

## **ATTRIBUTES OF AN EFFECTIVE MULTIGRADE CLASSROOM MANAGEMENT: EXPLORATORY APPROACH**

**HAIMIN B. AMBAS**

**GEMMA N. KINTANAR EdD, FRIEdr**

Central Mindanao Colleges, Kidapawan City, Philippines.

Corresponding email: [hambas@cmc.edu.ph](mailto:hambas@cmc.edu.ph)

### **ABSTRACT**

This study explored the attributes of effective multigrade classroom management in geographically isolated public elementary schools in the Municipality of Kalamansig, Sultan Kudarat. An exploratory sequential mixed-methods design was employed, beginning with a qualitative phase using semi-structured interviews with eight (8) multigrade teachers, followed by a quantitative phase for instrument development and validation. Qualitative data were analyzed using thematic analysis, which revealed five major themes: patience and emotional resilience, instructional flexibility, organizational and planning skills, relational and cultural responsiveness, and authority and consistency. Based on these findings, a 53-item questionnaire was developed and subjected to exploratory factor analysis, resulting in a refined 34-item instrument grouped into three dimensions: Adaptive and Inclusive Classroom Management, Professional Commitment and Multigrade Teaching Disposition, and Classroom Organization and Learning Support Structures. Reliability analysis using Cronbach's alpha showed excellent overall internal consistency ( $\alpha = 0.950$ ). The study concludes that effective multigrade classroom management is a multidimensional construct, and the developed instrument is valid and reliable for assessing classroom management practices and supporting teacher development in multigrade settings.

**Keywords:** *Multigrade Classroom Management, Teacher Attributes, Exploratory Sequential Design, Instrument Development, Kalamansig, Sultan Kudarat, Philippines*

## **INTRODUCTION**

In remote and underprivileged areas where single grade classrooms were impossible to have due to a lack of resources and teachers, multigrade teaching has emerged as an important educational tool and strategy. The multigrade classroom arrangement, in which a single instructor taught more than one grade level in the same classroom, was acknowledged on a global scale as an affordable way to provide education to underserved regions. UNESCO (2021) reports that this configuration was used in about 20% of schools in poor nations, especially in rural and hilly areas of Africa, Southeast Asia, and Latin America.

Multigrade teaching has been developed and adapted by the Philippine Department of Education (DepEd) as a tactical way to ensure that all students have equal access to education. According to DepEd (2023), multigrade teachings was used in about seventeen percent of public primary schools in the Philippines most especially in remote barangays with very limited student populations and inadequate infrastructure. The approach was very common in Sultan Kudarat provinces, such as the local government of Kalamansig, in where normal educational in rural locations was hampered by logistical issues and geographical limitations.

Despite the benefits that are intended, multigrade education shows a set of challenges, most particularly in classroom arrangements. Teachers were required to simultaneously address the cognitive, emotional, and behavioural needs of learners across different grade levels, in which demands extensive instructional planning, strong leadership, and creative engagement strategies. Several studies suggested that in the absence of training and administrative support, teachers in multigrade settings often relied on improvisation and personal resilience to maintain classroom order and facilitate learning (Antonio & Gatchalian, 2022; Reyes & Domingo, 2023).

The effectivity of the classroom management in multigrade settings was influenced not only by instructional techniques but also by teachers' personal and professional touches. Different traits and characteristics such as adaptability, patience, emotional intelligence, multitasking ability, and leadership were very important in managing different learners within a single classroom. Numerous studies had examined the structural and policy-related aspects of multigrade education, a noticeable gap remained in literature focusing on the teacher qualities and lived experiences that enabled successful classroom management in this unique context.

This study was based on the context of Kalamansig, a municipality characterized by remote and resource-constrained schools where multigrade teaching was a practical necessity, particularly in its most isolated areas. The research sought to explore the ways and strategies that helps to the effectivity of classroom management among multigrade teachers in the locality. Using a qualitative approach, this study employed semi-structured interviews with multigrade teachers to explore best practices, identify influential contextual factors, and develop a deeper understanding of the attributes and strategies that contribute to effective multigrade teaching in challenging educational contexts.

All the findings from the qualitative phase became the foundation for all the subsequent quantitative phase, in which a proposed measurement tool or questionnaire was developed. The instrument was designed mostly to operationalize the themes and attributes identified during the qualitative inquiry, such as instructional organization, learner engagement, classroom routines, time and resource management, differentiated instruction, and teacher adaptability. The questionnaire aimed in assessing the extent to which these attributes were present and consistently practiced by multigrade teachers across schools in Kalamansig.

The quantitative phase sought in validating and quantifying the identified attributes of effective multigrade classroom management by administering the questionnaire to a broader sample of multigrade teachers. Statistical analyses were intended to examine the reliability and validity of the instrument, as well as determining patterns, strengths, and areas for improvement in classroom management practices within multigrade settings. In integrating qualitative insights with quantitative evidence, the study aimed in strengthening the generalizability of the findings and in providing a more comprehensive understanding of effective multigrade classroom management.

