

## Reading Comprehension in a Multigrade Classroom

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**ABSTRACT:** *In communities where there is a small population, exists multigrade schools that deliver education to learners who cannot attend monograde schools because of several challenges such as topography and distance such as in the Philippines with over 8,000 multigrade schools. There are only very few studies about it in the province of Region X, Philippines, specifically in Gingoog City where there are 23 multigrade schools. So, this study sought to determine if multigrade classrooms are viable alternative to monograde classrooms by comparing the reading comprehension of sixth graders in these two types of classrooms in Gingoog City. This study used descriptive and causal-comparative designs of research. There were 37 respondents in multigrade group using total sampling method, and 136 in monograde group using proportionate stratified random technique with Raosoft sample size calculator. The instrument used in this study was a 40-item reading comprehension adapted from PHIL-IRI 2018, deemed reliable (0.70) through Kuder-Richardson 20. Frequency and percentage were used to measure students' reading comprehension in the two groups, and an independent t-test was used to establish whether there was a significant difference between the two groups' reading comprehension. Results revealed that there is no significant difference in the reading comprehension between the sixth graders of multigrade and monograde classrooms. This implies that multigrade education is a good alternative to monograde education and is therefore recommended to be continued. However, the study revealed that the majority of the respondents are frustration readers, so further research is needed to explore further their reading comprehension.*

**KEYWORDS -** *Learning Environment; Monograde Classroom; Multigrade Classroom; Reading Comprehension; Reading Achievement*

### I. INTRODUCTION

In communities where there is a small population, exists multigrade schools that deliver education to learners who cannot attend monograde schools because of several challenges such as topography and distance (Jakachira& Muchabaiwa, 2023). Philippines is one of the countries with complex topographies especially in its provinces. In fact, out of 47,612 public schools in the Philippines, there are 8, 164 multigrade schools (DepEd, 2021).

Multigrade education is a general educational structure that may be found in both developed and developing countries worldwide (Rabang & Perez, 2021). Multigrade schools were opened in order to deliver inclusive education in areas where communities are challenged by factors such as topography, population and transportation (Pérez, 2020). Multigrade classrooms are a way of keeping teachers and schools going as long as possible in the face of declining student enrollment, which in some inner-city communities means taking multigrade classes or not going to school at all (Escobar, 2020). Because of their prudent financial advantages and ability to maintain classrooms when there are small student enrollments, multigrade classrooms are advantageous when offered as an alternative to the monograde classroom to ensure a sustained educational program for rural students, and often, poor regions (Cozza, 2023).

Multigrade education is an acceptable, and sometimes preferable, alternative because of the required specialized teaching through differentiated instruction and the benefits of capable peer collaboration (Shareefa, 2021). Multigrade education is also expected to increase in the future as a viable alternative to the monograde classroom but research on the effects of this classroom layout on student achievement remains unclear (Taole, 2022) due to the wide variation of multigrade education implementation approaches (Jakachira & Muchabaiwa, 2023).

Barbetta et al. (2021) conducted a study which found that students in multigrade classrooms showcased reading achievement levels on par with those in traditional monograde classrooms. Their findings suggested that the practice of multigrade grouping did not adversely affect reading performance. Similarly, Marnholtz (2020) discovered in their research that primary school students in multigrade classrooms attained reading proficiency akin to their peers in monograde settings. This underscores that multigrade grouping did not impede reading progress among young learners.

