 73.47% are from the extension campuses, indicating that the majority of the respondents are from the extension campuses.

In terms of average family monthly income, 46 respondents or 46.94% belonged to the lower-income category, while 52 or 53.06% belonged to the higher-income category. The distribution of respondents by average family monthly income is relatively balanced, with the higher-income category slightly outnumbering the lower-income category.

Regarding parents' highest educational attainment, 31 respondents (31.63%) had parents who were elementary graduates, while 67 respondents (68.37%) had parents who were high school or college graduates. This indicates that the majority of the respondents had parents who had attained at least a high school or college education.

This profile indicates that most respondents came from families with relatively low parental educational attainment. Such a profile is common among students enrolled in Philippine State Universities and Colleges, which aim to expand access to higher education for financially disadvantaged but academically deserving students. The Commission on Higher Education (2017) prioritized financially disadvantaged students in implementing the free tuition program under the Higher Education Support Fund. Similarly, Isabela State University (2024) reported that 97.39% of its enrolled students belonged to low-income households, reflecting the university's commitment to providing educational opportunities for economically disadvantaged students.

Level of Students' Instructional Time Management

Table 2
Students' Instructional Time Management in terms of Concept Development

Items	Mean	Interpretation
As a student, I…		
1. take time during the lesson to think about concepts I find difficult.	4.06	High
2. prepare my notes, formulas, and materials before the class so I can use my time more effectively in understanding concepts.	3.93	High
3. allot time during the lesson to ask questions when I do not understand concepts.	3.68	High
4. spare time to review prior concepts related to the current topics before the lesson.	3.61	High
5. set a time during the lesson to follow examples and understand the concepts being explained.	3.91	High
6. set a specific time after the lesson to review my notes to reinforce my understanding of the concepts.	3.74	High
7. spend sufficient time reviewing and analyzing solved examples to better understand the concepts.	3.99	High
8. allot time after each lesson to summarize the key concepts and formulas learned during the class.	3.69	High
9. use the time given for assignments to understand the lesson concepts better.	4.00	High
10. set a specific time after the lesson to reflect on and clarify concepts I did not fully understand.	3.79	High
Overall Mean	**3.84**	**High**

Table 2 shows the students' instructional time management in terms of concept development. This obtained an overall mean of 3.84, interpreted as high. Item 1, taking time during the lesson to think about concepts, was found difficult, with the highest mean of 4.06, interpreted as a high level.

In contrast, Item 1 on sparing time to review prior concepts related to the current topics before the lesson had the lowest mean of 3.61, still interpreted as a high level. This suggests that students engage more frequently in processing and clarifying difficult concepts during the lesson than in reviewing related concepts beforehand. This may be because the lesson provides immediate opportunities for students to ask questions, receive explanations, participate in guided problem-solving, and clarify difficult concepts. Rach and Ufer (2020) emphasized that prior mathematical knowledge plays an important role in university mathematics because students draw on existing knowledge when integrating and developing new mathematical concepts. Sana et al. (2020) likewise demonstrated that engaging with content before formal study through pretesting can support conceptual learning.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 9 (2026)

Table 3
Students' Instructional Time Management in terms of Guided and Independent Practice

Items	Mean	Interpretation
As a student, I…		
1. complete the practice exercises given by the teacher within the allotted class time.	4.10	High
2. use part of the practice time to check and correct my answers.	4.17	High
3. set aside time to ask the teacher for additional examples when needed.	3.64	High
4. use the remaining practice time to review or improve my solutions.	3.85	High
5. use my practice time to complete unfinished problems before the activity ends.	3.90	High
6. set aside time to try solving the example problems from the lesson on my own.	3.67	High
7. set aside time to solve similar problems from other textbooks related to the lesson.	3.58	High
8. spend additional time solving more challenging problems to deepen my understanding.	3.64	High
9. allot time to complete homework or assigned problem sets.	4.03	High
10. set aside time to check and review my homework or assignments.	3.97	High
Overall Mean	**3.86**	**High**

Table 3 shows students' instructional time management across guided and independent practice, with an overall mean of 3.86, which is interpreted as high. Item 2, on using part of the practice time to check and correct my answers, obtained the highest mean of 4.17, interpreted as a high level.