The findings of this study were intended to inform future teacher the training programs, policy enhancements, and school-based management practices they can have. By highlighting both the lived experiences of multigrade teachers and empirically measured management attributes, the research aspired to support continuous improvement in delivering quality education to learners in the most underserved communities.

## **METHODS**

### **Research Design**

In order to investigate the characteristics of successful multigrade classroom management, the study used an exploratory research approach. The study's exploratory design was for examining a subject that had not yet received much attention, especially in light of the remote schools in Kalamansig, Sultan Kudarat.

By using an open-ended question, the qualitative approach for phase I enabled the researcher in capturing the full richness and complexity of teachers lived experiences in their everyday lives in teaching. The study concentrated on the insights, patterns, and meanings from the participant narratives and classroom practices than testing preconceived assumptions. This approach used an adaptable and realistic study in where the participants shared how they handled their classrooms, overcame obstacles, and evolved successful teaching techniques over time.

A thorough investigation of multigrade teachers' experiences was made possible by using the semi-structured interviews, which increased the findings' validity and depth. This method showed the context-specific knowledge that could guide future professional development initiatives, educational interventions for multigrade teaching in

underprivileged and rural areas, and legislation. Through an online survey form, the researcher employed a quantitative design with a descriptive method to gather and examine more data for phase II of the study.

### **Research Participants**

The participants of this study were selected public school teachers who were currently assigned to multigrade classrooms in the Municipality of Kalamansig, Sultan Kudarat. These individuals were purposefully chosen due to their direct and substantial experience in managing classrooms with multiple grade levels, making them ideal sources of rich, context-specific insights. To qualify for inclusion, participants were required to have at least two years of experience handling multigrade classes and to be currently teaching in geographically isolated or disadvantaged schools within the municipality.

A total of eight teachers participated in the qualitative phase of the study, a number deemed sufficient to reach data saturation while allowing for an in-depth exploration of individual experiences. The participants represented a range of school locations, grade-level combinations, and teaching backgrounds, ensuring a diverse and comprehensive perspective on multigrade classroom management.

In the quantitative phase, a complete enumeration method was used in determining the participants. This means that the researcher chooses all teachers handling multigrade classes in the municipality of Kalamansig.

### **Research Instrument**

The personal and professional characteristics of multigrade instructors, classroom management techniques, and environmental impacts were the main topics of this study's semi-structured interview guide. Together with the objectives of the study, the open-ended questions helped with the further in-depth investigation. Validated by three experts in the field of education—two multigrade school principals and one qualitative researcher—to ensure clarity, relevance, and content validity. A pilot interview was conducted with a teacher outside the study locale to refine the language and sequencing of the questions. A survey questionnaire was used in a later quantitative phase, but the qualitative insights served as the basis for the analysis. In order to authentically reflect the perspectives of the teachers, this questionnaire was created based on the qualitative findings.

### **Data Collection**

The study focused on the experiences, classroom management techniques, and personal characteristics of multigrade instructors utilizing semi-structured interviews as the main method of data collection. These interviews, which lasted 45 to 60 minutes and were recorded with participants' permission over the course of four weeks, were designed to offer in-depth insights using a validated interview technique. In the end, patterns and major themes pertaining to efficient classroom management in multigrade settings were found thanks to this methodology, which permitted follow-up enquiries and ensured a thorough knowledge of participants' experiences. A survey questionnaire was created

based on the themes found during the qualitative phase in order to gather quantitative data.

### **Data Analysis**

In keeping with its exploratory approach, the study employed theme analysis to interpret data gathered from semi-structured interviews. Transcribing audio-recorded interviews was the first step in the analytic process. The transcripts were then reviewed several times to gain familiarity. Important terms and recurrent ideas about classroom management, teacher characteristics, and contextual factors were found through initial coding. After that, these codes were grouped into more general categories. Participants were given the opportunity to examine and confirm the data through member checking, which reduced misrepresentation and validated interpretations. Without using inferential statistics, descriptive categorical frequency counts revealed the emergence of particular themes among participants because the objective was to enhance knowledge of classroom management rather than to extrapolate results. The concluding themes clarified efficient classroom management techniques in multigrade settings, especially in Kalamansig, Sultan Kudarat, and were in line with the study's conceptual framework and research questions.

#### **Anticipated Methodological Issues**

A number of methodological issues were expected in this qualitative and exploratory study, especially with regard to participant accessibility in remote and underprivileged locations. Limited mobility, erratic weather, and different school schedules created logistical challenges that led to the utilization of digital platforms and flexible scheduling to interview multigrade teachers with the least amount of interference with their teaching responsibilities. One major issue was participant bias, since teachers could only highlight positive aspects of their management techniques out of fear of criticism or negative consequences. In order to combat this, the researcher placed a strong emphasis on participant rapport-building, secrecy, and the study's non-evaluative design.

The study's focus on a particular area and small sample size limited its generalizability; nonetheless, the goal was to get a nuanced understanding and enable the transferability of findings rather than to accomplish statistical generalization. In-depth explanations were given to aid readers in determining if the results might be applied to comparable situations. Finally, measures like member checking and keeping a reflective journal were used to monitor personal presumptions and preserve the study's credibility, trustworthiness, and ethical standards in order to address researcher bias during data interpretation.

