

Management of Multi Grade Teacher Pedagogical Practices on Student Engagement and Outcomes

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Abstract—The purpose of this study is to determine the Management of Teacher Pedagogical Practices on Student Engagement and Outcomes in Multi Grade Classroom. Specifically, it determines the Level of Multi Grade Teacher Pedagogical Practices, Level of Students Engagement and Outcomes, Instructional Management of Teacher Pedagogical Practices on Student Engagement and Outcomes. The research employed a descriptive and correlational research design for its investigation. The research collected data from 100 multi-grade teachers through a validated survey questionnaire which was administered in selected schools in Division of Laguna. The researchers analyzed the data by calculating weighted means and standard deviations and using Pearson Product Moment Correlation Coefficient with Real Statistics Data Analysis Tools. Salient findings revealed that the level of multi-grade teacher pedagogical practices in terms of instructional delivery, classroom management, use of learning resources, differentiated instruction and technology integration was Very High. The level of students' engagement in terms of active participation, effort and persistence, sense of belonging and peer interaction was Very High. The level of student outcomes in terms of concept mastery, skill development and literacy and numerical proficiency was Very High. The instructional management of teacher pedagogical practices and student engagement and outcomes in multigrade classrooms were revealed to have a significant relationship. The result shows a significant relationship between the instructional management of teachers' pedagogical practices and student engagement in multigrade classrooms, leading to the rejection of the null hypothesis. The findings suggest that effective instructional management plays a key role in promoting learners' active participation and engagement despite the influence of other factors. Similarly, a significant relationship between teachers' pedagogical practices and student outcomes, resulting in the rejection of the null hypothesis. This indicates that effective instructional management contributes significantly to learners' academic achievement and serves as an important determinant of educational success in multigrade classrooms. Recommendations include that multi-grade teachers can enhance their instructional effectiveness by using flexible teaching strategies that address diverse learner needs. They may also continue integrating technology purposefully such as multimedia tools, educational apps, and online resources to improve engagement while ensuring accessibility for all learners. Future researchers may expand on these findings by exploring additional variables, involving larger or different groups of respondents, and examining how these teaching practices impact student learning outcomes.

Keywords— Management, multi-grade, pedagogical, engagement, outcomes.

I. INTRODUCTION

Education is often seen as the key to breaking the cycle of poverty and building a more equitable society. Around the

world, it is recognized as a fundamental right and a powerful driver of personal and national development. Yet, for millions of children especially in rural and under-resourced communities access to quality education remains a challenge. One of the most overlooked barriers in these settings is the prevalence of multi-grade classrooms, where a single teacher is responsible for teaching students across different grade levels, age groups, and learning abilities all within the same room.

In the Philippine educational system, the most common classroom type is the single grade and this has been the typical classroom since the public school system is organized in the Philippines. However, in remote barangays where the number of children enrolled could not meet the required number to organize a single grade class, multi grade classes were adopted. Aside from the distance of the barangay and the small number of children for each grade level, the shortage of teachers, funds and school buildings were also among the factors that led to the organization of multigrade classes in the different parts of the country. Multigrade teaching is an instructional arrangement wherein a single teacher educates students from two or more grade levels in one classroom. This educational strategy is especially prevalent in rural and geographically isolated areas where low enrolment and limited human and material resources make traditional monograde classroom organization unfeasible. Multigrade classes aim to ensure access to basic education for all learners, particularly in far-flung communities, thereby supporting the national commitment to inclusive and equitable quality education.

Pedagogical practices for multigrade classes are uniquely shaped by the demands of teaching learners of different grade levels, abilities, and developmental needs within a single classroom. In remote and resource-limited settings, teachers use strategies like differentiated instruction, flexible grouping, contextualized teaching, and local materials to provide meaningful learning. This approach requires creativity, adaptability, and a strong understanding of learners to promote engagement and achievement. Learning outcomes, usually referred to as “educational outcomes”, relate to the knowledge, skills, and capacities that a student demonstrates after successfully completing a learning experience or series of learning activities. They are defined by expected performance and competencies gained. Student engagement refers to how involved and connected students are in their learning, which reflects the quality of teaching and learning. It is adaptive to different contexts and plays an important role in effective education.

This study seeks to explore the relationships among multigrade teachers' pedagogical practices, student engagement and outcomes. By analyzing these interrelated factors, the study aims to contribute to the existing body of knowledge on multigrade teaching and provide evidence-based recommendations for enhancing instructional effectiveness and student learning in multigrade classrooms.

1.1 Statement of the Problem

Problem/s which were addressed by the research

The purpose of this study is to determine the Management of Teacher Pedagogical Practices on Student Engagement and Outcomes in Multi Grade Classroom and to seek answer on the following questions:

1. What is the level of Multi Grade Teacher Pedagogical Practices in terms of:
 - 1.1. Instructional Delivery;
 - 1.2. classroom management;
 - 1.3. use of learning resources;
 - 1.4. differentiated instruction; and
 - 1.5. technology integration?
2. What is the level of Students Engagement in terms of:
 - 2.1 Active Participation;
 - 2.2 effort and persistence;
 - 2.3 sense of belonging; and
 - 2.4 peer interaction?
3. What is the level of Students Outcomes in terms of:
 - 3.1 Concep Mastery;
 - 3.2 skill development; and
 - 3.3 literacy and numeracy proficiency?
4. Is there a significant relationship between the instructional management of teacher pedagogical practices and student engagement in Multi Grade Classroom?
5. Is there a significant relationship between the instructional management of teacher pedagogical practices and student outcomes in Multi Grade Classroom?