In contrast, Item 7 on setting aside time to solve similar problems from other textbooks related to the lesson had the lowest mean of 3.58, although still interpreted as a high level. This revealed that students engage less frequently in solving supplementary problems from other textbooks than in the other Guided and Independent Practice activities. Boribor and Tonga (2022) emphasized mathematical practice activities that engage students in problem solving, reasoning, making connections, and repeated reasoning, highlighting the value of continued mathematical practice in developing conceptual understanding and problem-solving skills. The lower frequency of using additional textbook problems may be related to students' tendency to focus on the practice activities already provided during instruction. Velez et al. (2023) found that higher-education students addressed difficulties in mathematics through reading and studying, expert consultation, perseverance, and constant practice, showing that students use different forms of support and practice when working through mathematical difficulties.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 9 (2026)

Table 4
Students' Instructional Time Management in terms of Assessment and Feedback

Statement	Mean	Interpretation
As a student, I… 1. allocate sufficient time to prepare for quizzes or exams.	4.18	High
2. allocate time to check my answers before submitting quizzes or exams.	4.21	High
3. set aside time to check my mistakes after quizzes or exams.	4.10	High
4. set aside time to review topics where I made mistakes in previous quizzes or exams.	3.98	High
5. set aside time to apply the correct solutions after quizzes or exams.	4.00	High
6. set aside time to carefully read the feedback given on my quizzes, exams, or assignments.	4.14	High
7. set aside time to compare my answers with the teacher's corrections or suggestions.	4.02	High
8. spend time correcting my mistakes based on the feedback I receive.	4.20	High
9. spend additional time studying topics where I received low scores based on my quiz or exam results and feedback	4.07	High
10. spend time reviewing my quiz or exam results to monitor my progress.	4.10	High
Overall Mean	**4.10**	**High**

Table 4 shows the students' instructional time management in terms of assessment and feedback. The overall mean is 4.10, interpreted as high. Item 2, allocating time to check my answers before submitting quizzes or exams, received the highest mean of 4.21, which is also interpreted as a high level.

In contrast, Item 4 on setting aside time to review topics where mistakes were made in previous quizzes or exams had the lowest mean of 3.98, although still interpreted as a high level. The lowest-rated item suggests that students are less likely to allocate time to reviewing topics in which they made mistakes, indicating that reflective review after assessments is practiced less frequently than other assessment and feedback time-management behaviors. Mallillin et al. (2024) highlighted the importance of assessment and feedback in mathematics learning, particularly through self-assessment and detailed feedback that help students understand mathematical concepts and improve their learning. In actual classroom practice, students may prioritize completing current requirements and preparing for upcoming assessments, leaving less time to return to topics from previous assessments. Pyo (2023) found that self-assessment helped

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 9 (2026)

students regulate their study behaviors more effectively, leading to better understanding of the subject matter and greater participation in learning activities.

Table 5
Students' Instructional Time Management in terms of Time on Task

Items	Mean	Interpretation
As a student, I…		
1. set aside time before class to review previous tasks or homework.	3.88	High
2. use my class time to participate in learning tasks or activities.	3.98	High
3. begin working on assigned tasks as soon as instructions are given.	3.86	High
4. take time to review the instructions before starting the assigned task.	4.26	High
5. spend additional time solving challenging problems	3.87	High
6. spend time trying other methods when the solution is not immediately clear	3.99	High
7. allocate time to revisit a problem after getting stuck	3.99	High
8. set aside time to verify my solutions before moving to the next problem	4.04	High
9. complete assigned tasks within the given time	4.19	High
10. maximize my class time by staying focused on the given tasks without distractions.	4.10	High
Overall Mean	**4.02**	**High**

Table 5 shows students' instructional time management in terms of time on task, with an overall mean of 4.02, which is interpreted as high. Item 4, on taking time to review the instructions before starting the assigned task, obtained the highest mean of 4.26, interpreted as a high level.

In contrast, Item 3 on beginning to work on assigned tasks as soon as instructions are given had the lowest mean of 3.86, although still interpreted as a high level. The relatively low rating indicates that students tend to spend time reviewing and understanding instructions before proceeding with their assigned tasks, rather than starting immediately. Panadero (2017) explained that during the forethought phase of self-regulated learning, students analyze task requirements and plan their approach before beginning an activity. This pattern may be related to students taking time to determine what the task requires before acting, particularly when instructions involve several procedures or specific requirements. Cerdán and

Comparative Analysis in the Students' Instructional Time Management When Grouped and Compared According to the Variables

Table 6
Significant Difference in the Students' Instructional Time Management in terms of Concept Development when grouped by the Respondents' Profile

Variable	Category	N	Mean	Mann-Whitney U	p-value	Sig. level	Interpretation
School Campus	Main Campus	26	3.72	1132.5	0.113		Not Significant
	Extension Campuses	72	3.88				
Average Family Monthly Income	Lower	52	3.85	1199.5	0.980		Not Significant
	Higher	46	3.83				
Parents' Educational Attainment	Lower	31	4.00	774.5	0.043		Significant
	Higher	67	3.77				