### **Statistical Treatment**

The study used factor analysis on quantitative data to determine how many constructs, latent variables, or factors underlie a given set of items. The use of exploratory factor analysis (EFA) aimed to identify the underlying dimensions of the attributes of an effective multigrade classroom management. Kaiser-Meyer-Okin (KMO) Measure of Sampling Adequacy was used to assess the data's suitability for data structure detection before the EFA is applied. Using Bartlett's test of sphericity, the correlation matrix for inter-item correlation was conducted. This is to find out if the correlation matrix is an identity matrix, which would indicate that the variables are unrelated and therefore unsuitable for structure detection. Small values (less than 0.05) of the significance level indicate that a factor analysis may be useful with the data (Burton & Mazerolle, 2011; Hyuncheol, 2014).

The next step was the determination of dimensions of the unrelated factors of the data by initial extraction using principal axis factoring of Exploratory Factor Analysis (EFA).

Since this study aimed to develop a tool to measure the attributes of an effective multigrade classroom management, Cronbach's alpha was used for the pilot-tested data. It quantified the extent to which a set of items in a test or questionnaire are correlated with each other, which suggest that they are measuring the same underlying construct or concept of the attributes of an effective multigrade classroom management.

## **RESULTS AND DISCUSSION**

This chapter presents the results and discussion of the study on effective classroom management in multigrade settings, focusing on the experiences of multigrade teachers in the geographically isolated municipality of Kalamansig, Sultan Kudarat. The study aimed to explore the key attributes, strategies, and contextual factors that contribute to effective classroom management. The results are discussed according to the research questions and integrate both qualitative and quantitative findings to provide a comprehensive understanding of the phenomenon.

### **Emerging Themes of the Attributes of Effective Classroom Management in a Multigrade Setting**

Eight (8) multigrade teachers identified a number of recurrent themes pertaining to the qualities required for efficient classroom management in multigrade environments. Five main themes that together characterize the crucial elements of successful multigrade classroom management were identified through methodical coding, classification, and thematic analysis. These emerging themes are patience and emotional resilience,

instructional flexibility, organizational and planning skills, relational and cultural responsiveness, and authority and consistency.

**Patience and Emotional Resilience.** Teachers stressed that managing a varied student body and several grade levels at once requires patience and emotional fortitude. They characterized teaching many grades as emotionally and mentally taxing, demanding composure, tenacity, and commitment. These qualities are reflected in the participants' responses below:

*"Without patience, you may get frustrated and fail to help them."* (Respondent 1)

*"Remaining calm is very important; if I get stressed, learners lose focus."*  
(Respondent 3)

*"Emotional resilience is necessary to stay calm when lessons don't go as planned."*  
(Respondent 2)

*"Dedication drives me to continue preparing lessons even on weekends."*  
(Respondent 8)

Mostly of the respondents emphasize on the patience and emotional fortitude highlights how difficult multigrade classrooms are by nature, since teachers must simultaneously oversee several curricula, student behaviors, and developmental stages in a single classroom. The result was consistent with Emmer and Sabornie (2015) that maintaining instructional flow and reducing disturbances in difficult classroom situations depend heavily on teachers' emotional control, perseverance, and composed demeanor.

**Instructional Flexibility.** Teachers reported the need to adjust instruction to accommodate different learner abilities, styles, and behaviors. Flexibility in teaching ensures inclusivity and promotes engagement across all grade levels. These qualities are reflected in the participants' responses below:

*"I handle them according to their needs, abilities, and learning styles."*  
(Respondent 1)

*"I provide different difficulty levels. I give simpler tasks to learners who struggle and enrichment tasks to advanced learners."* (Respondent 5)

*"Sometimes I change my plan when learners encounter difficulty. I prepare alternative exercises and adapt strategies in real-time."* (Respondent 8)

*"I must adjust because not all learners learn at the same pace. Flexibility is a daily requirement in a multigrade classroom."* (Respondent 4)

In contrast to monograde classes, where instructional focus is more consistent, multigrade teaching necessitates ongoing instructional recalibration in order to effectively handle learner variability, as participants' narratives demonstrate. This bolsters the claim made by Tomlinson (2017) that adaptive teaching is crucial in diverse classrooms since inflexible teaching methods frequently fall short of meeting the demands of a wide range of learners.

**Organizational and Planning Skills.** Participants emphasized the significance of well-planned schedules, organized routines, and meticulous preparation of teaching resources. While teachers manage several grade levels, organization enables students to work autonomously. These qualities are reflected in the participants' responses below:

*"I give independent activities to one grade level while I teach the other."*  
(Respondent 2)

*"To maintain order and promote learning, I establish clear rules and routines at the beginning of the school year. Learners know what to do."* (Respondent 2)

*"For me, as a teacher of a multi-grade class, I must be highly organized, must clarify my expectations, and have consistent rules for my learners."* (Respondent 5)

*"Planning is very important. Organized materials and activities allow learners to continue working productively."* (Respondent 6)

These responses from the respondents shows that in order to have a good classroom management in multigrade environments, it needs to be prepared meticulously, disciplined routines, well-organized materials, and regular timetables that allow teachers to juggle several grades while encouraging student autonomy and involvement. This was supported by the theory of Evertson and Weinstein's (2006) for classroom management, in which holds that orderly learning environments foster learner autonomy and lessen ambiguity. One operational requirement specific to multigrade classroom setups, according to respondents, is that regular routines enable students to work autonomously while the teacher attends to another grade level.