II. METHODOLOGY

The research employed a descriptive and correlational research design for its investigation. The research collected data from 100 multi-grade teachers through a validated survey questionnaire which was administered in selected schools in Division of Laguna. The researchers analyzed the data by calculating weighted means and standard deviations and using Pearson Product Moment Correlation Coefficient with Real Statistics Data Analysis Tools.

III. RESULTS AND DISCUSSION

This part presented the different results and discussed the results from treating the data gathered in this study. All specific questions in Chapter 1 under the statement of the problem were answered in this chapter supported by tables. It presents the data gathered about the significant relationship between instructional management of teacher pedagogical practices and student engagement outcomes in Multi Grade Classroom. In particular, the study sought to address the following:

Level of Multi Grade Teacher Pedagogical Practices

In this study, the level of multi-grade teacher pedagogical practices referred to the extent to which teachers demonstrated effectiveness in instructional delivery, classroom management, use of learning resources, differentiated instruction, and technology integration. These components were considered essential in addressing the diverse needs of learners across different grade levels within a single classroom setting.

This study focuses on the management of multi grade teacher pedagogical practices on student engagement and outcomes. The researcher employed descriptive and correlation as its research design. The research respondents of this study were multi grade teachers who were purposively chosen by the researcher based on the needs of this study.

The following tables show the statement, mean, standard deviation, remarks and verbal interpretation from the perspectives of respondents.

Table 1 shows the level of multi-grade teacher pedagogical practices in terms of instructional delivery. It presents the statements, mean, standard deviation, and remarks based on the responses gathered from the respondents.

Table 1. Level of Multi Grade Teacher Pedagogical Practices in terms of Instructional Delivery

Statements	Mean	SD	Remarks
As a Multi Grade Teacher I...			
...employ a variety of teaching strategies that effectively address the learning needs of students across different grade levels in a multi-grade classroom.	4.78	0.42	Strongly Agree
...clearly communicate lesson objectives in ways that are understandable and appropriate for learners from different grade levels.	4.65	0.50	Strongly Agree
...adjust the pacing of my lessons to accommodate the varying abilities and learning readiness of students in a multi-grade setting.	4.77	0.42	Strongly Agree
...use examples, activities, and learning materials that are developmentally appropriate for each grade level within the same classroom.	4.76	0.49	Strongly Agree
...implement instructional practices that promote active engagement and understanding among students from multiple grade levels simultaneously.	4.77	0.42	Strongly Agree
Weighted Mean	4.74		
SD	0.26		
Verbal Interpretation	Very High		

The highest mean score was recorded for the statement "employ a variety of teaching strategies that effectively address the learning needs of students across different grade levels in a multi-grade classroom" ($M = 4.78$, $SD = 0.42$), indicating a very high level of pedagogical practice among multi-grade teachers verbally interpreted as Strongly Agree. The statement "clearly communicate lesson objectives in ways that are understandable and appropriate for learners from different grade levels" obtained the lowest mean score of 4.65 ($SD = 0.50$), although it still falls under the verbal interpretation of Strongly Agree.

The weighted mean of 4.74 with a standard deviation of 0.26 was verbally interpreted as Very High. This indicates that the respondents consistently demonstrate effective instructional delivery practices in handling multigrade classes.

The findings imply that multi-grade teachers possess the capability to manage diverse learners simultaneously through differentiated instruction.

In summary, the results reveal that multi-grade teachers exhibit a very high level of pedagogical practices in terms of instructional delivery. Their ability to implement varied and instructional delivery contributes significantly to enhancing learner engagement, improving understanding, and addressing the diverse educational needs of students in multigrade classrooms.

Table 2 presents the level of multi-grade teacher pedagogical practices in terms of classroom management. It shows the statements, mean, standard deviation, and verbal remarks based on the responses of the respondents.

Table 2. Level of Multi Grade Teacher Pedagogical Practices in Terms of Classroom Management

Statements As a Multi Grade Teacher I...	Mean	SD	Remarks
...establish clear and age-appropriate classroom rules that are understood by learners across different grade levels.	4.84	0.37	Strongly Agree
...manage instructional time effectively to ensure that learners from different grade levels remain engaged in their assigned tasks.	4.75	0.46	Strongly Agree
...maintain an orderly, inclusive, and supportive classroom environment that encourages active participation from all learners.	4.74	0.46	Strongly Agree
...apply positive discipline strategies consistently to support learner self-regulation and sustained engagement.	4.69	0.49	Strongly Agree
...promote respectful behavior among learners of different ages and grade levels to foster a positive learning atmosphere.	4.81	0.39	Strongly Agree
Weighted Mean	4.77		
SD	0.24		
Verbal Interpretation	Very High		

The highest mean score was obtained by the statement “establish clear and age-appropriate classroom rules that are understood by learners across different grade levels” ($M = 4.84$, $SD = 0.37$), which indicates that multigrade teachers strongly prioritize the establishment of clear classroom rules to maintain order and ensure learners’ understanding of expectations regardless of grade level, interpreted as Strongly Agree. The statement “apply positive discipline strategies consistently to support learner self-regulation and sustained engagement” obtained the lowest mean score of 4.69 ($SD = 0.49$), though still interpreted as Strongly Agree, indicating that teachers still consistently apply positive discipline strategies in managing learner behavior.

