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EFFECTIVENESS OF STRUCTURED CLASSROOM ROUTINE ON STUDENTS' ACADEMIC PERFORMANCE: QUASI-EXPERIMENT

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ABSTRACT

This study aimed to determine the effectiveness of structured classroom routines on the academic performance of Grade IV students in Mathematics at Asia Academic School in Zamboanga City. A quasi-experimental research design was employed, involving 40 students divided into an experimental group and a control group, with 20 students in each group. A researcher-made 30-item multiple-choice Mathematics achievement test was administered as a pre-test and post-test. The experimental group was exposed to structured classroom routines, while the control group followed the regular classroom routine. The mean scores and paired-samples t-test were used to analyze the students' performance before and after the intervention.

The results showed that the experimental group obtained a pre-test mean score of 9.55 and a post-test mean score of 24.10, indicating an improvement of 14.55 points. Meanwhile, the control group obtained a pre-test mean score of 11.00 and a post-test mean score of 21.00, showing an improvement of 10.00 points. The paired-samples t-test revealed a statistically significant difference between the pre-test and post-test scores of both the experimental group, $t(19) = -14.609$, $p < .001$, and the control group, $t(19) = -8.735$, $p < .001$.

The findings indicate that students in both groups improved their Mathematics performance after the respective classroom routines. The experimental group showed a greater increase in mean scores; however, the within-group tests alone do not establish whether the structured classroom routine was statistically more effective than the regular classroom routine. The study recommends the consistent implementation of organized classroom routines and further research to examine their effects on students' academic performance.

KEYWORDS: *Academic Performance, Classroom Routines, Mathematics, Quasi-Experimental Design*

INTRODUCTION

Background of the study

Structured classroom routines are regular, organized, and predictable procedures that teachers and students consistently follow during classroom activities. These routines serve as guides for managing learning activities, transitions, and classroom tasks while helping students understand what is expected of them. By establishing clear and consistent procedures, classroom routines can contribute to an orderly learning environment and allow teachers and students to focus more effectively on the teaching-learning process.

International research emphasizes the importance of providing structure within the classroom. Cheon, Reeve, and Vansteenkiste (2020), for instance, found that when teachers provided classroom structure in an autonomy-supportive manner, students demonstrated positive outcomes in areas such as classroom engagement and skill development. Similarly, research on educational routines suggests that repeated and recognizable patterns of classroom activities can help organize the learning environment and provide students with greater opportunities to participate in academic activities. These findings suggest that structured classroom routines can play an important role in promoting classroom organization, student engagement, and meaningful participation in learning.

The importance of structured classroom routines is also evident in the Philippine educational context. Pollescas and Aguilar (2025), in their study on classroom management practices and teacher performance, found that teachers demonstrated a high level of classroom management practices, including classroom routine practices, and that these practices were significantly related to teacher performance. Similarly, Quileste, Ferrarez, and Abao (2025), in their action research on the use of visible routines during classroom transitions, found that implementing a daily routine schedule improved students' attention, reduced confusion, and enhanced response accuracy during transitions. These local findings demonstrate that classroom routines are relevant not only in international educational settings but also in Philippine classrooms. Taken together, the international and local evidence indicates that structured classroom routines can contribute to an organized and supportive learning environment, promote student engagement, and facilitate smoother classroom transitions. Therefore, structured classroom routines may serve as an important classroom practice that can support the teaching-learning process and potentially contribute to improved student academic outcomes.

While, academic performance refers to the extent to which a student achieves short-term or long-term educational goals. It reflects students' academic achievements and provides an indication of the extent to which they have attained expected learning outcomes. In educational research, academic performance is commonly understood through measurable indicators of students' learning and achievement. Tharu (2024) explained that academic performance refers to measurable educational outcomes that indicates students' progress and achievement, commonly assessed through continuous

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evaluation methods such as grade point average (GPA) and percentage marks. Similarly, York et al. (2015) explain that academic performance is commonly understood through measurable educational outcomes.

Local research likewise recognizes the importance of measurable achievement outcomes in assessing students' academic performance. Almerino et al. (2020) examined academic performance through measurable indicators of student achievement. On the other hand, Aguirre and Legaspi (2020) examined academic performance in relation to various factors that may influence the learning process. Whether examined through international or local research, academic performance is commonly measured to determine the level of learning and achievement demonstrated by students. Thus, academic performance provides an important basis for determining whether students are achieving the expected outcomes of the teaching-learning process.