Table 6 presents the difference in students' instructional time management in terms of concept development when grouped by school campus, average monthly family income, and parents' educational attainment. The results show that the p-value for the school campus is 0.113 and the p-value for the average family monthly income is 0.980, both greater than the 0.05 level of significance, indicating no significant difference. However, the p-value for parents' educational attainment is 0.043, which is less than 0.05, indicating a significant difference in concept development when students are grouped according to their parents' educational attainment. Therefore, the null hypothesis is accepted for the school campus and average family monthly income but rejected for parents' educational attainment. These findings suggest that students demonstrate similar concept-development practices regardless of school campus or average family monthly income. Students may have similar classroom experiences and instructional activities that support their understanding and development of mathematical concepts across campuses and income groups. The absence of a significant difference in Concept Development across campuses and income groups may suggest that students had comparable opportunities to engage in learning activities that support mathematical understanding. This observation can be viewed through the concept of Opportunity to Learn, which emphasizes that students' opportunities to develop mathematical understanding are shaped by their exposure to instructional time, mathematical tasks, and classroom interactions (Walkowiak et al., 2017). From this perspective, comparable opportunities to engage in such learning experiences may help explain the similar Concept Development practices observed across campuses and income groups. Meaningful learning experiences, connections between concrete and abstract ideas, and

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 9 (2026)

opportunities to apply mathematical concepts are also important in developing mathematical conceptual understanding (Gaylo, 2025).

In contrast, a significant difference was found when students were grouped by parents' educational attainment (p = 0.043), which is less than the 0.05 level of significance. Therefore, the null hypothesis that there is no significant difference in students' instructional time management when grouped according to parents' highest educational attainment is rejected. This indicates that students' instructional time management for concept development differs according to their parents' educational attainment. Notably, students whose parents had lower educational attainment obtained a higher mean in Concept Development. This may suggest that these students rely more on independent learning, particularly when direct academic assistance from parents may be limited. They may therefore develop greater responsibility for reviewing lessons, seeking learning resources, and working through mathematical concepts on their own. Cabilan and Peteros (2024) emphasized the role of cognitive, metacognitive, and motivational strategies in students' independent learning in mathematics, highlighting the importance of students' active responsibility in managing their own learning.

Table 7
Significant Difference in the Students' Instructional Time Management in terms of Guided and Independent Practice when grouped and Compared According to the Respondents' Profile

Variable	Category	N	Mean	Mann-Whitney U	p-value	Sig. level	Interpretation
School Campus	Main Campus	26	3.75	1105.0	0.173		Not Significant
	Others	72	3.90				
Average Family Monthly Income	Lower	52	3.89	1131.5	0.645		Not Significant
	Higher	46	3.82				
Parents' Educational Attainment	Lower	31	3.91	974.0	0.621		Not Significant
	Higher	67	3.83				

Table 7 presents a significant difference in students' instructional time management between guided and independent practice when grouped by school campus, average monthly family income, and parents' educational attainment. The results show that the p-values for school campus were 0.173, for average family monthly income were 0.645, and for parents' educational attainment were 0.621. These p-values are all greater than the 0.05 level of significance. Therefore, the null hypothesis stating that there is no significant difference in the level of students' instructional time management when grouped and compared according to the aforementioned variables was accepted.

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 9 (2026)

The findings suggest that students demonstrate comparable instructional time-management practices in guided and independent practice, regardless of their school campus, average monthly family income, or parents' educational attainment. This may imply that students are similarly engaged in teacher-guided exercises and independent mathematical practice despite differences in their backgrounds. Regular exposure to classroom demonstrations, guided problem-solving, practice exercises, and individual tasks may provide students with similar experiences in applying and reinforcing mathematical skills. Vistro-Yu et al. (2025) emphasized opportunities that encourage students to become active participants in mathematical learning through exploration, problem posing, and classroom participation. Such learning experiences may provide students with opportunities to apply and reinforce mathematical skills. When students are regularly exposed to these common classroom learning experiences, differences in their personal and family backgrounds may not necessarily result in substantially different ways of engaging in guided and independent practice. Francisco et al. (2025) similarly reported no significant difference in students' numeracy skills when grouped by socio-economic status, with students from different socio-economic backgrounds demonstrating comparable levels of numeracy. This suggests that socio-economic differences do not necessarily result in differences in students' mathematical abilities. Likewise, Ntibi and Edoho (2017) reported no significant difference in mathematics-related performance among students from different school locations, suggesting that differences in school location do not necessarily translate into differences in mathematics-related outcomes.