The weighted mean of 4.77 with a standard deviation of 0.24 was verbally interpreted as Very High. This indicates that multigrade teachers demonstrate a very high level of classroom management practices. The results imply that teachers are highly effective in establishing rules, maintaining discipline, managing time, and fostering a respectful and inclusive classroom environment.

In summary, the findings suggest that effective classroom management is a key strength among multigrade teachers. Their ability to manage diverse learners in a single classroom

setting contributes to maintaining order, promoting positive behavior, and ensuring active engagement in learning activities across different grade levels.

Table 3. Level of Multi Grade Teacher Pedagogical Practices in terms of Use of Learning Resources

Statements As a Multi Grade Teacher I...	Mean	SD	Remarks
...utilize learning materials that are appropriate to the developmental level and learning needs of each grade level in the multi-grade classroom.	4.76	0.43	Strongly Agree
...select instructional resources that effectively support the objectives of my lessons across different grade levels.	4.77	0.42	Strongly Agree
...integrate visual aids and manipulative materials to enhance learners’ understanding and engagement during lessons.	4.82	0.39	Strongly Agree
...encourage learners to use available learning resources independently to support self-directed learning.	4.73	0.45	Strongly Agree
...maximize limited instructional resources to ensure active participation and meaningful learning for all learners.	4.65	0.50	Strongly Agree
Weighted Mean	4.75		
SD	0.24		
Verbal Interpretation	Very High		

Table 3 presents the level of multi-grade teacher pedagogical practices in terms of the use of learning resources.

The highest mean was obtained by the statement “integrate visual aids and manipulative materials to enhance learners’ understanding and engagement during lessons” ($M = 4.82$, $SD = 0.39$), indicating that teachers highly utilize visual and hands-on materials to support learners’ understanding and engagement in the classroom. On the other hand, the lowest mean was recorded in the statement “maximize limited instructional resources to ensure active participation and meaningful learning for all learners” ($M = 4.65$, $SD = 0.50$), suggesting that while still rated highly, resource maximization is the least emphasized among the indicators.

The table obtained a weighted mean of 4.75 ($SD = 0.24$), verbally interpreted as Very High, indicating that multigrade teachers demonstrate a very high level of pedagogical practices in the use of learning resources.

In summary, the results reveal that multigrade teachers consistently demonstrate a very high level of effectiveness in utilizing learning resources to support instruction. The findings suggest that teachers prioritize the use of visual aids and instructional materials to enhance learner understanding and engagement. Although maximizing limited resources received the lowest mean, it is still interpreted as highly practiced, indicating that teachers are able to adapt and make effective use of available materials. Overall, the results imply that the use of learning resources plays a significant role in supporting effective teaching and learning in multigrade classrooms.

Table 4 presents the level of multi-grade teacher pedagogical practices in terms of differentiated instruction.

The highest-rated statement was “modify lesson content based on learners’ readiness levels across different grade levels” ($M = 4.76$, $SD = 0.43$), indicating that teachers

consistently adjust and tailor lesson content according to the readiness and capacity of learners in multigrade classrooms. The lowest-rated statements were “appropriately challenge advanced learners to extend their skills and deepen their understanding” ($M = 4.71$, $SD = 0.46$), suggesting that these practices are slightly less emphasized but still strongly evident among teachers.

Table 4. Level of Multi Grade Teacher Pedagogical Practices in terms of Differentiated Instruction

Statements	Mean	SD	Remarks
As a Multi Grade Teacher I...			
...modify lesson content based on learners' readiness levels across different grade levels.	4.76	0.43	Strongly Agree
...provide varied learning activities to address diverse abilities and interests in the multi-grade classroom.	4.73	0.47	Strongly Agree
...adjust instructional strategies to accommodate different learning styles among learners.	4.74	0.44	Strongly Agree
...provide additional support to learners who require extra assistance to achieve learning objectives	4.71	0.48	Strongly Agree
...appropriately challenge advanced learners to extend their skills and deepen their understanding	4.71	0.46	Strongly Agree
Weighted Mean	4.73		
SD	0.28		
Verbal Interpretation	Very High		

The table obtained a weighted mean of 4.73 ($SD = 0.28$), verbally interpreted as Very High, indicating that multigrade teachers demonstrate a very high level of pedagogical practices in differentiated instruction.