**Relational and Cultural Responsiveness.** According to the respondents, effective classroom management requires an awareness of the language and culture of the students as well as community and parent involvement. Cooperation, engagement, and trust are all strengthened by cultural responsiveness. These responses from the participants show these attributes:

*"Learning their language helped me manage the class better. Learners pay more attention and cooperate when communicated in their dialect."* (Respondent 2)

*“Living in the community helps me understand my learners’ family situations, customs, and routines, which informs my instruction and management strategies.”*  
(Respondent 8)

*“Cultural sensitivity is important, especially with Indigenous Peoples (IP) learners.”*  
(Respondent 7)

*“Engaging parents and community members ensures learners are supported both at school and at home.”* (Respondent 7)

The responses shows that the teachers' cultural sensitivity, community involvement, and solid parent-teacher partnerships promote collaboration, trust, and active engagement in the classroom in which are essential for successful multigrade classroom management. Gay (2018) idea of culturally responsive teaching, which highlights how cultural sensitivity improves student involvement and classroom harmony.

**Authority and Consistency.** In promoting the effectiveness of the multigrade classroom management, teachers stressed the significance of upholding clear rules, consistent routines, and fair enforcement of classroom standards. Across all grade levels, the promotion of student cooperation, self-discipline, and a positive classroom environment was said to depend on authority and consistency. The following responses from the participants demonstrate these attributes:

*“I use clear rules and classroom routines to maintain order among my learners.”*  
(Respondent 5)

*“Consistency is very important. I train learners on routines from the first day and consistently reinforce expectations.”* (Respondent 4)

*“Authority is maintained not through fear, but through fairness* (Respondent 3)

*“You need to be firm but understanding. Authority should be exercised calmly, without raising your voice unnecessarily.”* (Respondent 6)

Firm authority, fairness, regular routines, and positive reinforcement must all be balanced for effective classroom management in multigrade situations. These components foster student accountability and cooperation, resulting in a peaceful learning environment. The results are in line with Simonsen et al. (2008), who claim that fair enforcement of regular procedures and explicit regulations are essential to good management. Students' cooperation and self-control are improved by this regularity. Additionally, positive reinforcement promotes desired behaviour, which strengthens authority and creates a favourable learning environment (Fiveable, 2025). According to experts, authority that is based on justice rather than terror increases accountability and engagement (Wong, n.d.; Journal of Education, Social & Communication Studies, 2025).

When combined, these strategies enable educators to successfully oversee multigrade classes while encouraging order and emphasizing student-centered learning.

*Table 1*  
Essential Themes that Emerge from Examining Attributes of Effective Classroom Management in a Multigrade Setting

<b>Issues Probed</b>	<b>Codes / Categories</b>	<b>Significant Statements</b>	<b>Theme</b>	<b>Meaning</b>
Managing emotional demands and diverse learners	Patience; Emotional control; Perseverance; Commitment	“Without patience, you may get frustrated and fail to help them.” (R1) “Remaining calm is very important; if I get stressed, learners lose focus.” (R3)	<b>Patience and Emotional Resilience</b>	Effective multigrade classroom management requires teachers to regulate emotions, remain calm under pressure, and persist despite challenges arising from handling multiple grade levels and learner needs simultaneously.
Sustaining teaching despite instructional and behavioral challenges	Dedication; Adaptability; Stress management	“Emotional resilience is necessary to stay calm when lessons don’t go as planned.” (R2) “Dedication drives me to continue preparing lessons even on weekends.” (R8)	<b>Patience and Emotional Resilience</b>	Emotional resilience enables teachers to sustain motivation, manage stress, and continue effective teaching despite heavy workload and instructional complexity.

Issues Probed	Codes / Categories	Significant Statements	Theme	Meaning
Addressing varied learner abilities and learning styles	Differentiation; Learner-centered instruction; Responsiveness	<p>“I handle them according to their needs, abilities, and learning styles.” (R1)</p> <p>“I provide different difficulty levels. I give simpler tasks to learners who struggle and enrichment tasks to advanced learners.” (R5)</p>	<b>Instructional Flexibility</b>	Teachers must adapt instruction to individual learner differences to ensure inclusivity, engagement, and equitable learning opportunities across grade levels.
Adjusting lessons in real time	Adaptive strategies; Flexible planning	<p>“Sometimes I change my plan when learners encounter difficulty. I prepare alternative exercises and adapt strategies in real-time.” (R8)</p> <p>“I must adjust because not all learners learn at the same pace. Flexibility is a daily requirement in a multigrade</p>	<b>Instructional Flexibility</b>	Instructional flexibility allows teachers to modify teaching strategies and activities promptly to address learner difficulties and maintain learning momentum.