Classroom routines, as an essential component of classroom management, may play an important role in supporting students' academic performance. Meremikwu et al. (2022) found that classroom routines significantly predicted students' academic performance, suggesting that consistent and well-established routines may contribute to improved learning outcomes. Similarly, Schumaker and Fisher (2021) reported that students who were engaged in instructional routines obtained significantly higher scores, indicating that structured and consistent classroom practices can support students' learning and achievement.

Local studies also provide evidence of a relationship between classroom management practices and students' academic performance. Castino (2026), who examined classroom routines as one of the dimensions of classroom management, found a moderate and statistically significant relationship between overall classroom management practices and pupils' academic performance. This finding suggests that effective classroom-management practices, including classroom routines, may contribute to a learning environment that supports students' attention, participation, and academic achievement. Thus, international and local evidence indicates that classroom routines are an important classroom-management practice that may be associated with students' academic performance.

Despite these findings, there remains a need to further examine the effectiveness of structured classroom routines through an intervention-based approach, particularly among elementary learners. While previous studies have established relationships between classroom routines, classroom management, and academic performance, fewer studies have directly examined whether the structured implementation of classroom routines can improve students' academic performance using a quasi-experimental approach. This provides a basis for conducting the present study among Grade IV students at Asia Academic School, Zamboanga City.

In today's educational setting, establishing effective classroom-management practices, particularly structured classroom routines, is important in creating an organized and supportive learning environment. Based on the researcher's observation, some learners may experience difficulties in maintaining attention, following classroom activities, and remaining engaged when classroom expectations and procedures are not clearly established. Classroom routines can serve as a guide that helps learners understand what they are expected to do and become more involved in the learning process.

Although teachers use various strategies and methods to facilitate teaching and learning, their effectiveness may differ depending on the learners and classroom situation. Establishing structured classroom routines may therefore help provide clear expectations, maintain consistency in classroom activities, and support students in focusing their attention on learning tasks. When learners understand what to expect and how to participate in classroom activities, they may become more focused and engaged in the learning process. This observation encouraged the researcher to examine whether the systematic implementation of structured classroom routines could contribute to improved academic performance among Grade IV students.

The purpose of this study is to determine the effectiveness of structured classroom routines on the academic performance of Grade IV students at Asia Academic School, Zamboanga City. The researcher was encouraged to conduct this study based on the observation that some learners continue to obtain low academic scores despite being provided with learning activities and lessons appropriate to their grade level. This situation highlights the need to examine classroom practices that may help improve learners' engagement, focus, and academic performance.

Furthermore, the study aims to determine whether the implementation of structured classroom routines can contribute to improved academic performance among Grade IV students. Specifically, the study seeks to provide evidence regarding the effectiveness of structured classroom routines as a classroom-management intervention. The findings of this study may also help the researcher better understand the learning difficulties experienced by Grade IV students and provide a basis for applying appropriate classroom routines to support their learning process and academic achievement.

Statement of the Problem

This study aims to determine the effectiveness of structured classroom routine on students' academic performance in Mathematics of Asia Academic School.

1. What is the pre-test performance of the experimental and control group in mathematics?
2. What is the post –test performance of the experimental and control group in mathematics?
3. Is there a significant difference in the pre and post test results of the experimental and control group in mathematics?

Hypothesis

Is there a significant difference in the pre and post test results of the experimental and controlled group in mathematics?

Ho. There is no significant difference in the pre and post test results of the experimental and control groups in mathematics.

Scope and Delimitation

This study aims to examine the effectiveness of the structured classroom routine and students' academic performance among grades 4 students in Mathematics. The respondents of the study will consist of 40 Grade IV students

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who will be selected purposively and assigned into experimental and control groups, as appropriate to the research design.

The study will cover the researcher's assigned Mathematics subject for Grade IV and will examine the students' academic performance through the implementation of structured classroom routines. The entire study is estimated to be conducted within two months. The first three weeks will be allotted for the validation and reliability testing of the research instrument. The actual conduct of the experiment will take approximately three weeks, during which the structured classroom routine will be implemented with the experimental group while the control group will follow the usual classroom routine. The remaining two weeks will be allotted for the collection, organization, analysis, and interpretation of the results.