The results indicate that multigrade teachers consistently demonstrate very high implementation of differentiated instruction. They are able to modify lessons, apply appropriate teaching strategies, and use varied activities to address the diverse learning needs of students. While providing additional support and challenging advanced learners obtained the lowest means, both are still highly practiced. In general, the findings confirm that differentiated instruction is effectively applied in multigrade classroom settings.

Table 5 presents the level of multi-grade teacher pedagogical practices in terms of technology integration. It shows the statements, mean, standard deviation, and remarks based on the responses of the respondents.

The highest mean was obtained by the statement “use digital tools to enhance instruction and learner engagement in the multi-grade classroom” ($M = 4.78$, $SD = 0.42$), indicating that teachers strongly utilize digital tools to improve instruction and increase learner engagement in multigrade classrooms. On the other hand, the lowest mean was recorded in the statement “apply technology to effectively manage instructional activities across different grade levels” ($M = 4.33$, $SD = 0.68$), suggesting that this aspect of technology integration is relatively less emphasized compared to the other indicators, although still interpreted as Strongly Agree.

The weighted mean of 4.56 ($SD = 0.37$), verbally interpreted as Very High, indicating that multigrade teachers demonstrate a very high level of pedagogical practices in terms of technology integration.

Table 5. Level of Multi Grade Teacher Pedagogical Practices in terms of Technology Integration

Statements	Mean	SD	Remarks
As a Multi Grade Teacher I...			
...use digital tools to enhance instruction and learner engagement in the multi-grade classroom.	4.78	0.42	Strongly Agree
...integrate multimedia resources (videos, presentations, interactive content) to support lesson objectives.	4.52	0.56	Strongly Agree
...apply technology to effectively manage instructional activities across different grade levels.	4.33	0.68	Strongly Agree
...encourage learners to use educational technologies to support independent and collaborative learning.	4.46	0.61	Strongly Agree
...evaluate the effectiveness of technology use in improving learner engagement and learning outcomes.	4.69	0.46	Strongly Agree
Weighted Mean	4.56		
SD	0.37		
Verbal Interpretation	Very High		

In summary, the findings show that multigrade teachers demonstrate a very high level of technology integration in their teaching practices. They commonly use digital tools, multimedia resources, and other educational technologies to enhance instruction and support learner engagement. Although using technology for managing instructional activities obtained the lowest mean, it is still highly practiced. Overall, the results indicate that technology is effectively integrated in multigrade classrooms to improve teaching and learning.

Level of Students Engagement

The level of participation includes active participation, effort and persistence, sense and belonging and peer interaction and statistically determined by mean and standard deviation.

Table 6 presents the level of students' engagement in terms of active participation. It shows the statements, mean, standard deviation, and remarks based on the responses of the respondents.

Table 6. Level of Students Engagement in terms of Active Participation

Statements	Mean	SD	Remarks
I...			
...encourage learners from different grade levels to actively participate in classroom discussions.	4.73	0.45	Strongly Agree
...ask purposeful questions during lessons to stimulate thinking and sustain learner engagement.	4.82	0.39	Strongly Agree
...provide structured opportunities for learner interaction to support collaborative learning.	4.86	0.35	Strongly Agree
...recognize and value learners' contributions to encourage continued participation and confidence.	4.75	0.46	Strongly Agree
...promote learner-centered activities that actively involve learners in the learning process.	4.88	0.33	Strongly Agree
Weighted Mean	4.81		
SD	0.21		
Verbal Interpretation	Very High		

The highest mean was obtained by the statement “promote learner-centered activities that actively involve learners in the

learning process” ($M = 4.88$, $SD = 0.33$), indicating that teachers strongly emphasize learner-centered activities that actively engage students in classroom learning. On the other hand, the lowest mean was recorded in the statement “encourage learners from different grade levels to actively participate in classroom discussions” ($M = 4.73$, $SD = 0.45$), suggesting that while still highly practiced, this indicator received the least emphasis among the items.

The table obtained a weighted mean of 4.81 ($SD = 0.21$), verbally interpreted as Very High, indicating that students demonstrate a very high level of active participation in the learning process.

In summary, the results show that students exhibit a very high level of active participation in class. They are highly engaged through discussions, questioning, collaboration, and learner-centered activities. Although encouraging participation in discussions obtained the lowest mean, it is still strongly observed. Overall, the findings indicate that learners are actively involved in classroom activities, contributing to a more interactive and engaging learning environment.

Table 7 presents the level of students’ engagement in terms of effort and persistence. It shows the statements, mean, standard deviation, and remarks based on the responses of the respondents.