Issues Probed	Codes / Categories	Significant Statements	Theme	Meaning
Managing time and multiple grade levels	Scheduling; Grouping strategies; Task allocation	<p>classroom.” (R4)</p> <p>“I give independent activities to one grade while I teach the other.” (R2)</p>	<b>Organizational and Planning Skills</b>	Careful planning and structured time management enable teachers to balance instruction across grades without neglecting any learner group.
Maintaining order and learner independence	Classroom routines; Clear expectations; Organized materials	<p>“To maintain order and promote learning, I establish clear rules and routines at the beginning of the school year. Learners know what to do.” (R2)</p> <p>“For me, as a teacher of a multi-grade class, I must be highly organized, must clarify my expectations, and have consistent rules for my learners.” (R5)</p> <p>“Planning is very important.</p>	<b>Organizational and Planning Skills</b>	Established routines and organized materials promote learner independence and reduce disruptions, which are essential in multigrade settings.

Issues Probed	Codes / Categories	Significant Statements	Theme	Meaning
		Organized materials and activities allow learners to continue working productively.” (R6)		
Building positive teacher–learner relationship	Cultural awareness; Language adaptation; Respect	“Learning their language helped me manage the class better.” (R2) “Cultural sensitivity is important, especially with Indigenous Peoples (IP) learners.” (R7)	<b>Relational and Cultural Responsiveness</b>	Understanding learners’ language and culture fosters respect, trust, and cooperation, leading to improved classroom discipline and engagement.
Integrating community and family support	Community immersion; Parental involvement	“Living in the community helps me understand my learners.” (R8) “Engaging parents and community members ensures learners are supported both at school and at home.” (R7)	<b>Relational and Cultural Responsiveness</b>	Strong partnerships with families and communities reinforce classroom expectations and support learner behavior and motivation both in and out of school.
Ensuring discipline across	Clear rules; Fair enforcement;	“I use clear rules and classroom	<b>Authority and</b>	Clear, consistently enforced rules

<b>Issues Probed</b>	<b>Codes / Categories</b>	<b>Significant Statements</b>	<b>Theme</b>	<b>Meaning</b>
multiple grades	Leadership roles	routines to maintain order.” (R5)	<b>Consistency</b>	provide structure and promote responsible behavior among learners of different ages and grade levels.
Promoting self-regulation and positive behavior	Consistency; Positive reinforcement; Fairness	<p>“Authority is maintained not through fear, but through fairness.” (R3)</p> <p>“Consistency is very important. I train learners on routines from the first day and consistently reinforce expectations.” (R4)</p> <p>“You need to be firm but understanding. Authority should be exercised calmly, without raising your voice unnecessarily.” (R6)</p>	<b>Authority and Consistency</b>	Balanced authority—grounded in fairness, consistency, and positive reinforcement—encourages self-discipline, accountability, and a harmonious classroom environment.

**Construction of Attributes of an Effective Multigrade Classroom Management**

The characteristics of an Effective Multigrade Classroom Management scale are shown in Table 2 based on participant responses from the conducted interviews and the findings of the thematic analysis. These items were chosen based on how frequently they appeared in the data from qualitative interviews. Exploratory factor analysis (EFA) was used to reduce and screen the 53 items that resulted from the thematic analysis.

*Table 2*  
Proposed Survey Questionnaire to be subjected for EFA

<b>Item No.</b>	<b>Attributes of an Effective Multigrade Classroom Management</b>
1	I remain patient when managing learners with different abilities.
2	I adapt my teaching strategies to suit diverse learners.
3	I remain calm when handling multiple grade levels.
4	I am well-organized in managing lesson plans and schedules.
5	I prepare instructional materials ahead of time.
6	I demonstrate commitment despite challenging conditions.
7	I show respect for learners' cultural backgrounds.
8	I integrate learners' culture into classroom activities.
9	I manage unexpected classroom situations effectively.
10	I maintain a positive attitude toward multigrade teaching.
11	I establish trust with learners.
12	I communicate effectively with learners from different backgrounds.
13	I demonstrate flexibility in classroom decision-making.
14	I handle stress effectively in multigrade settings.
15	I show dedication to my teaching responsibilities.
16	I continuously seek to improve my teaching skills.
17	I remain motivated despite limited resources.
18	I foster respectful relationships with learners.
19	I model positive behavior in the classroom.
20	I maintain professionalism at all times.
21	I respond calmly to behavioral challenges.
22	I adjust lesson pacing according to learner needs.
23	I plan lessons that accommodate multiple grade levels.
24	I demonstrate perseverance in long teaching hours.
25	I engage learners using my personal competencies.
26	I group learners according to their abilities.
27	I use mixed-ability grouping strategies.
28	I apply differentiated instruction regularly.