The study is delimited to Grade IV students only and will not include students from other grade levels. It will also focus only on Mathematics and will not cover other Grade IV subjects because of differences in the researcher's teaching load and assigned instructional responsibilities. The study will likewise be limited to the selected respondents, the specified school, and the period of implementation.

These delimitations are necessary to ensure that the study remains manageable within the available time and teaching responsibilities of the researcher. Focusing on one grade level, one subject, and the researcher's assigned teaching load will allow the researcher to implement the structured classroom routine consistently and examine its effectiveness on students' academic performance more accurately.

Significance of the study

This study has substantial educational significance as it examines the effectiveness of structured classroom routines on students' academic performance of Grade IV students. This study is beneficial to the following:

Principal

The findings of this study may provide the school principal with a basis for supporting appropriate classroom management practices and promoting a conducive learning environment within the school.

Teachers

This study may help teachers understand the importance of implementing structured classroom routines and maintaining consistency in the teaching and learning process. It may provide them with strategies for keeping classroom activities organized, aligned, and effective in managing students' learning and academic performance.

Parents/Guardians

The study may help parents and guardians understand the effectiveness of implementing classroom routines in supporting students' academic performance. It may also encourage them to reinforce appropriate routines and study habits at home to support their children's learning.

Students

This study may help students monitor and improve their learning process by providing them with a well-organized and predictable classroom environment. Structured classroom routines may also encourage students to actively participate in the teaching and learning process and become more engaged in classroom activities.

Future Educators

The study may provide future educators with practical insights into the use of structured classroom routines in promoting an organized and effective learning environment. The findings may help them develop appropriate classroom routines that can support students' learning and academic performance.

Researchers

This study may provide researchers with useful information for developing and improving structured classroom routines in future studies. It may also serve as a basis for further research involving other variables that may affect students' academic performance.

Intervention, Innovation, or Strategy

The intervention used in this study was the implementation of a Structured Classroom Routine designed to provide an organized, consistent, and purposeful sequence of activities during Mathematics instruction for Grade 4 students. The strategy aimed to established predictable learning environment, encourage student participation, and support academic performance. The structured classroom routine is consisted of 10 sequential classroom activities implemented in the experimental group during scheduled Mathematics lessons over a period of three (3) weeks, 40-minute each session.

Before the intervention, both the experimental and control groups took the same 30-item test as a pre-test to determine both initial academic performance in Mathematics. The experimental group then received Mathematics instruction using the Structured Classroom Routine, while the control group continued with the regular classroom routines throughout the intervention period.

The Structured Classroom Routine consists of ten activities: (1) greetings, (2) energizer, (3) stating the lesson objectives, (4) reviewing the previous lesson, (5) lesson proper, (6) giving instructions for group activities, (7) conducting group activities, (8) giving instructions for individual activities, (9) individual activities, and (10) generalization. These activities were implemented consistently during scheduled Mathematics session on experimental group to promote structure and student engagement. The teacher guided the students through the lesson, facilitated group and individual activities, and allow students to summarized key concepts at the end of each session.

A Structured Classroom Routine Implementation Checklist was used to continue to document the implementation of the prescribed activities and monitor consistently throughout the intervention. After the three-week period, both groups took the same 30-item Mathematics test as a post-test to assess their academic performance following the intervention. The pre-test and post-test results were then analyzed and compared using appropriate statistical procedures to examine differences in the Mathematics performance between the experimental and

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control groups and evaluate the effectiveness of the Structured Classroom Routine.

METHODOLOGY

Research Design

A quasi-experimental design was employed, involving an experimental and a control group (Siedlecki, 2020). Both groups will participate in pre-test and post-test. The experimental group will receive instruction using structured classroom routine, while the control group will continue with the usual routine or traditional teaching methods.

This design is appropriate for the study as it will allow researcher to compare changes in academic performance between two groups. The quasi-experimental design is particularly suitable because it will enable the investigation of effectiveness of structured classroom routine within the existing classroom setting.