The highest mean was obtained by the statements “assign tasks that require learners to sustain effort and focus over time” ($M = 4.80$, $SD = 0.43$) indicating that the respondents expressed a very high level of agreement that learners are consistently given tasks that develop sustained effort and that emphasis is placed on progress and continuous improvement. On the other hand, the lowest mean was recorded in the statement “motivate learners to complete challenging tasks, regardless of grade level” ($M = 4.74$, $SD = 0.48$), suggesting that while this indicator still reflects a strong level of agreement, it was the least emphasized among the items presented

Table 7. Level of Students Engagement in terms of Effort and Persistence

Statements I...	Mean	SD	Remarks
...assign tasks that require learners to sustain effort and focus over time.	4.80	0.43	Strongly Agree
...motivate learners to complete challenging tasks, regardless of grade level.	4.74	0.48	Strongly Agree
...encourage learners to persevere when faced with difficult activities.	4.79	0.41	Strongly Agree
...provide constructive feedback that supports learners’ persistence and improvement.	4.77	0.42	Strongly Agree
...reinforce effort and progress rather than emphasizing innate ability alone.	4.80	0.40	Strongly Agree
Weighted Mean	4.78		
SD	0.25		
Verbal Interpretation	Very High		

The weighted mean of 4.78 ($SD = 0.25$), verbally interpreted as Very High, indicating that students demonstrate a very high level of effort and persistence in their learning activities.

In summary, the findings reveal that learners consistently exhibit strong dedication and perseverance in their academic tasks. They are able to maintain focus, exert continuous effort,

and persist in completing learning activities despite challenges. Although motivating learners to accomplish difficult tasks obtained the lowest mean, it remains strongly observed. Overall, the results show that students demonstrate consistent resilience and a high level of commitment to learning.

Table 8. Level of Students Engagement in terms of Sense of Belonging

Statements I...	Mean	SD	Remarks
...create an inclusive classroom environment where all learners feel valued and supported.	4.88	0.33	Strongly Agree
...promote respect among learners of different ages and abilities to encourage positive interactions.	4.77	0.45	Strongly Agree
...encourage peer support and cooperation across grade levels to strengthen learning outcomes.	4.86	0.35	Strongly Agree
...foster positive teacher–student relationships to build trust and engagement.	4.79	0.41	Strongly Agree
...build a safe and welcoming learning space that supports participation and risk-taking in learning.	4.77	0.42	Strongly Agree
Weighted Mean	4.81		
SD	0.19		
Verbal Interpretation	Very High		

Table 8 presents the level of students’ engagement in terms of sense of belonging. It shows the statements, mean, standard deviation, and remarks based on the responses of the respondents.

The highest mean was obtained by the statement “create an inclusive classroom environment where all learners feel valued and supported” ($M = 4.88$, $SD = 0.33$), indicating that the respondents expressed a very high level of agreement that inclusive classroom environments are consistently established to make learners feel valued and supported. On the other hand, the lowest mean was recorded in the statements “build a safe and welcoming learning space that supports participation and risk-taking in learning” ($M = 4.77$, $SD = 0.42$), suggesting that although these indicators were rated highly, they received relatively lower emphasis compared to the other items.

The weighted mean of 4.81 ($SD = 0.19$), verbally interpreted as Very High, indicating that students demonstrate a very high level of sense of belonging in the learning environment.

In summary, the findings reveal that learners consistently experience a strong sense of belonging in the classroom. They feel valued, supported, and included in learning activities, which promotes positive relationships and active participation. Although promoting respect and maintaining a safe and welcoming environment obtained the lowest means, both are still strongly observed. Overall, the results indicate that students feel highly connected and secure within their learning environment.

Table 9 presents the level of students’ engagement in terms of peer interaction. It shows the statements, mean, standard deviation, and remarks based on the responses of the respondents.

Table 9. Level of Students Engagement in terms of Peer Interaction

Statements	Mean	SD	Remarks
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I...			
...encourage learners to cooperate with peers from different grade levels during activities.	4.91	0.29	Strongly Agree
...guide learners to communicate their ideas respectfully during group work.	4.84	0.37	Strongly Agree
...facilitate opportunities for learners to help classmates who are struggling with tasks.	4.84	0.37	Strongly Agree
...promote learners' ability to resolve conflicts or disagreements positively with peers.	4.74	0.44	Strongly Agree
...support learners in recognizing and appreciating their peers' contributions in class.	4.82	0.39	Strongly Agree
Weighted Mean	4.83		
SD	0.20		
Verbal Interpretation	Very High		

The highest mean was obtained by the statement "encourage learners to cooperate with peers from different grade levels during activities" ($M = 4.91$, $SD = 0.29$), indicating that the respondents expressed a very high level of agreement that learners are consistently encouraged to collaborate and cooperate with peers across different grade levels during classroom activities. On the other hand, the lowest mean was recorded in the statement "promote learners' ability to resolve conflicts or disagreements positively with peers" ($M = 4.74$, $SD = 0.44$), suggesting that although this indicator was still highly observed, it received comparatively lower emphasis among the items.

The weighted mean of 4.83 ($SD = 0.20$), verbally interpreted as Very High, indicating that students demonstrate a very high level of engagement in terms of peer interaction.

In summary, the findings reveal that learners demonstrate a very high level of peer interaction in the classroom. They actively cooperate, communicate, and support one another during learning activities, which helps strengthen positive relationships and collaborative learning. Although resolving conflicts positively obtained the lowest mean, it remains strongly observed among learners. Overall, the results indicate that students maintain positive and meaningful interactions with their peers in the learning environment.