- 29 I provide varied activities for different learners.
- 30 I encourage peer support among learners.
- 31 I rotate instruction among grade levels.
- 32 I assign independent tasks to learners.
- 33 I manage time effectively across grade levels.
- 34 I adjust activities based on learner readiness.
- 35 I monitor group activities consistently.
- 36 I provide scaffolding for struggling learners.
- 37 I challenge advanced learners appropriately.
- 38 I ensure all learners are engaged.
- 39 I use cooperative learning strategies.
- 40 I manage diverse behaviors effectively.
- 41 I apply flexible grouping techniques.
- 42 I use learner-centered approaches.
- 43 I encourage learner participation.
- 44 I address individual learning needs.
- 45 I promote inclusive learning practices.
- 46 I identify learners who need additional support.
- 47 I adapt activities to learners' interests.
- 48 I provide alternative learning tasks.
- 49 I adjust teaching methods to meet varied learning styles.
- 50 I maintain fairness in distributing tasks among learners.
- 51 I establish clear classroom rules.
- 52 I implement consistent classroom routines.
- 53 I train learners on routines at the start of the year.

### **Adequacy of Dimensions on the Attributes of an Effective Multigrade Classroom Management**

The adequacy of the data for factor analysis with regard to the 53-item Attributes of an Effective Multigrade Classroom Management scale was evaluated using the Kaiser–Meyer–Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity. The sample and variables are suitable for additional analysis since there is enough shared variance among the items, as indicated by the KMO value of 0.503. Furthermore, a significant result (Approx.  $\chi^2 = 5345$ ,  $df = 1378$ ,  $p = .000$ ) from Bartlett's Test of Sphericity confirmed that the data show structured connections appropriate for factorability. All of these findings support the discovery of dimensions associated with successful multigrade classroom management by confirming that the dataset is suitable for exploratory factor analysis.

*Table 3*

#### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.503
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Bartlett's Test of Sphericity	Approx. Chi-Square	5345
	Df	1378
	Sig.	.000

### **Derivation of the Number of Factor Structure of Test Questions for the Attributes of an Effective Multigrade Classroom Management**

A collection of 53 questions reflecting the characteristics of successful multigrade classroom management were judged suitable for exploratory factor analysis based on preliminary analysis. A three-factor structure that reflects the multifaceted nature of successful multigrade classroom management was found by using parallel analysis to decide the number of elements to keep. In accordance with Field's (2005) recommendations, which state that factor loadings of at least 0.40 are necessary for items to significantly contribute to their respective factors and to improve the clarity of factor structure interpretation, a cut-off value of 0.40 was used to interpret the factor loadings.

Eighteen of the 53 items in the analysis were eliminated from further interpretation because their factor loadings fell below the 0.40 criterion. The remaining items were successfully grouped under three different factors: Factor 1, called Adaptive and Inclusive Classroom Management, reflects the teacher's ability to modify instructional strategies and meet the needs of a variety of learners; Factor 2, Professional Commitment and Multigrade Teaching Disposition, includes items that emphasize professional responsibility and a positive attitude towards multigrade teaching; and Factor 3, Classroom Organization and Learning Support Structures, deals with the organization of classroom routines and instructional management in multigrade settings. The claim made by Hair et al. (1998) that greater factor loadings indicate a better relationship between variables and latent factors, hence strengthening the representation of constructs, is supported by this classification.

Because item number 15 cross-loaded across two factors, compromising factor clarity, it was eliminated from further analysis. This is consistent with Hair et al. (2010), who argue that factorial purity and concept validity are improved by eliminating items with unclear factor connections. Findings from Little (2001) and Mulryan-Kyne (2007) were corroborated by the strong factor loadings of other items, especially number 11 under Professional Commitment and Multigrade Teaching Disposition and numbers 51 and 52 under Classroom Organization and Learning Support Structures, which highlighted their importance in effective multigrade classroom management.

Overall, a three-factor model of successful multigrade classroom management is empirically supported by the factor loading data. The instrument's construct validity and factor structure were reinforced by the distinct pattern of item loadings and the removal of item number 15. These results are in line with earlier research on multigrade teaching and classroom management, which highlights the multifaceted character of successful

teaching strategies and the significance of precise indicators in assessing intricate educational concepts (Veenman, 1995; Mulryan-Kyne, 2007).

*Table 4*  
Pattern Matrix Three-Factor Model

Item No.	Attributes of an Effective Multigrade Classroom Management	Factor			Uniqueness
		1	2	3	
1	I remain patient when managing learners with different abilities.	0.424			0.642
2	I adapt my teaching strategies to suit diverse learners.				0.669
3	I remain calm when handling multiple grade levels.				0.785
4	I am well-organized in managing lesson plans and schedules.				0.511
5	I prepare instructional materials ahead of time.	0.473			0.537
6	I demonstrate commitment despite challenging conditions.		0.483		0.731
7	I show respect for learners' cultural backgrounds.				0.769
8	I integrate learners' culture into classroom activities.		0.494		0.511
9	I manage unexpected classroom situations effectively.	0.767			0.490
10	I maintain a positive attitude toward multigrade teaching.		0.723		0.464
11	I establish trust with learners.		0.880		0.299
12	I communicate effectively with learners from different backgrounds.				0.820
13	I demonstrate flexibility in classroom decision-making.				0.566
14	I handle stress effectively in multigrade settings.		0.457		0.614
15	I show dedication to my teaching responsibilities.		0.458	0.428	0.587
16	I continuously seek to improve my teaching skills.		0.434		0.665
17	I remain motivated despite limited resources.			0.452	0.524
18	I foster respectful relationships with learners.				0.668