Research Locale

The study will be conducted at Asia Academic School. The school is located at MC Enriquez Drive, Don Alfaro in Tetuan, Zamboanga City. The school is a DepEd-recognized private educational institution that blends standards academic learning with Islamic values and Arabic education.

The institution is managed by an interim school principal and OIC-school director, supported by about 70 teaching and non-teaching personnel, it currently has 26 functional classrooms, 2 faculty rooms, 1 computer laboratory rooms, 8 comfort rooms for both male and female learners, and a library.

Asia Academic School implement various programs and projects to support learners' holistic development. These include Risalatul Haqq Pbulication, MSA (Muslim Students Association), and SBO (Student Body Organization).

At present, the school caters to a student population of more than 500 learners, composed of approximately 250 male students and 250 female students.

The researcher did not consider choosing another school as it is easy and attainable to conduct the study within the school.

Population and Sampling

The respondents of this study are the pupils of Asia Academic School for the School Year 2025–2026. They were selected because they are directly involved in the implementation of structured classroom routines within the teaching-learning process.

The population of the study consists of 40 pupils, with 20 pupils from Grade IV-Asmaa and 20 pupils from Grade IV-Alhusaen, who will participate in the study. The study will employ purposive sampling because the researcher handles Grade IV pupils and the selected participants are directly relevant to the purpose of the study.

The pupils will be divided into two groups: the experimental group and the control group. Both groups will undergo a pretest to establish their baseline level of academic performance before the intervention. The experimental group will undergo the implementation of structured classroom routines, while the control group will continue with the usual classroom practices. The pretest results will establish the baseline academic performance of both groups and provide a basis for examining changes in students' academic performance after the intervention.

Research Instrument

This study use quantitative research methods. A researcher-made 30-item Academic Achievement Test will use as the pretest and posttest to measure the academic performance of the Grade 4 students in Mathematics. The test covered the second-quarter lessons on Reading and Writing Numbers, Place Value, Comparing Numbers, Rounding Numbers, Estimating Sums and Differences, and Multiplication.

Each correct answer is equivalent to one (1) point, resulting in a total of 30 points. The pretest will be administered before the intervention, while posttest will be administered after intervention to determine changes in the students' academic performance.

The researcher developed the test based on the identified learning competencies and Table of Specifications (TOS) to ensure that the items were aligned with the content and cognitive levels appropriate for Grade 4 learners. The instrument will undergo expert validation and will revise based on the recommendations of the validators. A pilot test will also conduct with learners who are not included in the actual experimental and control groups to determine the clarity, appropriateness, and reliability of the test items.

The intervention will involve the implementation of structured classroom routine over a period of two weeks, with each session lasting 40 minutes. The routine will consist of specific classroom activities, including greetings, an energizer, stating the lesson objectives, reviewing previous lesson, lesson proper, generalization, giving instruction for group activity, group activity, giving instruction for individual activity, and individual activity. Each activity will have designated time allocation to ensure consistency in the implementation of the structured classroom routine and the administration of the assessment.

The structured classroom routine and its corresponding time allocations will be presented in the appendix, together with the researcher-made Academic Achievement Test. The pretest and posttest scores will be analyzed to determine whether changes in students' academic performance occur following the implementation of the intervention.

The validated Academic Achievement Test will administer to both the experimental and control groups before implementation of the intervention as the pretest. After the intervention period, the same test will use to administer the posttest. The score will obtain from the pretest and posttest will use to determine the changes in students' academic performance and the effectiveness of the structured classroom routine.

Validity and Reliability

The researcher instrument used by the researcher was a self-made questionnaire. The researcher-made questionnaire consist 30-item multiple choices. The questionnaire underwent validity and reliability testing to ensure their accuracy and consistency. The instrument was reviewed by qualified experts to evaluate the clarity, relevance, and appropriateness of the test items. After the validation process, Pilot testing was conducted

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with 15 students who were not included in the accrual research participants in the actual research participants. The reliability analysis yielded a Cronbach's alpha coefficient of 0.951, indicating excellent internal consistency among the 30 test items. These finding suggest that the instrument demonstrated a high level of consistency in the pilot-test responses.

Data Gathering Procedure

The data-gathering procedure of the study was conducted in five phases to ensure the systematic collection of data and the proper implementation of the intervention. Before the conduct of the study, the researcher secured the necessary permissions and coordinated with the school administration, teachers, and research participants.

