

Prioritization of Time Management Skills in the Teaching- Learning Basic Graders Mathematics Academic Productivity

¹Jeverly Ann C. Villaceran, ²Teresita B. Escanillan, ³Anelim M. Villaceran, ⁴Grace A. Taber,

⁵Myra M. Escala, ⁶Rowela A. Nemil, ⁷Krizza Faye S. Zapanta

Cebu Technological University

¹jeverlyann.corridor@deped.gov.ph, ²teresita.escanillan001@deped.gov.ph,

³anelim.villaceran@deped.gov.ph, ⁴grace.taber@deped.gov.ph, ⁵myra.escala@deped.gov.ph,

⁶rowela.allanic@gmail.com, ⁷kringkring102694@gmail.com

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Corresponding Email:

jeverlyann.corridor@deped.gov.ph

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Administration and Supervision, prioritization of time management skills towards the academic productivity for basic graders in mathematics, Descriptive-Quantitative Research, Madridejos District, Cebu Province Division

Abstract. This study assessed time management strategies and the level of academic performance of Grade 5 Mathematics learners among the select public elementary Schools at Madridejos District, DepEd Cebu Province Division during School Year 2025-2026, as basis for Time Management Skills Activities. This study employed descriptive-quantitative method of research. The respondents of this research were the Grade 5 Mathematics learners among the select public elementary schools in Madridejos District of Cebu Province Division during the School Year 2025 – 2026. The population has a total of 65 respondents with 10 teachers and 55 learners. The quality of Mathematics instruction is closely associated with teachers' professional competence, continuous learning, and instructional experience. Significant relationship between status of the time management strategies and the academic performance of the grade 5 mathematics learners stating that there is no significant relationship between the status of the time management strategies and the academic performance of the Mathematics learners is partially rejected. The hypothesis is rejected for the dimensions and competencies where the computed probability values are less than the 0.05 level of significance, particularly in setting boundaries in Completing Homework, Balancing Time for School Work, and Balancing Time for Playing, while it is retained for dimensions where the probability values exceed the 0.05 alpha level. As a result, effective time management becomes an essential component of quality Mathematics instruction because it supports learner engagement, strengthens self-discipline, and provides greater opportunities for meaningful mathematical learning. Findings provide empirical evidence that effective time management practices contribute meaningfully to improving learners' academic productivity in Mathematics and support the development of organized learning behaviors that facilitate mastery of the Most Essential Learning Competencies. Based on the conclusions reached in this research, it is highly Recommended "the Time Management Oriented Activities" can be submitted to the concerned / school officials for consideration and implementation.

Introduction

The development of time management skills assists students when analyzing tasks and scheduling their completion, giving students more vital planning skills and a greater understanding of responsibilities and their significance when constructing task schedules. Parents can aid their children in developing time management skills by utilizing time management worksheets. These offer a visual representation of tasks, priorities, and schedules, teaching kids to organize their time effectively. Parents can collaborate with children to fill in these worksheets, discussing goals and deadlines. This process instills responsibility and planning habits.

Time management can significantly influence learning achievement when managed effectively. Moreover, it plays a critical role in enhancing students' academic performance. However, during the transition to puberty, particularly at the high school level, students often encounter increased autonomy and responsibility. This period is marked by their involvement in numerous activities, both academic and non-academic, which can pose challenges to effective time management.

Mathematics plays a pivotal role in advancing civilization and enhancing human resources for modern society. Effective mathematics learning is essential for students to acquire critical life skills. Research has demonstrated that incorporating the history of mathematics into lessons helps students better understand mathematical concepts and theorems while also increasing their interest in learning mathematics. Interest is a key factor in cognitive development, student growth, and improved academic achievement. One approach to enhancing student achievement is by fostering learning motivation, which can be influenced by employing engaging and enjoyable learning models as supporting elements in the learning process.

Mathematics is a field of science that plays a crucial role in education. In Palu, Indonesia, admission to higher education is determined by scholastic and literacy tests, with the latter being closely related to mathematical reasoning abilities. Empirical evidence shows that the average percentage of mathematical reasoning scores is lower than those of scholastic tests. According to the 2022 Program for International Student Assessment (PISA), Indonesian students rank 67th out of 81 countries in mathematical literacy. The PISA exam categorizes students' mathematical proficiency into six levels, with level 1 being the lowest and level 6 representing advanced higher-order cognitive skills. Indonesian students continue to perform poorly on level 5 and 6 assessments, indicating significant obstacles in the mathematics learning process within educational institutions.