19	I model positive behavior in the classroom.		0.429	0.734
20	I maintain professionalism at all times.			0.740
21	I respond calmly to behavioral challenges.	0.425		0.623
22	I adjust lesson pacing according to learner needs.	0.501		0.502
23	I plan lessons that accommodate multiple grade levels.		0.434	0.621
24	I demonstrate perseverance in long teaching hours.	0.466		0.510
25	I engage learners using my personal competencies.			0.652
26	I group learners according to their abilities.			0.856
27	I use mixed-ability grouping strategies.			0.952
28	I apply differentiated instruction regularly.			0.629
29	I provide varied activities for different learners.			0.638
30	I encourage peer support among learners.	0.445		0.500
31	I rotate instruction among grade levels.	0.489		0.648
32	I assign independent tasks to learners.			0.557
33	I manage time effectively across grade levels.	0.476		0.638
34	I adjust activities based on learner readiness.			0.713
35	I monitor group activities consistently.		0.570	0.459
36	I provide scaffolding for struggling learners.		0.490	0.486
37	I challenge advanced learners appropriately.			0.638
38	I ensure all learners are engaged.	0.762		0.536
39	I use cooperative learning strategies.		0.535	0.590
40	I manage diverse behaviors effectively.	0.571		0.419
41	I apply flexible grouping techniques.			0.573
42	I use learner-centered approaches.	0.742		0.527
43	I encourage learner participation.	0.507		0.678
44	I address individual learning needs.	0.410		0.462
45	I promote inclusive learning practices.	0.498		0.534
46	I identify learners who need additional support.	0.601		0.513
47	I adapt activities to learners' interests.	0.558		0.467

48	I provide alternative learning tasks.	0.518	0.468
49	I adjust teaching methods to meet varied learning styles.		0.516
50	I maintain fairness in distributing tasks among learners.	0.441	0.551
51	I establish clear classroom rules.		0.806
52	I implement consistent classroom routines.		0.791
53	I train learners on routines at the start of the year.		0.618
			0.581

Note. ‘Minimum residual’ extraction method was used in combination with a ‘oblimin’ rotation

### Inter-Factor Correlation Matrix

Low to moderate positive correlations between the three retrieved elements are displayed in the inter-factor correlation matrix. Factor 2 and Factor 3 showed a weaker connection ( $r = 0.392$ ). Factor 1 has a moderate correlation with both Factor 2 and Factor 3 ( $r = 0.527$  and  $0.463$ ). These values, all below  $0.70$ , indicate that the factors are distinct yet conceptually related, supporting multidimensional nature of attributes of an effective multigrade classroom management. The weaker correlation between Factor 2 and Factor 3 suggests that these factors represent more distinct dimensions of effective multigrade classroom management, while still contributing to the overall construct.

*Table 5*  
Inter-Factor Correlations Matrix

Factor	1	2	3
1	1.000	.527	.463
2	.527	1.000	.392
3	.463	.392	1.000

### Reliability Test Analysis

Eighteen items with factor loadings less than  $0.40$  and one cross-loading item (Item 15) were eliminated following the exploratory factor analysis. Cronbach's alpha was used in the examination of the reliability of the remaining 34 items measuring the characteristics of successful multigrade classroom management.

With 18 items, Table 6's Factor 1 data showed a Cronbach's alpha of  $0.921$ , indicating excellent reliability. While the alpha for Factor 3, which has six items, was  $0.706$ , which is acceptable, the alpha for Factor 2, which has ten items, was  $0.847$ ,

reflecting good reliability. The instrument demonstrated exceptional internal consistency with an overall Cronbach's alpha of 0.950.

These results confirm that the refined 34-item instrument is highly reliable and suitable for measuring the attributes of effective multigrade classroom management.

*Table 6*  
Reliability Test Analysis

<b>Factor</b>	<b>Cronbach's Alpha</b>	<b>Number of Items</b>	<b>Interpretation</b>
Factor 1	0.921	18	Excellent reliability
Factor 2	0.847	10	Good reliability
Factor 3	0.706	6	Acceptable reliability
<b>Overall</b>	<b>0.950</b>	<b>34</b>	<b>Excellent reliability</b>

### **Developed Tool on Attributes of an Effective Multigrade Classroom Management**

The tool for assessing effective multigrade classroom management was developed using a comprehensive methodology that combined qualitative and quantitative techniques. Based on a thematic analysis of interview data, a pool of 53 items was first created, highlighting common characteristics of effective multigrade classroom management. Following reliability tests and factor analysis, 34 items were left, which were divided into three main categories: Classroom Organization and Learning Support Structures (6 items), Professional Commitment and Multigrade Teaching Disposition (10 items), and Adaptive and Inclusive Classroom Management (18 items). With ratings ranging from 1 to 5, where 5 represents the maximum expression of the trait, the finalized instrument uses a levelled response structure. The format of this finalized 34-item test for evaluating multigrade classroom management features is shown in Table 7.