Table 8
Significant Difference in the Students' *Instructional Time Management in terms of Assessment and Feedback when grouped by the Respondents' Profile*

Variable	Category	N	Mean	Mann-Whitney U	p-value	Sig. level	Interpretation
School Campus	Main Campus	26	3.99	1108.0	0.165		Not Significant
	Extension Campus	72	4.14				
Average Family Monthly Income	Below	52	4.14	1134.5	0.661		Not Significant
	High	46	4.06				
Parents' Educational Attainment	Lower	31	4.23	856.5	0.163		Not Significant
	Higher	67	4.04				

Table 8 presents a significant difference in students' instructional time management regarding assessment and feedback when grouped by school campus, average monthly family income, and parents' educational attainment. The results show that the p-value for school campus was 0.165, the p-value for average family monthly income was 0.661, and the p-value for parents' educational attainment was 0.163. These p-values are all greater than the 0.05 level of significance. Therefore, the null hypothesis stating that there is no significant difference in students' instructional time management in terms of Assessment and Feedback when grouped according to the aforementioned profile variables is accepted.

The findings indicate that students demonstrate comparable instructional time-management practices for assessment and feedback regardless of their school campus, average monthly family income, or parents' educational attainment. Students may develop comparable assessment and feedback practices because they regularly encounter assessment activities that require them to monitor their performance, identify errors, and respond to feedback. A similar result was reported by Sumardi et al. (2026), who found that students' self-regulated learning skills were not significantly associated with parents' educational attainment, indicating comparable self-regulated learning behaviors across parental educational backgrounds. Asgali (2025) also reported no significant differences in student proficiency by parents' average monthly income, suggesting that income differences do not necessarily correspond to differences in students' mathematical outcomes. Kanwal et al. (2024) further reported no significant differences in time-management practices among university students when grouped by gender, locality, university, and academic department, suggesting that students may exhibit similar time-management practices across groups.

Table 9
Significant Difference in the Students' Instructional Time Management in terms of Time on Task when grouped by the Respondents' Profile

Variable	Category	N	Mean	Mann-Whitney U	p-value	Sig. level	Interpretation
School Campus	Main Campus	26	3.93	1069.5	0.282		Not Significant
	Extension Campuses	72	4.05				
Average Family Monthly Income	Lower	52	4.05	1083.5	0.442		Not Significant
	Higher	46	3.98				
Parents' Educational Attainment	Lower	31	4.13	857.0	0.165		Not Significant
	Higher	67	3.96				

Table 9 presents a significant difference in students' instructional time management, specifically time on task, when grouped by school campus, average monthly family income, and parents' educational attainment. The results show that the p-value for the school campus is 0.282, for average family monthly income is 0.442, and for parents' educational attainment is 0.165.

These p-values are all greater than the 0.05 level of significance. Therefore, the null hypothesis stating that there is no significant difference in the level of students' instructional time management when grouped according to the aforementioned variables is accepted.

The results reveal that students demonstrate comparable instructional time-management practices, in terms of time on task, regardless of their school campus, average monthly family income, or parents' educational attainment. Students may allocate and sustain their time on learning tasks in similar ways despite differences in their backgrounds. Common class schedules, learning requirements, deadlines, and regular classroom routines provide similar expectations for participating in activities and completing mathematical tasks. Kraft and Novicoff (2024) conceptualized the relationship between time in school and active learning time, emphasizing that instructional time must be converted into actual engagement in learning activities. This is consistent with Baker et al. (2020), who found no statistically significant differences in students' time on task across class settings, including comparisons between classes from different schools. This indicates that differences in learning settings do not necessarily lead to differences in the amount of time students spend engaged in learning. In terms of socio-economic background, Arztmann et al. (2024) observed no significant direct or indirect effect of socio-economic status on students' time on task. This indicates that differences in socio-economic background do not necessarily affect how long students remain engaged in learning activities. Regarding parental educational attainment, Ustol (2025) found no significant differences in students' study habits when grouped by parental education and income, with time management among the study-habit dimensions examined.

Relational Analysis in the Students' Instructional Time Management and their Academic Performance

Table 10
Relationship between the Students' Instructional Time Management and their Academic Performance

Variable 1	Variable 2	Spearman Rank	p-value	Interpretation
Academic Performance	Instructional Time Management	0.180	0.076	Not Significant

Table 10 presents the relationship between the students' instructional time management and their academic performance. The results show a Spearman rank correlation coefficient of 0.180 with a p-value of 0.076. Since the p-value exceeds the 0.05 significance level, the relationship between instructional time management and academic performance is not statistically significant. Therefore, the null hypothesis stating that there is no significant relationship between students' instructional time management and academic performance is accepted.