Moreover, Stern et al.'s (2022) literature review uncovered varied results concerning the impact of multigrade grouping on reading achievement. While certain studies reported positive outcomes, others found no significant differences compared to monograde classrooms such as the study of Risonar & Digamon (2022) revealing that there is no significant difference in students' achievement between multigrade and monograde courses. In a separate investigation, Munser-Kiefer et al. (2023) determined that multigrade grouping did not have adverse effects on reading achievement or attitudes toward reading. Students in multigrade environments displayed comparable levels of achievement and positive attitudes toward reading when compared to those in monograde classrooms. Similarly, Naparan and Alinsug (2021) noted that students in multigrade classrooms achieved reading proficiency levels comparable to those in monograde classrooms. Their study also highlighted favorable interaction patterns among students within multigrade settings. Furthermore, Barbetta et al. (2021) reaffirmed in their study that primary students in multigrade classrooms attained reading proficiency levels equivalent to those in monograde classrooms, concluding that multiage grouping did not hinder the reading performance of primary students.

Given the data on the impact of multigrade education on student achievement is inconclusive and controversial, determining whether multigrade education is a viable alternative to monograde education is an issue that requires more research (Cornish, 2021).

Generally, there were already surveys locally and internationally that determined the performances of Filipino learners in areas like mathematics, science and reading. For instance, the study conducted by Tomas et al. (2021), revealed that in the 4056 Filipino reading profiles and 4216 English reading profiles of children in grades 1 through 7, majority of them were frustrated readers. This is consistent to the National Achievement Test in 2015, depicting the low performances of sixth-grade students in reading (DepEd, 2015). Moreover, in the 2018 Program for International Student Assessment (PISA), 80 percent of students around fifteen years of age in the Philippines received lower scores in areas like mathematics, science (Risonar et al., 2021), while the report of Villanueva (2022) revealed that twenty million Filipinos could read but not understand what they read.

However, while there are a number of studies explored the performances of students in multigrade classrooms in comparison to the normal classrooms, there is a very limited number of research on multigrade education in Region X of the Philippines where there are 419 multigrade schools. In Gingoog City alone, there are about 23 multigrade schools. Therefore, there is a need to explore multigrade education in the Philippines because there are so many multigrade schools especially in the hinterlands (Napanar & Alinsug, 2021). Moreover, it is important to determine the academic performance of the students in multigrade schools to conclude whether multigrade classrooms are good alternative to monogrades classrooms (Ballesteros & Ocampo, 2016).

Therefore, this study sought to determine if multigrade classrooms are viable alternative to monograde classrooms by comparing the reading performance of the learners in multigrade schools and normal schools.

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## II. METHODOLOGY

### **Research Design**

This study used descriptive research design and causal-comparative research designs. Descriptive research design aims to systematically obtain information to describe a phenomenon, situation, or population (Rashid et al., 2021). Meanwhile, a causal-comparative research is a methodology used to identify cause-effect relationships between independent and dependent variables (Barroga et al., 2023). Additionally, a causal-comparative research is used to examine differences found among existing groups (Azalea , 2022).

In the context of this study, problems 1 and 2 utilized a descriptive research design to obtain information about the reading comprehension of learners in monograde and multigrade classrooms. For problem 3, causal-comparative design is used considering that the study sought to determine the difference of the two groups (monograde and multigrade classrooms) in terms of reading comprehension.

### **Sampling**

The respondents of the study were the 245 sixth-graders of East 2 district of Gingoog City division. Through total population sampling method, there were about 37 respondents for the multigrade group. Meanwhile, through a proportionate stratified random technique using Raosoft calculator, the researchers established a sample size of 136 respondents out of 208 learners for the monograde group.

The table below shows the distribution of the respondents of the study.

### **Table**

*Respondents of the study*

<b>Group</b>	<b>Population Size</b>	<b>Sample Size</b>
Monograde	208	136
Multigrade	37	37
<b>TOTAL</b>	<b>245</b>	<b>173</b>

### **Instrumentation**

The instrument used in this study was a 40-item reading comprehension test used for pretest and post-test which was adapted from Philippine Informal Reading Inventory (PHIL-IRI) (Abril et al., 2022). It determined if the student fell under the independent, instructional, or frustration category of reading comprehension. For the reliability of the instrument, Kuder-Richardson 20 was used, which revealed a result of 0.70, implying that the instrument was reliable.