Phase 1: Validation of the Research Instruments. The researcher-made 30-item Mathematics questionnaire and the Structured Classroom Routine Implementation Checklist were submitted to qualified experts for validation. The experts evaluated the clarity, relevance, appropriateness, and alignment of the instruments with the objectives of the study. The researcher also presented the structured classroom routine for expert review to ensure that the planned activities were appropriate for the intended classroom setting. Necessary revisions were incorporated based on the experts' recommendations before proceeding to the next phase.

Phase 2: Pilot Testing and Pre-Test Administration. After the validation process, the researcher-made Mathematics questionnaire underwent pilot testing with 15 students who were not included in the actual experimental and control groups. The pilot testing aimed to assess the clarity and appropriateness of the test items and determine the instrument's internal consistency. The reliability analysis yielded a Cronbach's alpha coefficient of 0.951, indicating excellent internal consistency among the 30 test items. After the pilot testing, the same 30-item Mathematics test was administered as a pre-test to both the experimental and control groups to determine their initial academic performance before the intervention.

Phase 3: Implementation of the Intervention. The intervention was conducted over a period of three weeks. During this period, the structured classroom routine was implemented in the experimental group during scheduled Mathematics lessons. The routine consisted of ten sequential activities: greetings, energizer, stating the lesson objectives, reviewing the previous lesson, lesson proper, giving instructions for group activity, conducting the group activity, giving instructions for individual activity, conducting the individual activity, and generalization or lesson recap. The routine was implemented consistently throughout the intervention period. Meanwhile, the control group continued with the regular classroom routine. The researcher used the Structured Classroom Routine Implementation Checklist to document the implementation of the routine in the experimental group.

Phase 4: Post-Test Administration. After the three-week intervention, the same 30-item Mathematics test was administered as a post-test to both the experimental and control groups. The post-test measured the students' academic performance after the intervention. The results were then compared with the pre-test scores to examine changes in performance and differences between the two groups.

Phase 5: Data Organization, Analysis, and Interpretation. One day was allotted for organizing, encoding, and tabulating the collected pre-test and post-test results. Two additional days were devoted to analyzing and interpreting the data using appropriate descriptive and inferential statistical procedures. The analysis aimed to answer the research questions, determine whether statistically significant differences existed between the academic performance of the experimental and control groups, and evaluate the effectiveness of the structured classroom routine based on the findings.

Statistical Treatment

The raw data will be collected from the Grade IV learners of Asia Academic School will be treated by the following statistics tool:

1. To answer Research Questions 1 and 2 a descriptive statistics used to get the mean scores of pre and post-test of experimental and control group.

2. To answer Research Question 3, a paired-sample T-Test was used to determine the significant difference of pre-test and post-test of experimental and control group.

RESULT AND DISCUSSION

The data will be gathered from the 30-item researcher-made questionnaire will be organized, coded, and analyzed using appropriate descriptive and inferential statistical procedures. The pretest and posttest scores of the experimental and control groups will analyze and determine the effectiveness of classroom routine on students' academic performance.

The mean scores will use to describe the pretest and posttest performance of experimental and control groups. The mean scores will use to determine the average performance of the students.

A paired-sample t-test will use to determine whether there is a significant difference between the pretest and posttest scores within the experimental group and within the control group. An independent-sample t-test will use to determine whether there is a significant difference between the posttest scores of the experimental and control groups.

Research Question 1: What is the pre-test performance of the experimental and controlled group in mathematics?

Table 1: Pre-test of Experimental and Control Groups

	N	Mean
Pre-test of Experimental	20	9.5500
Pre-test of Control Group	20	11.0000

Table 1 shows the pretest mean scores of experimental and control group in Mathematics. Both groups consisted of 20 students. The experimental group obtained a mean scores of 9.55. While, the control group obtained a mean scores of 11.00.

This implies that the pretest scores of control group obtained a higher result than the experimental group. However, this descriptive comparison alone does not guarantee whether the difference is statistically significant.