*Table 7*  
Attributes of Effective Multigrade Classroom Management Tool

<b>Item No.</b>	<b>Factor 1: Adaptive and Inclusive Classroom Management</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1	I remain patient when managing learners with different abilities.					
2	I prepare instructional materials ahead of time.					
3	I manage unexpected classroom situations effectively.					
4	I respond calmly to behavioral challenges.					
5	I adjust lesson pacing according to learner needs.					

6	I demonstrate perseverance in long teaching hours.					
7	I encourage peer support among learners.					
8	I rotate instruction among grade levels.					
9	I manage time effectively across grade levels.					
10	I ensure all learners are engaged.					
11	I manage diverse behaviors effectively.					
12	I use learner-centered approaches.					
13	I encourage learner participation.					
14	I address individual learning needs.					
15	I promote inclusive learning practices.					
16	I identify learners who need additional support.					
17	I adapt activities to learners' interests.					
18	I provide alternative learning tasks.					
	<b>Factor 2 : Professional Commitment and Multigrade Teaching Disposition</b>					
19	I demonstrate commitment despite challenging conditions.					
20	I integrate learners' culture into classroom activities.					
21	I maintain a positive attitude toward multigrade teaching.					
22	I establish trust with learners.					
23	I handle stress effectively in multigrade settings.					
24	I continuously seek to improve my teaching skills.					
25	I model positive behavior in the classroom.					
26	I plan lessons that accommodate multiple grade levels.					
27	I use cooperative learning strategies.					
28	I maintain fairness in distributing tasks among learners.					
	<b>Factor 3: Classroom Organization and Learning Support Structures</b>					
29	I remain motivated despite limited resources.					
30	I monitor group activities consistently.					
31	I provide scaffolding for struggling learners.					
32	I establish clear classroom rules.					
33	I implement consistent classroom routines.					
34	I train learners on routines at the start of the year.					

Legend:

- 5 – To the very great extent
- 4 – Great Extent
- 3 – Moderately Extent

- 2 – Fair Extent
- 1 – Less Extent

## **SUMMARY OF FINDINGS**

Based on the analysis, the following are the summary of findings:

1. Five main themes were patience and emotional resilience, instructional flexibility, organizational and planning skills, relational and cultural responsiveness, authority and consistency which were identified through the qualitative analysis of interviews with eight (8) multigrade teachers.
2. After eliminating low-loading and cross-loading items, 34 items remained in the three-factor structure that emerged from the exploratory factor analysis. The dimensions are Classroom Organization and Learning Support Structures (6 items), Professional Commitment and Multigrade Teaching Disposition (10 items), and Adaptive and Inclusive Classroom Management (18 elements). The elements supported the multifaceted nature of successful multigrade classroom management since they were conceptually different yet connected.
3. Reliability analysis using Cronbach's alpha indicated that the instrument is highly consistent: Factor 1 ( $\alpha = 0.921$ ) – excellent reliability, Factor 2 ( $\alpha = 0.847$ ) – good reliability, Factor 3 ( $\alpha = 0.706$ ) – acceptable reliability, and the overall instrument ( $\alpha = 0.950$ ) – excellent reliability.
4. The finalized instrument has 34 items with a levelled response structure where 5 represents the attribute's highest manifestation and 1 its lowest. For evaluating teaching practices in multigrade classrooms, this framework provides a useful, valid, and trustworthy instrument.

## **CONCLUSIONS**

Based on the results and summary of findings, the conclusions made include:

1. Effective multigrade classroom management requires teachers to demonstrate patience and emotional resilience, instructional flexibility, organizational and planning skills, relational and cultural responsiveness, and authority and consistency, which are essential attributes for managing diverse learners.

2. The 34-item instrument developed to measure these attributes is organized into three dimensions: Adaptive and Inclusive Classroom Management, Professional Commitment and Multigrade Teaching Disposition, and Classroom Organization and Learning Support Structures, reflecting the multidimensional nature of effective multigrade classroom management.
3. The instrument is highly reliable, with Cronbach's alpha coefficients of 0.921, 0.847, and 0.706 for Factors 1, 2, and 3, respectively, and an overall alpha of 0.950, confirming its suitability for assessing teacher practices in multigrade classrooms.
4. The leveled response format of the instrument, where 5 indicates the highest manifestation of the attribute and 1 the lowest, provides a practical and structured method for evaluating teacher performance.
5. Overall, the study confirms that effective multigrade classroom management is multidimensional, observable, and measurable, and the developed instrument offers a valid and reliable tool for research and professional development purposes.

## **RECOMMENDATIONS**

Based on the results, findings, and conclusions, the following recommendations are enumerated:

1. The 34-item questionnaire developed in this research may be used as a tool to evaluate the traits of effective elementary classroom leadership in different educational institutions and locations, particularly those with larger populations, in order to further test its validity and applicability.
2. Future studies could examine the advantages and disadvantages of multigrade classroom management techniques, which could be the foundation for creating focused interventions and professional development opportunities for teacher programs.
3. To improve inclusive and productive learning environments, multigrade teachers are urged to evaluate their classroom management strategies, especially in the areas of flexible instruction, professional dedication, and classroom organization.

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