### **Data Collection Procedure**

The researchers acquired clearance from the ethics board of the department. After that they secured a letter of approval from the division superintendent and the school heads. Then, consent forms were secured both from the participants and their guardians. The participants were oriented on the guidelines of the study including the confidentiality of the data being gathered and their rights to withdraw from the study upon their decision. The instrument underwent thorough validation and evaluation to make sure that was reliable. The respondents then answered the instrument. The data were gathered and analyzed for discussions.

### Scoring Procedure

Reading comprehension was measured through a 40-item Reading Comprehension Test composed of literal, inferential, and evaluative questions. The researcher used the Philippine Informal Reading Inventory (Phil-IRI) Scale 2018 to determine the reading comprehension level of the learners. Below is the scale to measure the reading comprehension level.

### Table

Scale for Reading Comprehension Level

Range Of Score	Performance Criteria	Qualitative Description
33-40	At least 80-100% of the questions were correctly answered	Independent
24-32	Students answered 59-79% of the questions correctly	Instructional
0-23	At least 58% of the questions were correctly answered	Frustration

### Data Analysis Procedure

For the analysis and interpretation of data, the frequency and percentage were used to determine the reading comprehension level of the participants in both multigrade and monograde classrooms, and an independent t-test was used to determine the significant difference between the reading comprehension levels of the sixth-grade participants in the two groups.

### Results and Discussion

#### Reading Comprehension of Students in Multigrade Schools

Table 1 shows the reading comprehension level of the sixth-graders in multigrade classrooms.

**Table 1**

Reading Comprehension Level of Multigrade Sixth-graders

Range	Description	Frequency	Percent
33-40	Independent	0	0%
24-32	Instructional	0	0%
0-23	Frustration	37	100%
Total		37	100%

As shown in the table, all the learners were in frustration level at 100% ( $f = 37$ ). This means that all of the learners were frustration readers who failed to meet the minimum standard for reading comprehension. As frustration readers, they could not read well and they could not understand what they were reading.

The findings affirm the observations of a decline in the reading abilities of Filipino students. As outlined by Tomas et al. (2021), the bulk of children across 4056 Filipino reading profiles and 4216 English

reading profiles, spanning grades 1 through 7, were identified as frustration readers. Similarly, Villanueva (2022) highlights that a staggering twenty million Filipinos possess the ability to read but struggle with comprehension. This trend resonates with findings from the 2015 National Achievement Test (NAT) and the 2018 Program for International Student Assessment (PISA), which underscored the prevalence of poor reading comprehension among the majority of students in the Philippines (Risonar et al., 2021).

### Reading Comprehension of Students in Monograde Schools

Table 2 shows the reading comprehension level of the sixth-graders in monograde classrooms.

**Table 2**

Reading Comprehension Level of Monograde Sixth-graders

Range	Description	Frequency	Percent
33-40	Independent	0	0%
24-32	Instructional	10	7%
0-23	Frustration	126	93%
Total		136	100%

As shown in the table, most students in the monograde classes at 93% ( $f = 126$ ) were in frustration level. The rest of the participants at 7% ( $f = 10$ ) were in instructional level. None of them reached independent level. This implies that most of the monograde students did not meet the minimum standard for reading comprehension and that they found it hard to read and understand. Only ten (10) participants were instructional readers, implying that they could read some words but could not comprehend completely what they were reading.

The findings further corroborate indications of a decline in the reading proficiency of Filipino students. Among the twenty (20) million Filipinos who could read but struggled with comprehension were sixth-graders in single-grade classrooms, as highlighted by Villanueva (2022). Evidently, the reading performance of Filipinos was deteriorating, as evidenced by the results of the 2015 National Achievement Test (NAT) and the 2018 Program for International Student Assessment (PISA). This trend aligns with the findings of Tomas et al. (2021), indicating that a significant portion of Filipino children were categorized as frustration readers. However, a distinct learning outcome pattern emerged among 7% of learners in single-grade classrooms. Statistically, these students did not fall into the category of Filipinos who could read but lacked comprehension skills.