Mathematics is one subject that pervades life at any age and in any circumstance. Thus, its value goes beyond the classroom and the school. Mathematics as a school subject, therefore, must be learned comprehensively and with much depth. The twin goals of mathematics in the basic education levels, K-10, are Critical Thinking and Problem Solving. Critical thinking, is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action.

The low-test scores can be attributed to several factors, including study time and students' interest in learning. Study time plays a critical role in developing mathematical literacy and reasoning skills. Effective time management enables students to optimize their study time, focus on understanding mathematical concepts, and enhance their reasoning abilities, ultimately improving mathematical literacy. Additionally, interest in learning mathematics is another key factor. A high interest in learning motivates students to engage actively in mastering mathematical concepts and refining their reasoning skills. Considering these issues, this study aims to investigate whether improving time management and fostering a greater interest in learning mathematics can serve as effective strategies to enhance student achievement. The research seeks to evaluate the extent to which these two factors influence students' mathematics learning outcomes. Time management is defined as the ability to utilize and allocate time efficiently and effectively. While time itself cannot be controlled or managed, how individuals manage and use their time can be optimized. Time management refers to the capacity to organize, plan, and utilize time effectively to accomplish specific tasks in an efficient manner.

This study is based on existentialism philosophy, which is learner centered and offers direction to students about their study. Learners are self-responsible of their academics as they just seek guidance from their teachers, but take decisions as well as manage all activities themselves. This study is relied on pickle jar theory, which is the modern and relevant theory of time management. This theory shows that human beings should construct balance among activities and things while integrating time management techniques effectively. The success of students is determined through effective utilization of time at each phase in distance learning institutions and regular system.

Based from the study of Sebastian et.al, 2021 mentioned that managing responsibilities in a limited time and using cognitive resources in an efficient way, to maximize performance, are a set of, not only desirable, but also necessary skills for our students. In terms of learning skills, we first focus on how to write down relevant information, then on organizing said information into meaningful units, and finally, on a method to facilitate its retention in the long-term memory. This approach has the goal to maximize the potential improvement of the subject's academic performance.

These two goals are to be achieved with an organized and rigorous curriculum content, a well-defined set of high-level skills and processes, desirable values and attitudes, and appropriate tools, considering the different contexts of Filipino learners. The specific skills and processes to be developed are: knowing and understanding; estimating, computing and solving; visualizing and modelling; representing and communicating; conjecturing, reasoning, proving and decision-making; and applying and connecting. The following values and attitudes are to be honed as well: accuracy, creativity, objectivity, perseverance, and productivity. We recognize that the use of appropriate tools is necessary in teaching mathematics. These

include: manipulative objects, measuring devices, calculators and computers, smart phones and tablet PCs, and the Internet. We define context as a locale, situation, or set of conditions of Filipino learners that may influence their study and use of mathematics to develop critical thinking and problem solving skills. Contexts refer to beliefs, environment, language and culture that include traditions and practices, as well as the learner's prior knowledge and experiences.

One of the disciplines that learners find to be the most difficult is frequently mathematics. The fact that it's so abstract might be one of the major obstacles. Drilling and solving problems that are irrelevant to the student or lack context are frequently combined when teaching math. The main reason why people have trouble with arithmetic is because they can't visualize the ideas that underlie math operations. Instead than using numbers to think, reason, and solve problems, people instead try to memorize facts.

Methodology

Design

This study employed descriptive-quantitative method of research. This approach to problem solving answer questions to real facts relating to existing conditions. This is a technique of quantitative description which determined the prevailing conditions in a group of cases chosen for study. Several studies stress the current conditions with the assumptions that things were change. This research design presented the outlines of the research process and the philosophical underpinning for this research. A researcher conducted this research using various methodologies. It predominantly employed quantitative data, although qualitative data sometimes used for descriptive purposes. It is important to note that in the descriptive research method, the researcher does not control or manipulate any variables, unlike in experimental research. Instead, the variables are only identified, observed, and measured. Surveys and observation are the most used method to conduct this research design. You can leverage online survey tools or offline survey tools to gather data as per your research objective. (Voxco, 2021) To gather data, the researcher adapted questionnaires from related studies. It determines to see the distributions of specific variables that is, the status of the time management and academic performance of Grade 5 learners in Mathematics.