In the study of Libo-on and Perez (2022), where they investigated 3 groups from Senior High School student, exposed to game-based, outcome-based, and technology-based

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teaching strategies. Before the intervention, an initial assessment was conducted to know the students' performance in Mathematics. All groups show satisfactory performance before the intervention. Albay (2020), in his study on the 'Effects of a Problem Solving Approach' supported by collaborative strategies on the Mathematics performance of tertiary-level students. The study also used a pre-test and post-test before the intervention. The pre-test was used to determine the initial performance of the College student in Mathematics. This studies support the researcher's study on conducting pre-test assessment as a baseline before the Implementation of structured classroom routine.

Research Question 2: What is the post-test performance of the experimental and controlled group in mathematics?

Table 2: Post-test of Experimental and Control Groups

	N	Mean
Post-test of Experimental	20	24.1000
Post-test of Control Group	20	21.0000

Table 2 shows the post-test mean scores of experimental and control group in Mathematics. Both groups consisted of 20 students. The experimental group obtained a mean score of 24.10 after the implementation of structured classroom routine while, the control group obtained a mean scores of 21.00 following the traditional classroom routine.

The result indicates that the experimental group obtained a higher post-test mean score than the control group, with difference of 3.10 points. This implies that students in experimental group achieved higher average Mathematics scores after the intervention. The findings indicate that the structured classroom routine may have supported students' learning and academic performance during the class session.

Tapado (2023), the study investigated a quasi-experimental on 'the effect of pre-recorded lessons and home tutorials on the academic performance of Grade 11 students in Mathematics'. The study assess pre-test and post-test of students' performance in Mathematics. Before the intervention both groups show the same initial performance in Mathematics, however after the implementation of the intervention the post-test result of the students' shows that the experimental group obtained higher results compare to the control group. Similarly in the study of Solomon et al, (2019), in the 'Effectiveness of the JUMP Math instructional program improving elementary students' Mathematics achievement, a pre-test and post-test were used to assess students' performance before and after the intervention.

Both studies emphasize the importance of examining students' academic performance following an intervention. However, this descriptive comparison alone does not guarantee whether the difference is statistically significant.

Research Question 3: Is there a significant difference in the pre and post test results of the experimental and control group in mathematics?

Table 3: Pre-test and Post-test of Experimental and Control Groups

Test Variable	Mean	SD	t-obs	df	P value	Interpretation
Pair 1: Pre-test and post- test experimental group	-14.55000	4.45415	-14.609	19	.001	significant
Pair 2: Pre-test and post-test control group	-10.0000	5.119622	-8.735	19	.001	significant

Table 3 shows a statistically significant difference between the pre-test and post-test scores of both the experimental and control groups in Mathematics. The experimental group obtained a mean difference of -14.55, with a computed t-value of -14.609 and a p-value of .001 less than the alpha value .05. Similarly, the control group obtained a mean difference of -10.00, with a computed t-value of -8.735 and a p-value of .001 less than the alpha value of .05. Therefore, there is a significant difference in the pre-test and post-test of each group. The null hypotheses of no difference between the pre-test and post-test scores within each group were rejected.

These findings are consisted with the Panlaan (2019), in the study on the 'Effectiveness of the Gradual release of Responsibility approach' in improving students' Mathematics performance. The study reported improvements in both the experimental group, which received the instructional intervention, and the control group, which received traditional instruction. However, the experimental group demonstrated stronger post-test performance when pre-test scores were taken into account. This suggest that students' Mathematics performance may improve under different instructional approaches, while comparison between groups are necessary to determine the relative effectiveness of particular intervention.

Similarly, Abao and Alcantara (2026) examined different instructional models and their effects on Mathematics achievement among Grade 10 students in a printed modular learning environment. Their quasi-experimental study found statistically significant differences in achievement among the instructional models, with Gagne's nine events of instruction producing higher performance than the other approaches. The study highlights the importance of organized instructional sequence, clear explanations, guided practice, and structured learning activities in Mathematics instruction.

In the present study, the significant improvement observed in the experimental group suggest that the Structured Classroom Routine may have supported students' learning during Mathematics lessons. Nevertheless, the significant improvement in the control group indicates that the regular classroom instruction was also associated with improved performance. Therefore, the results of paired-sample t-test establish improvement within each group but do not, by themselves prove that the Structured Classroom Routine was more effective than the regular classroom routine.

CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study, Research Question 1 (RQ1) revealed that the control group obtained a higher mean pre-test score than the experimental group, indicating better initial performance in Mathematics. For Research Question 2 (RQ2), the experimental group obtained a higher mean post-test

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score than the control group after the three-week intervention.

For Research Question 3 (RQ3), the results revealed a statistically significant difference between the pre-test and post-test scores of both the experimental and control groups in Mathematics. The experimental group obtained a mean difference of -14.55, with a computed t-value of -14.609 and a p-value of less than .001. Similarly, the control group obtained a mean difference of -10.00, with a computed t-value of -8.735 and a p-value of less than .001. Since both p-values were below the 0.05 level of significance, the null hypotheses were rejected. These findings indicate that both groups demonstrated significant improvement in Mathematics performance during the study. However, the results do not establish that the Structured Classroom Routine was significantly more effective than the regular classroom routine because the analysis examined the pre-test and post-test differences within each group rather than directly comparing the improvement between the two groups.

Based on the findings, teachers are encouraged to implement organized and consistent classroom routines to support students' learning and improve classroom engagement during Mathematics instruction. Teachers may incorporate activities such as reviewing previous lessons, clearly stating learning objectives, providing guided and individual activities, and summarizing key concepts at the end of each lesson. Furthermore, future researchers are encouraged to conduct similar studies involving a larger number of participants and a longer intervention period. They may also compare the improvement scores of the experimental and control groups to determine whether the Structured Classroom Routine produces a statistically significant advantage over the regular classroom routine.

APPENDICES

Appendix A- Expert Validation Form

STRUCTURED CLASSROOM ROUTINE

Research Title: Effectiveness of Structured Classroom Routines on Students' Academic Performance: A Quasi-Experiment

Researcher:

Validator:

Position/Designation:

Area of Expertise:

Date:

Purpose of the Validation

This validation form is designed to evaluate the researcher-developed Structured Classroom Routine intended for implementation among Grade 4 students during Mathematics instruction.

Structured Classroom Routine

	Classroom Routine	Time Allocation	Language Use
1	Greetings	1 Minute	English
2	Energizer	2 Minutes	English
3	Stating Objectives	1 Minute	English
4	Review of Previous Lesson	2 Minutes	English
5	Lesson Proper	10 Minutes	English
6	Generalization	3 Minutes	English
7	Giving Instructions for Group Activity	3 Minutes	English
8	Group Activity	10 Minutes	English
9	Giving instructions for Individual Activity	3 Minutes	English
10	Individual Activity	5 Minutes	English
	Total	40 Minutes	

Rating Scale

Rating	Description
4	Highly Appropriate
3	Appropriate
2	Needs Revision
1	Not Appropriate

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A. General Evaluation

Criteria	4	3	2	1	Comments
1. The routine is appropriate for Grade 4 learners.	☐	☐	☐	☐	
2. The sequence of activities is logical and systematic.	☐	☐	☐	☐	
3. The routine is feasible within a 40-minute Mathematics lesson.	☐	☐	☐	☐	
4. The routine provides a clear structure for classroom instruction.	☐	☐	☐	☐	
5. The routine provides opportunities for learner participation.	☐	☐	☐	☐	
6. The instructions for activities are appropriately incorporated into the routine.	☐	☐	☐	☐	
7. The routine supports organized transitions between activities.	☐	☐	☐	☐	
8. The routine is practical for consistent classroom implementation.	☐	☐	☐	☐	
9. The routine is aligned with the objectives of the study.	☐	☐	☐	☐	
10. The routine can be consistently implemented throughout the intervention period.	☐	☐	☐	☐	

B. Component Level Validation

No.	Routine Component	Relevance 4–1	Clarity 4–1	Feasibility 4–1 / Comments
1	Greetings			
2	Energizer			
3	Stating Objectives			
4	Review of Previous Lesson			
5	Lesson Proper			
6	Giving Instructions for Group Activity			
7	Group Activity			
8	Giving Instructions for Individual Activity			
9	Individual Activity			
10	Generalization/Lesson Recap			

C. Overall Comments and Recommendations

_____

_____

D. Validator's Recommendation

☐ Accepted without revision

☐ Accepted with minor revisions

☐ Accepted with major revisions

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Appendix B- Research Instrument

Researcher-Made Questionnaire

Directions: Read each question carefully. Choose the letter of the correct answer and write it on the space provided.