The findings indicate that students' instructional time management in terms of concept development, guided and independent practice, assessment and feedback, and time on task is not significantly related to their academic performance during the first semester in College and Advanced Algebra. Although the correlation coefficients are positive, they are very weak and not statistically significant. This suggests that higher levels of instructional time management, as

Online ISSN: 3082-5121
Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields
https://journals.aloysianpublications.com
Volume 2 Issue 9 (2026)

measured in this study, were not associated with higher academic performance. This suggests that managing instructional time alone may not be sufficient to achieve higher academic performance in College and Advanced Algebra. Students' grades may also depend on how well they understand mathematical concepts, apply problem-solving strategies, participate in learning activities, and respond to the course content's difficulty. Differences in prior mathematical knowledge, learning strategies, motivation, and individual ability may also contribute to variations in academic performance.

The findings are consistent with Ganzon and Edig (2022), who found that time management and self-directed learning did not significantly relate to academic performance in Mathematics. Similarly, Amarado et al. (2026) found no statistically significant relationship between time management and the academic performance of BTLED students. Furthermore, Napoles et al. (2023) reported no significant association between time management skills and academic performance among college students engaged in distance learning, suggesting that effective time management may help students manage their academic responsibilities but may not independently predict academic achievement. In contrast, Lumoto et al. (2024) found a significant positive relationship between self-regulated learning and mathematics performance among first-year college students, with time management emerging as a significant predictor of mathematics performance. Ayeni (2020) also reported that the effective use of instructional time was positively associated with teacher effectiveness and students' academic performance. Adams and Blair (2019) found that students' perceived control of time was significantly associated with cumulative grade point average, while Waheed et al. (2025) reported that self-regulated learning strategies, including goal setting, planning, monitoring, and adaptability, contributed to improved academic performance. These findings differ from the results of the present study, which found no significant relationship between instructional time management and academic performance.

These findings suggest that although students may demonstrate effective time management practices, these behaviors alone may not be sufficient to contribute to academic performance, indicating that factors beyond time management may play a greater role in influencing academic achievement.

Conclusion:

The respondents were predominantly from the extension campuses, while the distribution according to average family monthly income was relatively balanced, with slightly more respondents belonging to the higher-income category. Most respondents also had parents who had attained high school or college education. Thus, the respondents represented students from different campus, economic, and parental educational backgrounds.

In terms of concept development, the students demonstrated a high level of instructional time management. They generally devoted sufficient time to understanding difficult concepts, preparing learning materials, following examples, reviewing solved problems, and reinforcing their understanding of lessons. However, reviewing prior concepts before the lesson was comparatively less practiced, indicating an area where students' management of instructional time for concept development may still be strengthened.

Likewise, the students demonstrated a high level of instructional time management in guided and independent practice. They particularly utilized practice time to check and correct their answers and complete assigned exercises and homework. Nevertheless, relatively less time was devoted to solving similar problems from other textbooks, suggesting that students may further broaden their independent practice beyond the learning activities and materials provided during instruction.

The students also demonstrated a high level of instructional time management in assessment and feedback, which obtained the highest overall mean among the four areas examined. They generally allocated time to prepare for assessments, check their answers, examine their mistakes, and use feedback to improve their work. However, reviewing topics in which mistakes were previously committed was comparatively less practiced, suggesting the need to further encourage reflective and corrective learning following assessments.

In terms of time on task, the students demonstrated a high level of instructional time management. They generally managed their learning time by reviewing instructions, completing assigned tasks within the prescribed period, verifying their solutions, and maintaining focus on learning activities. The findings further indicate that students tended to understand task requirements before immediately beginning their assigned work, reflecting a deliberate approach to accomplishing mathematical learning tasks.

With respect to concept development, students' instructional time management did not significantly differ according to school campus and average family monthly income. However, a significant difference was found according to parents' highest educational attainment, with students whose parents had lower educational attainment obtaining a higher mean. It can therefore be concluded that campus and family income do not differentiate students' management of instructional time for concept development, while parental educational attainment may be associated with differences in this particular aspect of their learning practices.