Level of Students Outcomes

In this study, the level of Students outcomes refers to concept mastery, skill development, and literacy and numeracy proficiency.

The following tables show the statement, mean, standard deviation, remarks and verbal interpretation from the perspectives of respondents.

Table 10 presents the level of students' outcomes in terms of concept mastery. It shows the statements, mean, standard deviation, and remarks based on the responses of the respondents.

The highest mean score was obtained by the statement "ask questions and provide guidance that enables learners to answer confidently" ($M = 4.79$, $SD = 0.41$), indicating that teachers highly utilize questioning and guidance strategies to strengthen learners' understanding and confidence in responding to lessons. Meanwhile, the lowest mean scores were recorded in the statements "use strategies that help learners demonstrate understanding of lesson concepts" ($M = 4.74$, $SD = 0.44$) Although these indicators obtained the lowest means, both were still verbally interpreted as Strongly

Agree, implying that these practices are consistently observed in the classroom.

Table 10. Level of Students Outcomes in terms of Concept Mastery

Statements	Mean	SD	Remarks
I...			
...use strategies that help learners demonstrate understanding of lesson concepts.	4.74	0.44	Strongly Agree
...design activities that allow learners to apply concepts in meaningful ways.	4.76	0.45	Strongly Agree
...encourage learners to explain ideas in their own words to enhance comprehension.	4.74	0.44	Strongly Agree
...ask questions and provide guidance that enables learners to answer confidently.	4.79	0.41	Strongly Agree
...create opportunities for learners to transfer knowledge to new situations.	4.77	0.42	Strongly Agree
Weighted Mean	4.76		
SD	0.21		
Verbal Interpretation	Very High		

The overall weighted mean of 4.76 ($SD = 0.21$) was verbally interpreted as Very High, indicating that students demonstrate a very high level of outcomes in terms of concept mastery. The findings imply that learners are able to understand, explain, and apply lesson concepts effectively through the instructional strategies implemented by teachers.

In summary, the results reveal that students exhibit a very high level of concept mastery. Teachers consistently provide meaningful learning experiences, questioning techniques, and guidance that help learners strengthen comprehension and apply acquired knowledge in different learning situations.

Table 11 presents the level of students' outcomes in terms of skill development. It shows the statements, mean, standard deviation, and remarks based on the responses of the respondents.

Table 11. Level of Students Outcomes in terms of Skill Development

Statements	Mean	SD	Remarks
I...			
...implement activities that help learners develop essential academic skills.	4.76	0.43	Strongly Agree
...design tasks that enable learners to work independently and confidently.	4.83	0.38	Strongly Agree
...create opportunities for learners to apply skills in practical, real-world contexts.	4.78	0.42	Strongly Agree
...encourage learners to demonstrate critical thinking in classroom tasks.	4.69	0.49	Strongly Agree
...provide guidance that enhances learners' problem-solving abilities.	4.74	0.44	Strongly Agree
Weighted Mean	4.76		
SD	0.23		
Verbal Interpretation	Very High		

The highest mean score was obtained by the statement "design tasks that enable learners to work independently and confidently" ($M = 4.83$, $SD = 0.38$), indicating that teachers highly provide learning tasks that promote learners' independence and confidence in accomplishing classroom activities. On the other hand, the lowest mean score was recorded in the statement "encourage learners to demonstrate critical thinking in classroom tasks" ($M = 4.69$, $SD = 0.49$). Although this indicator obtained the lowest mean, it was still verbally interpreted as Strongly Agree, implying that critical

thinking activities are still consistently practiced in the classroom.

The weighted mean of 4.76 (SD = 0.23) was verbally interpreted as Very High, indicating that students demonstrate a very high level of outcomes in terms of skill development. The findings imply that teachers effectively implement activities and provide guidance that help learners develop essential academic and practical skills.

In summary, the results reveal that students exhibit a very high level of skill development. Teachers consistently provide meaningful tasks, practical activities, and guidance that strengthen learners' independence, problem-solving abilities, and application of skills in real-life situations.

Table 12 presents the level of students' outcomes in terms of literacy and numeracy proficiency. It shows the statements, mean, standard deviation, and remarks based on the responses of the respondents.

The highest mean score was obtained by the statement "design tasks that help learners solve numerical problems accurately" (M = 4.85, SD = 0.36), indicating that teachers highly implement activities that strengthen learners' numeracy skills and accuracy in solving mathematical problems. Meanwhile, the lowest mean score was recorded in the statement "provide writing activities that develop grade-appropriate writing skills" (M = 4.69, SD = 0.51). Although this indicator obtained the lowest mean, it was still verbally interpreted as Strongly Agree, indicating that writing activities are still highly practiced in the classroom.