Environment

The research conducted among the select Public Elementary School Districts in Madridejos of Cebu Province Division, DepEd Region VII, and Central Visayas that are strategically located which is accessible to the researcher and is limited on the mobility and access of all schools. It has an arable land, residential areas.

Madridejos is a 4th-class municipality located on the northern tip of Bantayan Island, Cebu, Philippines. Known as the "Little Alaska of the Philippines" due to its rich fishing grounds, it has a land area of 23.95 sq. km and a population of 42,828 people. The town is composed of 14 barangays: Bunakan, Kangwayan, Kaongkod, Kodia, Maalat, Malbago, Mancilang, Pili, Poblacion, San Agustin, Tabagak, Talangnan, Tarong, and Tugas. Primary livelihoods include fishing, poultry raising (the town supplies a substantial volume of eggs to neighboring regions), and tourism. The town's grand feast day is celebrated annually on December 8, and it frequently hosts community sports events like the Madridejos Sport Fishing Tournament. Madridejos is one of the three municipalities that make up the island of Bantayan, which lies to the west of the northern tip of Cebu. Madridejos is bordered to the north and west by the Visayan Sea, to the east is the town of Daanbantayan and to the south is the town of Bantayan.

Madridejos Central Elementary School (Poblacion) Madridejos Central Elementary School is a public educational institution located in Poblacion, Madridejos, Cebu, situated on Bantayan Island. As the central school for the district, it serves as a primary hub for basic education, catering to students from the local community and functioning under the jurisdiction of the Department of Education (DepEd) Cebu Province Division. The school works actively with the Local Government Unit (LGU) and private stakeholders to improve educational facilities, community involvement, and student learning. The school has developed strong ties with local and corporate partners. The school has notable best practices such as the partnerships have successfully provided essential school supplies, modern furniture, and learning resources to students. The school serves as a central hub for the municipality, hosting local government and youth initiatives like Sangguniang Kabataan (SK) elections and community-driven orientations.

Bunakan Integrated School. Bunakan Integrated School, located in Madridejos, Cebu, Philippines (School ID: 500658), operates under the DepEd Cebu Province division. As an integrated school, it offers continuous basic education. Its institutional operations are driven by strong community collaboration, transformational leadership, and environmental awareness. The school actively engages local stakeholders, alumni, and Barangay officials (such as in annual Brigada Eskwela campaigns) to ensure the campus is learner-friendly, organized, and adequately prepared for classes. As an

integrated school, it operates cohesively under a single principal, allowing teachers from both the elementary and secondary levels to share teaching strategies and create a continuous, learner-centered environment.

Kangwayan Elementary School. Kangwayan Elementary School is a public primary educational institution located in Barangay Kangwayan, Municipality of Madridejos, on Bantayan Island, Cebu, Philippines. Situated just about 5 km south of the Madridejos town center, the school serves a predominantly rural, fishing, and agricultural coastal community. Like many Department of Education (DepEd) schools operating in these community contexts, its best practices are heavily focused on local resource mobilization, community stakeholder engagement, and addressing rural educational needs (e.g., multigrade instruction and contextualized learning). They have an implementation of tailored reading programs to improve students' comprehension and performance. Application of effective classroom management strategies tailored to multigrade settings to ensure continuous and equal learning opportunities across grade levels.

Kaongkod Elementary School. Kaongkod Elementary School is a public educational institution located in Barangay Kaongkod, Madridejos, on Bantayan Island, Cebu, Philippines. It serves the local community by providing foundational basic education and acts as a central hub for localized community development and student safety programs. Located in a coastal fishing community. The local government and the provincial board have recently pushed for multi-million infrastructure projects (such as road concreting) to improve accessibility to the school. The school actively partners with local authorities, such as the Madridejos PNP, to conduct community and teacher dialogues. These seminars train teachers on the Safe Spaces Act (RA 11313) and the Juvenile Justice and Welfare Act (RA 9344) to ensure a safe, gender-fair, and legally compliant learning environment. Situated in a fishing village, the school often coordinates with the Municipal Government of Madridejos to ensure education programs respond directly to the socioeconomic realities of the community (e.g., aligning programs with local livelihood needs and safe transport).