For guided and independent practice, no significant differences were found when students were grouped according to school campus, average family monthly income, and parents' highest educational attainment. Thus, students generally demonstrate comparable instructional time-management practices in teacher-guided and independent mathematical activities regardless of these profile characteristics. This suggests that differences in campus and family background do not substantially differentiate how students allocate and utilize their time for mathematical practice.

Similarly, students' instructional time management in assessment and feedback did not significantly differ according to school campus, average family monthly income, and parents' highest educational attainment. It can therefore be concluded that students manage their time for preparing for assessments, reviewing their performance, and responding to feedback in relatively comparable ways regardless of their campus and family backgrounds.

Students' instructional time management in terms of time on task also did not significantly differ according to school campus, average family monthly income, and parents' highest educational attainment. Hence, students generally demonstrate comparable practices in allocating and sustaining time for mathematical learning tasks regardless of these profile characteristics. This indicates that their ability to remain engaged with assigned tasks is relatively consistent across the groups examined in the study.

Finally, students' instructional time management was not significantly related to their academic performance in College and Advanced Algebra. Although the relationship was positive, it was very weak and statistically insignificant. It can therefore be concluded that a high level of instructional time management does not necessarily correspond to higher academic performance among the respondents. Academic achievement in College and Advanced Algebra may consequently be influenced by other factors beyond the management of instructional time, such as prior mathematical knowledge, learning strategies, motivation, conceptual understanding, and individual ability.

References:

Abaniel, A. A., & Guanzon, R. S. (2026). Students’ competence in College and Advanced Algebra: Basis for an intervention plan. *Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields, 2*(5). https://doi.org/10.5281/zenodo.20191447

Al Husaini, Y. N. S., & Shukor, N. S. A. (2022). Factors affecting students' academic performance: A review. *Res Militaris, 12(6)*, 284–294 https://www.researchgate.net/publication/367360842_Factors_Affecting_Students%27_Academic_Performance_A_review

Amarado, A. J. M., Jamaro, S. C., Vasig, S., Viola, V. a. A., & Carale, R. T., EdD. (2026). The effect of time management on the academic performance of BTLED students. *International Journal of Research and Innovation in Social Science, 10(5)*, 12767–12773 https://doi.org/10.47772/ijriss.2026.100500863

Arztmann, M., Alfaro, J. L. D., Hornstra, L., Jeuring, J., & Kester, L. (2023). In-game performance: The role of students’ socio-economic status, self-efficacy and situational interest in an augmented reality game. *British Journal of Educational Technology, 55(2)*, 484–498 https://doi.org/10.1111/bjet.13395

Ayeni, A. J. (2020). Principals’ instructional time management and students’ academic performance in secondary schools in Ondo North senatorial district of Ondo State, Nigeria. *Journal of Education and Learning (EduLearn), 14(1)*, 123–133 https://doi.org/10.11591/edulearn.v14i1.14743

Baker, R. S., Yammahi, A. A., Sebaaly, J. E., Nadaf, A., Kapp, T., & Adjei, S. (2020, November 23). Can Computer-Based learning environments mitigate large class size? https://library.apsce.net/index.php/ICCE/article/view/3985

Boribor, J. D. V., & Tonga, D. L. (2022). The use of mathematical practice-based activities in teaching mathematics. International Journal of Research Studies in Education, 11(13). https://doi.org/10.5861/ijrse.2022.341

Cabilan, J. B., & Peteros, E. D. (2024). Predictive analysis of independent learning bearing on students' mathematics performance in Davao de Oro, Philippines. *Journal on Mathematics Education, 15(4)*, 1409–1432 https://doi.org/10.22342/jme.v15i4.pp1409-1432

Carroll, J. B. (1963). A model of school learning. *Teachers College Record, 64*(8), 723–733. Article/DOI; Carroll, J. B. (1989). The Carroll model: A 25-year retrospective and prospective view. *Educational Researcher, 18*(1), 26–31. Article/DOI; Walberg, H. J. (1982). Educational productivity: Theory, evidence, and prospects. *Australian Journal of Education, 26*(2), 115–122. https://journals.sagepub.com/doi/10.1177/000494418202600202

Commission on Higher Education (CHED). (2017, September 20). CHED, DBM release guidelines on free tuition in SUCs | Commission on Higher Education. Commission on Higher Education. https://legacy.ched.gov.ph/ched-dbm-release-guidelines-free-tuition-sucs/

Commission on Higher Education. (2017). CHED Memorandum Order No. 75, series of 2017: Policies, standards and guidelines for Bachelor of Secondary Education (BSEd).

https://ched.gov.ph/wp-content/uploads/2017/11/CMO-No.-75-s.-2017.pdf

Creswell, J. W., & Poth, C. N. (2018). Qualitative inquiry and research design: Choosing among five approaches (4th ed.). SAGE Publications.