Table 12. Level of Students Outcomes in terms of Literacy and Numeracy Proficiency

Statements	Mean	SD	Remarks
I...			
...use instructional strategies that enhance learners' reading comprehension skills.	4.79	0.41	Strongly Agree
...provide writing activities that develop grade-appropriate writing skills.	4.69	0.51	Strongly Agree
...design tasks that help learners solve numerical problems accurately.	4.85	0.36	Strongly Agree
...integrate literacy activities that allow learners to apply reading and writing skills.	4.76	0.43	Strongly Agree
...provide opportunities for learners to apply numeracy skills in assessments and real-life tasks.	4.72	0.45	Strongly Agree
Weighted Mean	4.76		
SD	0.21		
Verbal Interpretation	Very High		

The weighted mean of 4.76 (SD = 0.21) was verbally interpreted as Very High, indicating that students demonstrate a very high level of literacy and numeracy proficiency. The findings imply that teachers effectively use instructional strategies and learning activities that support the development of learners' reading, writing, and numeracy skills.

In summary, the results reveal that students exhibit a very high level of literacy and numeracy proficiency. Teachers consistently provide instructional activities and learning opportunities that strengthen learners' reading comprehension, writing abilities, and numerical skills needed for academic and real-life situations.

Test of association between the instructional management of teacher pedagogical practices and student engagement in Multi Grade Classroom

To test the significant relationship between the instructional management of teacher pedagogical practices and student engagement in Multi Grade Classroom in terms of Active Participation, Effort and Persistence, Sense of Belonging, and Peer Interaction they were treated statistically using Real Statistics Data Analysis Tools using the Pearson Product Moment.

Table 13 presents the significant relationship between instructional management of teacher pedagogical practices and student engagement in multi-grade classroom.

The findings show that instructional delivery has a significant relationship with student engagement in terms of active participation ($r=0.329$, $p=0.001$), sense of belonging ($r=0.294$, $p=0.003$), and peer interaction ($r=0.333$, $p=0.001$). This means that effective instructional delivery helps improve students' involvement, connection with classmates, and interaction during classroom activities.

Table 13. Significant Relationship Between Instructional Management of Teacher Pedagogical Practices and Student Engagement in Multi Grade Classroom

Instructional management of teacher practices		Active Participation	Effort and Persistence	Sense of Belonging	Peer Interaction
Instructional Delivery	Pearson Correlation	0.329**	0.067	0.294**	0.333**
	Sig. (2-tailed)	0.001	0.509	0.003	0.001
	N	99	99	99	99
Classroom Management	Pearson Correlation	0.370**	0.185	0.356**	0.310**
	Sig. (2-tailed)	0.000	0.067	0.000	0.002
	N	99	99	99	99
Use of Learning Resources	Pearson Correlation	0.247**	0.225**	0.193	0.295**
	Sig. (2-tailed)	0.014	0.025	0.056	0.003
	N	99	99	99	99
Differentiated Instruction	Pearson Correlation	0.302**	0.146	0.219*	0.237**
	Sig. (2-tailed)	0.002	0.149	0.029	0.018
	N	99	99	99	99
Technology Integration	Pearson Correlation	0.374**	0.363**	0.347**	0.299
	Sig. (2-tailed)	0.000	0.000	0.000	0.003
	N	99	99	99	99

Similarly, classroom management shows a significant relationship with active participation ($r=0.370$, $p=0.000$), sense of belonging ($r=0.356$, $p=0.000$), and peer interaction ($r=0.310$, $p=0.002$). This implies that maintaining a well-organized and supportive classroom environment encourages students to actively participate and build positive relationships with others.

In addition, the use of learning resources has a significant relationship with active participation ($r=0.247$, $p=0.014$), effort and persistence ($r=0.225$, $p=0.025$), and peer interaction ($r=0.295$, $p=0.003$). This means that providing appropriate learning materials helps students become more engaged, motivated, and cooperative in learning tasks.

The use of learning resources is significantly related to engagement, supported by UNESCO (2020), which highlights that learning materials and resources improve student motivation, interaction, and active participation in learning.

Furthermore, differentiated instruction shows a significant relationship with active participation ($r=0.302$, $p=0.002$), sense of belonging ($r=0.219$, $p=0.029$), and peer interaction ($r=0.237$, $p=0.018$). This indicates that addressing students' diverse learning needs promotes inclusion, participation, and positive classroom relationships.

Differentiated instruction is significantly related to engagement, supported by Tomlinson (2019), who stated that addressing learner diversity through tailored instruction increases student involvement and sense of belonging.

Lastly, technology integration has a significant relationship with active participation ($r=0.374$, $p=0.000$), effort and persistence ($r=0.363$, $p=0.000$), sense of belonging ($r=0.347$, $p=0.000$), and peer interaction ($r=0.299$, $p=0.003$). This shows that the use of technology in teaching enhances students' engagement by increasing their motivation, involvement, and collaboration in classroom activities.

Technology integration shows a significant relationship with student engagement, supported by Mishra and Koehler (2016) through the TPACK framework, which explains that effective use of technology enhances student learning, interaction, and engagement.

Overall, the results indicate that instructional management of teacher pedagogical practices is significantly related to all dimensions of student engagement in multigrade classrooms, as supported by p-values less than 0.05.

Table 14 presents the significant relationship between instructional management of teacher pedagogical practices and student outcomes in multi grade classroom. The results include Pearson correlation coefficients (r-values), p-values, and sample size ($N=99$) for each relationship.