### Reading Comprehension of Students in Multigrade and Monograde Classrooms

Table 3 presents the difference between the reading comprehension of students in multigrade and monograde classrooms.

**Table 3**

*Difference in the Reading Comprehension of Students in Multigrade and Monograde Classrooms*

	Multigrade		Monograde		t	p	Decision	Interpretation
	Mean	SD	Mean	SD				
Reading Comprehension	11.05	4.23	13.82	6.28	1.719	.093	Accept	Not Significant

The data indicate that the difference in reading comprehension scores between multigrade and monograde classes is adequate evidence to accept the hypothesis that there is no significant difference between the two groups. It reveals that the multigrade classrooms have a mean of 11.05 (SD = 4.23) whereas the monograde classes have a mean of 13.82 (SD = 6.28) in favor of the latter. There was no significant difference in reading comprehension between the two groups, implying that education in multigrade and monograde classes is of equivalent quality.

The findings of the study propose that multigrade classrooms offer a viable alternative to traditional single-grade classrooms. Indeed, the establishment of multigrade schools aims to provide inclusive education, especially in regions facing challenges such as difficult terrain, sparse population, and limited transportation options (Pérez, 2020). Multigrade classrooms serve as a means to sustain teaching staff and educational facilities despite declining student numbers, particularly in inner-city areas where the choice often lies between multigrade classes and no schooling at all (Escobar, 2020). Due to their cost-effectiveness and capacity to accommodate small student populations, multigrade classrooms present advantages when compared to single-grade classrooms, ensuring continuous educational provision for rural and economically disadvantaged areas (Cozza, 2023).

Multigrade education is viewed as an acceptable and sometimes preferable alternative due to its emphasis on tailored instruction and the benefits of collaborative learning among peers (Shareefa, 2021). While it is anticipated that multigrade education will continue to gain prominence as an alternative to single-grade classrooms, research on its impact on student achievement remains inconclusive due to the diverse approaches to its implementation (Taole, 2022), as highlighted by Jakachira & Muchabaiwa (2023).

The conclusions echo the findings of Barbetta et al. (2021), whose research demonstrated that students in multigrade classrooms achieved reading levels comparable to those in traditional single-grade classrooms, suggesting that multigrade grouping does not hinder reading performance. Similarly, Marnholtz (2020) revealed that primary students in multigrade classrooms attained reading proficiency similar to their peers in single-grade settings, indicating no impediment to reading progress among young learners. Furthermore, while Stern et al.'s (2022) literature review yielded mixed results regarding the impact of multigrade grouping on reading achievement, Munser-Kiefer et al. (2023) found no adverse effects on reading achievement or attitudes toward reading in multigrade environments. Naparan and Alinsug (2021) also observed comparable reading proficiency levels between students in multigrade and single-grade classrooms, alongside positive interaction patterns among students within multigrade settings. Barbetta et al. (2021) further confirmed that primary students in multigrade classrooms achieved reading proficiency levels equivalent to those in single-grade classrooms, emphasizing that multigrade grouping does not impede the reading performance of primary students.

### III. CONCLUSION

The respondents in the multigrade group were found to be frustration readers, while in monograde group, there are about ninety per cent of frustration readers. This implies that the reading comprehension of the two groups are below the proficiency level based on the PHIL-IRI guidelines. Using independent t-test, it was discovered that there is no significant difference in the reading comprehension of the two groups. This indicates that multigrade classrooms are viable alternative to monograde classrooms despite the results showing that majority of the respondents in the two groups are all frustration readers.

### IV. RECOMMENDATION

It is best recommended that multigrade education is continued especially in the local areas of the Region X, Philippines. However, since majority of the respondents are frustration readers, stake holders and future researchers must explore further the reading comprehension of the students and determine the causes affecting this condition.

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