Derio, D., Rosa, A. R., Gorit, J. F., Bolina, K., Martinez, D., Bolaños, J., & Obina, J. (2022). Factors affecting the mathematics performance of mathematics major students. https://www.ejournals.ph/article.php?id=20794

Francisco, P. K. D., Anating, N. B., Apurillo, S. E., De La Pena, P. B., Espinosa, A. R. C., & Tumlos, P. H. T. (2025). Numeracy skills and academic performance of elementary learners. *International Journal of Research and Innovation in Social Science, 9*(3), 3720–3748. https://doi.org/10.47772/IJRISS.2025.90300295

Galas, K. S., & Guanzon, R. S. (2026). Study habits and academic performance of senior high school STEM students in General Mathematics. *Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields, 2*(4), 133–154. https://doi.org/10.5281/zenodo.19637579

Ganzon, W. G., Jr., & Edig, M. M. N. (2022). Time management and self-directed learning as predictors of academic performance of students in mathematics. *Journal of Social, Humanity, and Education, 3*(1), 57–75. https://zenodo.org/records/20191447

Gaylo, D. N. (2024, November 20). Conceptual Understanding of Mathematics among Pre-service Teachers: A Socio-Metacognitive Structural Model Generation. https://so03.tci-thaijo.org/index.php/sduhs/article/view/283684

Gunawan, H. (2024). The Pickle Jar Theory and Effective Time Management: A Philosophical Review. *Technium Social Sciences Journal, 66*, 287–298 https://doi.org/10.47577/tssj.v66i1.12028

Isabela State University. (2025). 2025 reports: SDG 1—No poverty*. Isabela State University. [https://sdg.isu.edu.ph/2025-reports-sdg-1-no-poverty/

Kanwal, M., Abbasi, S., Kiran, S., & Quratulain. (2024). Role of Time Management in Developing Self- Regulating Study Habits among Students at University Level. *Bulletin of Business and Economics (BBE), 13(2)*, 730–740 https://doi.org/10.61506/01.00387

Kraft, M. A., & Novicoff, S. (2024). Time in School: a conceptual framework, synthesis of the causal research, and empirical exploration. *American Educational Research Journal, 61(4)*, 724–766 https://doi.org/10.3102/00028312241251857

Lumoto, H. Q. A., Decolas, C. C., Cabalquinto, K. E., & Miranda, A. T. (2024). Exploring Students’ Mathematics Performance through Self-regulated Learning. *Asian Journal of Education and Social Studies, 50(8)*, 240–250 https://doi.org/10.9734/ajess/2024/v50i81525

Mallillin, L. L. D., Canda, E. G., & Caday, M. a. T. (2024). SELF-LEARNING MODULE ASSESSMENT AND FEEDBACK IN MATHEMATICS. European Journal of Education Studies, 11(9). https://doi.org/10.46827/ejes.v11i9.5534

McCombes, S. (2023). Descriptive Research | Definition, Types, Methods & Examples. https://www.scribbr.com/methodology/descriptive-research/

Napoles, M. A., Altubar, J. a. B., & Anding, H. K. T. (2023). The role of time management to the academic performance of the college students during pandemic. *The International Journal of Social Sciences and Humanities Invention, 10(02)*, 7731–7741 https://doi.org/10.18535/ijsshi/v10i02.05

Ntibi, Joseph & A., Edoho. (2017). Influence of school location on students attitude towards mathematicacs and basic science. https://www.researchgate.net/publication/336640011_Influence_of_school_location_on_students_attitude_towards_mathematicacs_and_basic_science

OECD. (2023, December 5). PISA 2022 results (Volume I and II): Country notes – Philippines. https://www.oecd.org/en/publications/pisa-2022-results-volume- i-and-ii-country-notes_ed6fbcc5-en/philippines_a0882a2d-en.html

Panadero, E. (2017). A review of Self-regulated Learning: Six models and four directions for research. *Frontiers in Psychology, 8*, 422 https://doi.org/10.3389/fpsyg.2017.00422

Para, R. R., & Guanzon, R. S. (2026). Difficulties of Grade 7 learners in mathematics: Basis for an instructional intervention plan. *Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields, 2*(4). https://doi.org/10.5281/zenodo.19625413

Pyo, K. (2023). Impacts of Self-Assessment on Students' Self-Regulated Learning and Satisfaction at a University Foreign Language Pedagogy Course. *Foreign Languages Education, 30(4)*, 1–24 https://doi.org/10.15334/fle.2023.30.4.1