As perceived in the preceding table, the existence of a significant correlation between the dimensions of instructional management of teacher pedagogical practices such as instructional delivery, classroom management, use of learning resources, differentiated instruction, and technology integration and the dimensions of student outcomes specifically; concept mastery, skill development, and literacy and numeracy proficiency is supported by the obtained p-values less than 0.05 level of significance. This further means that effective instructional management practices contribute positively to the improvement of student learning outcomes in the multi-grade classroom.

In summary, the results indicate that instructional management of teacher pedagogical practices is a vital predictor of student outcomes. Effective pedagogical practices enable students to develop mastery of concepts, enhance their

skills, and improve literacy and numeracy proficiency through meaningful and organized learning experiences.

Table 14. Significant Relationship Between Instructional Management of Teacher Pedagogical Practices and Student Outcomes in Multi Grade Classroom

		Classroom		
Instructional management of teacher pedagogical practices		of Concept Mastery	Skill Development	Literacy and Numeracy Proficiency
Instructional Delivery	Pearson Correlation	0.126	0.212*	0.185
	Sig. (2-tailed)	0.214	0.035	0.067
	N	99	99	99
Classroom Management	Pearson Correlation	0.402**	0.252**	0.377**
	Sig. (2-tailed)	0.000	0.012	0.000
	N	99	99	99
Use of Learning Resources	Pearson Correlation	0.276**	0.258**	0.175
	Sig. (2-tailed)	0.006	0.010	0.083
	N	99	99	99
Differentiated Instruction	Pearson Correlation	0.390**	0.270**	0.274**
	Sig. (2-tailed)	0.000	0.007	0.006
	N	99	99	99
Technology Integration	Pearson Correlation	0.193	0.259**	0.092
	Sig. (2-tailed)	0.056	0.010	0.365
	N	99	99	99

The significant relationship exists between instructional management and skill development ($r=0.212$, $p=0.035$). The relationship is weak but significant. This means that effective instructional management enhances students' skill development by providing clear, organized, and structured teaching that supports learning progression.

The significant relationship exists between classroom management and concept mastery ($r=0.402$, $p=0.000$), skill development ($r=0.252$, $p=0.012$), and literacy and numeracy proficiency ($r=0.377$, $p=0.000$). The relationship ranges from weak to moderate. This means that effective classroom management creates an orderly and supportive learning environment that enhances students' understanding, strengthens their skills, and improves their literacy and numeracy performance.

Evertson and Weinstein (2018), widely cited in recent studies, who explained that effective classroom management creates an environment conducive to learning, improving both academic achievement and behavior. The significant relationship exists between the use of learning resources and concept mastery ($r=0.276$, $p=0.006$) and skill development ($r=0.258$, $p=0.010$). The relationship is weak but significant. This means that the use of appropriate learning resources helps students deepen their understanding of lessons and develop essential academic skills by providing additional learning support and materials.

The significant relationship exists between differentiated instruction and concept mastery ($r=0.390$, $p=0.000$), skill development ($r=0.270$, $p=0.007$), and literacy and numeracy proficiency ($r=0.274$, $p=0.006$). The relationship ranges from

weak to moderate. This means that differentiated instruction addresses the diverse learning needs of students, allowing them to better understand concepts, improve skills, and enhance literacy and numeracy proficiency.

The significant relationship exists between technology integration and skill development ($r=0.259$, $p=0.010$). The relationship is weak but significant. This means that technology integration enhances students' skill development by providing interactive and engaging learning experiences.

IV. CONCLUSION AND RECOMMENDATIONS

The study revealed that there is a significant relationship between instructional management of teacher pedagogical practices and student engagement in multigrade classrooms. Therefore, the null hypothesis was rejected. This indicates that effective instructional delivery, classroom management, use of learning resources, differentiated instruction, and technology integration are associated with high levels of student participation, effort and persistence, sense of belonging, and peer interaction.

The findings also showed a significant relationship between instructional management of teacher pedagogical practices and student outcomes in multigrade classrooms. Hence, the null hypothesis was also rejected. This means that effective teaching practices contribute to better concept mastery, skill development, and literacy and numeracy proficiency among learners.

Based on the findings of the study and conclusions drawn, the following recommendations can be considered:

Multi-grade teachers further enhance their instructional delivery practices by continuously utilizing varied and flexible teaching strategies that address the diverse needs of learners across grade levels. Teachers were encouraged to strengthen lesson pacing by regularly assessing students' learning readiness and adjusting instruction accordingly to ensure that no group of learners is left behind. Multi-grade teachers may sustain and further improve their integration of technology in instruction to enhance teaching effectiveness and student engagement. Teachers were encouraged to integrate technology in ways that align with lesson objectives and accommodate different learning needs, such as using multimedia presentations, educational applications, and online resources. Future researchers may conduct similar studies focusing on other variables that may affect multi-grade teaching effectiveness. They may also explore larger groups of respondents or different locations to gain more comprehensive findings. Further studies may also examine the impact of these pedagogical practices on student learning outcomes.

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