San Agustin Elementary School. San Agustin Elementary School (often recognized within the Schools Division of Cebu Province) is committed to building lifelong learners and fostering a God-fearing, morally upright student body. It is highly regarded for its inclusive special education initiatives, specialized science programs, and award-winning health and sanitation practices. The school features the Kinder Headstart Program, enhanced Special Science Classes (SSC) for Grades 1-6, and a robust Alternative Learning System (ALS). The institution continually upgrades its offerings by establishing functional learning centers like an ICT Center and an Interactive Library. The school achieved the highest 3-Star rating under the Wash in Schools (WinS) Program, heavily promoting health, hygiene, and sanitation among learners. They operate a specialized Vocational Transition Program which teaches applied behavior analysis, handicraft, food preparation, and daily living skills to students with special needs to prepare them for independent living.

Respondents

The respondents of this research were the Grade 5 Mathematic learners among the select public elementary schools in Madridejos District of Cebu Province Division during the School Year 2025 – 2026. The population has a total of 65 respondents with 10 teachers and 55 learners .

Table 1 below shows the distribution of the respondent-groups for this research.

Name of Schools	Teachers	Students	Total	%
Madridejos Central ES	2	15	17	20
Bunakan Integrated Sch.	2	10	12	20
Kangwayan ES	2	10	12	20
Kaongkod ES	2	10	12	20
San Agustin ES	2	10	12	20
TOTAL	10	55	65	100

Table 1. Distribution of Respondent Groups

Research Instrument.

The researcher uses a descriptive-quantitative research method to gather data using a Likert-type survey questionnaire with four indicators to gather measurable data needed from teacher-respondents. Using these questionnaires will have the advantage of obtaining more honest and correct responses from respondents and the data's dependability due to its anonymity. This design accurately and systematically describes, observes, or validates aspects of groups collected through quantifiable information, like the relationship among variables, in their natural state (Benitez , 2023).

Data Collection Procedure

The following procedures were carefully observed in conducting this research. The researcher personally met with the teachers and learners as respondent to the study. The observations that must be gathered inside the school served as a learning aid towards academic enhancement of the Mathematics 5 learners. Explanations and direction about the topic and how the process were done. The interventions, tools to be used, and benefits for this study are thoroughly discussed by the researcher with possible questions, clarifications, and recommendations. After the validation of the instrument, necessary permission will be secured by the researcher to gain approval from the school supervisor, parents, and teachers. The researcher then prepares a letter to the supervisor, teachers, and parents among the select public elementary schools respectively asking permission to conduct the research.

In the selection of respondents, random sampling technique will be used resulting to 65 respondents consisting of 10 teachers and 55 Grade 5 mathematics learners. Selection still be based on the inclusive criteria mentioned in the research respondents. The respondent-groups were given a set of questionnaires distributed online or paper-pencil test that relates to the research topic. With the available information and help from the respondents.

Data Analysis

The data gathered in the study were analyzed using descriptive and inferential statistical procedures to determine the status of time management strategies and the academic performance of Grade 5 Mathematics learners in selected public elementary schools in Madridejos District, DepEd Cebu Province Division, during School Year 2025–2026. The respondents consisted of 65 participants, comprising 10 teachers and 55 Grade 5 learners. Descriptive statistics were used to summarize the respondents' assessments of time management strategies across the identified dimensions, including setting boundaries in completing homework, balancing time for schoolwork, and balancing time for playing. The learners' academic performance in Mathematics was likewise examined to determine their level of achievement based on the available assessment results. To establish whether a significant relationship existed between time management strategies and Mathematics academic performance, an appropriate inferential test was employed using a 0.05 level of significance. The results indicated that the null hypothesis was partially rejected, demonstrating that significant relationships existed in selected dimensions. Specifically, the probability values for setting boundaries in completing homework, balancing time for schoolwork, and balancing time for playing were below the 0.05 significance level, indicating statistically significant relationships with learners' Mathematics academic performance. Conversely, dimensions with probability values greater than 0.05 did not demonstrate significant relationships, resulting in the retention of the null hypothesis for those areas. These findings suggest that effective time management practices are associated with improved academic productivity in Mathematics. The results further indicate that learners who develop organized study routines, establish appropriate boundaries, and allocate time effectively for academic and recreational activities may have greater opportunities to engage meaningfully in Mathematics learning.