Rach, S., & Ufer, S. (2020). Which Prior Mathematical Knowledge Is Necessary for Study Success in the University Study Entrance Phase? Results on a New Model of Knowledge Levels Based on a Reanalysis of Data from Existing Studies. *International Journal of Research in Undergraduate Mathematics Education, 6(3)*, 375–403 https://doi.org/10.1007/s40753-020-00112-x

Ragaza, K. V. (2024). Factors Affecting the mathematics performance of the college students: A Discriminant analysis. *International Journal of Scientific and Management Research, 07(07)*, 60–77 https://doi.org/10.37502/ijsmr.2024.7705

Rodrigo, D. B., & Alave, A. D. (2021). Academic achievement in algebra of the public high school students in the new normal. *Philippine Social Science Journal, 4(3)*, 65–74 https://doi.org/10.52006/main.v4i3.381

Romero, M., Casadevante, C., & Santacreu, J. (2024). Time management, fluid intelligence and academic achievement. *Psychological Studies, 69*, 59–68. https://link.springer.com/article/10.1007/s12646-023-00764

Sana, F., Forrin, N. D., Sharma, M., Dubljevic, T., Ho, P., Jalil, E., & Kim, J. A. (2020). Optimizing the Efficacy of Learning Objectives through Pretests. *CBE—Life Sciences Education, 19(3)*, ar43 https://doi.org/10.1187/cbe.19-11-0257

Spitzer, M. W. H. (2022). Just do it! Study time increases mathematical achievement scores for grade 4–10 students in a large longitudinal cross-country study. *European Journal of Psychology of Education, 37*, 39–53. https://link.springer.com/article/10.1007/s10212-021-00546-0

Sumardi, L., Kurniawansyah, E., Basariah, Edi, M. G. P., & Hasanah, U. (2026). The influence of parental education level, educational background, organizational involvement, and future expectations on students' self-regulated learning. *International Journal of Education and Practice, 14(3)*, 11–24 https://doi.org/10.18488/61.v14i3.4915

Tablate, R. T. (2025). Determinants of performance of first year college students in mathematics in the modern world. https://ejournals.ph/article.php?id=33765

United Nations. (2015). Transforming our world: The 2030 agenda for sustainable development. https://sdgs.un.org/2030agenda

Ustol, S.R. (2025). Assessing the Study Habits of the Grade Six Learners at Patikul East District, Division of Sulu. Journal of Education and Academic Settings. https://www.semanticscholar.org/paper/Assessing-the-Study-Habits-of-the-Grade-Six-at-East-Ustol/f2bfc1bac1ec76633a11f0822af5e2bdacd74af2

Velez, A. J., Dayaganon, D. G., Robigid, J., Demorito, J., Villegas, J., & Gomez, D. (2023). Difficulties and Coping Strategies in Understanding Mathematical Concepts in a Private Higher Education in Tagum City, Davao del Norte, Philippines. *Davao Research Journal, 14(1)*, 45–54 https://doi.org/10.59120/drj.v14i1.10

Vistro-Yu, C. P., Hao, L. C., & Sua, M. H. (2025a). The struggle is real: Finding opportunities for problem posing in the Philippine school mathematics curriculum. *Asian Journal for Mathematics Education, 4(2)*, 280–294 https://doi.org/10.1177/27527263251340036

Villaluz, A. V., Longa, G. A., Sobrevilla, A. R. M., Rico, A. A., Guanzon, R. S., Diaz, N. B., Jr., Cruz, J. D., & Aguilar, H. J. P. (2026). Examining the link between learners' engagement and academic performance. *Aloysian Interdisciplinary Journal of Social Sciences, Education, and Allied Fields, 2*(1). https://doi.org/10.5281/zenodo.18193332

Waheed, Z., Tham, J., & Keat, O. B. (2025). The Impact of Self-Regulated Learning Strategies on Academic Performance: A Systematic review. Social Science and Human Research Bulletin., 02(08). https://doi.org/10.55677/sshrb/2025-3050-0803

Walkowiak, T. A., Pinter, H. H., & Berry, R. Q. (2017). A reconceptualized framework for 'Opportunity to learn' in school mathematics. DOAJ (DOAJ: Directory of Open Access Journals). https://doi.org/10.7916/jmetc.v8i1.800

Xu, W. (2020). A research on the influence of college student time management on their academic development. Proceedings of the 2020 5th International Conference on Modern Management and Education Technology (MMET 2020). https://doi.org/10.2991/assehr.k.201023.019