_____1. Which is the correct word form of 4, 325?
A. Four thousand three hundred twenty-five
B. Four thousand three hundred fifty-two
C. Four thousand three hundred-eight
D. Four thousand three hundred fifty

_____2. Which is the correct numeral form of 'six thousand, eight hundred forty-two?
A. 6, 482
B. 6, 824
C. 6, 842
D. 6, 248

_____3. Which number is written correctly in words as nine thousand, one hundred six?
A. 9, 016
B. 9, 106
C. 9, 160
D. 9, 610

_____4. What is the place value of the underlined digit in 5, 734?
A. Ones
B. Tens
C. Hundreds
D. Thousands

_____5. What is the value of the underlined digit in 8, 621?
A. 60
B. 600
C. 6,000
D. 60, 000

_____6. In which number does the digit 4 have a value of 4, 000?
A. 2, 456
B. 4, 256
C. 6, 421
D. 5, 642

_____7. What is the value of the underlined digit in 3, 845?
A. 8
B. 80
C. 800
D. 8, 000

_____8. Which number has 5 in the thousands place and 2 in the tens place?
A. 5, 234
B. 5, 323
C. 5, 243
D. 5, 423

_____9. Which symbol makes the statement correct? 4, 526 ____ 4, 526
A. >
B. <
C. =
D. +

_____10. Which of the following is a greater number?
A. 7, 205
B. 7, 250
C. 7, 025
D. 7, 052

_____11. Which statement is correct?
A. 6, 432 > 6, 423
B. 6, 432 < 6, 423
C. 6, 432 = 6, 423
D. 6, 432 + 6, 423

_____12. Ana has 5, 684 points, while Ben has 5, 648 points. Who has more points?
A. Ana
B. Ben
C. They have the same number of points
D. There is not enough information

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_____13. Which of the following list shows the numbers arranged from least to greatest?
A. 3 421, 3 214, 3 412
B. 3 214, 3 412, 3 421
C. 3 412, 3 421, 3 214
D. 3 421, 3 412, 3 214

_____14. Round the underlined digit 347 to the nearest hundred.
A. 300
B. 350
C. 400
D. 500
_____15. Round the underlined digit 6, 241 to the nearest thousand.
A. 5 000
B. 6 000
C. 6 500
D. 7 000
_____16. What is 4, 675 rounded to the nearest hundred?
A. 4,600
B. 4,700
C. 4,750
D. 5,000
_____17. A school has 3,482 books. How many books is this when rounded to the nearest thousand?
A. 3,000
B. 3,400
C. 3,500
D. 4,000
_____18. Which number rounds to 8,000 when rounded to the nearest thousand?
A. 7, 421
B. 7,499
C. 7,521
D. 8,621
_____19. Estimate 347 + 251 by rounding each number to the nearest hundred.
A. 500
B. 600
C. 700
D. 800
_____20. Estimate 682 – 291 by rounding each number to the nearest hundred.
A. 300
B. 400
C. 500
D. 600
_____21. Estimate 4,215 + 2,782 by rounding each number to the nearest thousand.
A. 5,000 C. 7,000
B. 6,000 D. 8,000
_____22. A store sold 2,845 notebooks on Monday and 3,126 notebooks on Tuesday. How many notebooks were sold altogether?
A. 4,000 C. 6,000
B. 5,000 D. 7,000
_____23. A library had 6,782 books and gave away 2,241 books. About how many books are left?
A. 3,000 C. 5,000
B. 4,000 D. 6,000
_____24. What is 6 x 7?
A. 36 C. 48
B. 42
D. 54

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_____25. What is 8 x 9?
A. 63
B. 72
C. 81
D. 90

_____26. What is 24 x 3?
A. 62
B. 72
C. 82
D. 92

_____27. What is 36 x 4?
A. 124
B. 134
C. 144
D. 154

_____28. What is 125 x 3?
A. 325
B. 350
C. 375
D. 425

_____29. A box contains 24 pencils. If there are 6 boxes, how many pencils are there altogether?
A. 120
B. 134
C. 144
D. 154

_____30. A school has 8 classrooms. Each classroom has 125 books. How many books are there altogether?
A. 800
B. 900
C. 1,000
D. 1,200

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