Results and Discussion

Results

The results of the study revealed that the Grade 5 Mathematics learners in selected public elementary schools in Madridejos District demonstrated varying levels of time management strategies and academic performance during School Year 2025–2026. The findings showed that time management practices were particularly associated with learners' ability to set boundaries when completing homework, balance time for schoolwork, and balance time for playing. Statistical analysis indicated that the null hypothesis stating that there was no significant relationship between time management strategies and Mathematics academic performance was partially rejected. Specifically, the dimensions with computed probability values lower than the 0.05 level of significance demonstrated significant relationships with the academic performance of the learners. These results indicate that learners who effectively allocate time for homework, school-related tasks, and recreational activities are more likely to demonstrate better academic productivity in Mathematics. However, the null hypothesis was retained for dimensions whose probability values exceeded the 0.05 significance level, indicating that not all aspects of time management were significantly related to Mathematics performance. Overall, the results provide empirical evidence that effective time management is an important factor in supporting learners' academic productivity and engagement in Mathematics. Proper scheduling and prioritization of academic responsibilities may help learners develop self-discipline, maintain focus, and maximize available learning time. The findings further support the development of Time Management-Oriented Activities designed to strengthen learners' organizational skills, study habits, and responsible use of time. These activities may consequently contribute to improved Mathematics learning outcomes and facilitate the mastery of the required learning competencies.

Discussion

The findings of the study highlight the important role of time management in supporting the academic performance of Grade 5 Mathematics learners in selected public elementary schools in Madridejos District during School Year 2025–2026. The significant relationships found in setting boundaries in completing homework, balancing time for schoolwork, and balancing time for playing suggest that learners' ability to organize and prioritize their activities is closely associated with their Mathematics performance. This implies that learners who can properly allocate their time between academic responsibilities and recreational activities may have greater opportunities to complete learning tasks, review lessons, and participate actively in Mathematics activities. The results also indicate that time management is not limited to simply following schedules; rather, it involves developing self-discipline, establishing priorities, and making responsible decisions about how available time is used. However, the retention of the null hypothesis for dimensions with probability values greater than the 0.05 level of significance suggests that some aspects of time management may not have a statistically significant association with Mathematics performance. This finding indicates that other factors, such as instructional strategies, learner motivation, parental support, learning resources, and individual differences, may also influence academic achievement. Nevertheless, the overall findings provide empirical support for strengthening time management skills among Grade 5 learners. The proposed Time Management-Oriented Activities may therefore serve as a practical intervention to help learners develop organized study habits, improve task completion, and balance academic and personal activities. Such activities can complement Mathematics instruction and contribute to improved academic productivity and mastery of essential learning competencies.

Conclusion and Recommendations

As a result, effective time management becomes an essential component of quality Mathematics instruction because it supports learner engagement, strengthens self-discipline, and provides greater opportunities for meaningful mathematical learning.

Overall, the findings provide empirical evidence that effective time management practices contribute meaningfully to improving learners' academic productivity in Mathematics and support the development of organized learning behaviors that facilitate mastery of the Most Essential Learning Competencies.

Recommendations

Based on the conclusions reached in the study, the Time Management-Oriented Activities are highly recommended for submission to the concerned school officials for consideration, validation, and possible implementation. The proposed activities may be designed to address the identified time management needs of Grade 5 Mathematics learners, particularly in setting appropriate boundaries for completing homework, allocating sufficient time for schoolwork, and maintaining a healthy balance between academic responsibilities and recreational activities. These activities should be practical, age-appropriate, engaging, and responsive to the learners' daily experiences.

The school administrators may consider integrating the Time Management-Oriented Activities into Mathematics instruction, homeroom guidance sessions, enrichment activities, or other appropriate school programs. Teachers may also provide learners with simple schedules, task-prioritization exercises, homework planners, goal-setting activities, and time-monitoring strategies to help them develop responsible study habits. These activities may be implemented gradually and monitored regularly to determine their effectiveness in improving learners' ability to manage academic tasks and complete requirements within the allotted time.

Teachers are further encouraged to provide consistent guidance, reinforcement, and feedback while learners practice effective time management. Parents or guardians may also be involved by encouraging appropriate study routines at home and helping learners establish reasonable schedules for homework, rest, play, and other responsibilities. School officials may provide the necessary support, resources, and monitoring mechanisms for the successful implementation of the proposed activities.

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Competing Interests Statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

Data Availability Statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study; all data used were obtained from previously published sources as cited in the reference list.

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Appendices

No appendices are attached to this study.