SATISFACTION AND ACADEMIC PERFORMANCE OF MULTIGRADE PUPILS

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**ABSTRACT**

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| **Aims:** The study assessed the satisfaction of multigrade pupils by considering teacher, student, and learning environment factors. **Study design:** This research used a descriptive-correlational quantitative design. **Place and Duration of Study:** This research was conducted in an elementary school in Ozamiz City, Misamis Occidental, Philippines, during the School Year, 2023-2024. **Methodology:** A descriptive-correlational quantitative design was employed to assess the level of satisfaction among multigrade pupils. This study involved 31 Grade 3 and 4 students in a multigrade class enrolled for the academic year 2023-2024 . The study used a researcher-made survey questionnaire to gather data. The mean, weighted mean, and Spearman’s rho were used to treat the gathered data.**Results:** The results showed that the multigrade pupils were very satisfied with the teaching-learning process in terms of the teacher factor (3.42), student factor (3.33), and the learning environment factor (3.59). The academic performance of multigrade pupils was found to be satisfactory, meeting expectations as set by the Department of Education's grading system. Despite high satisfaction levels, the correlation analysis using Spearman's rho showed no significant relationship between the pupils' satisfaction level in the teaching-learning process and their academic performance.**Conclusion:** The high level of satisfaction of multigrade pupils in the teaching-learning process, in terms of teacher, student, and learning environment factors, was not a guarantee of creating an impact on their academic performance. The academic performance was very satisfactory, even if pupils were very satisfied with the teaching-learning process in the multigrade class. Therefore, further research is necessary to identify additional factors that impact the academic performance of pupils. |

*Keywords: multigrade pupils’ satisfaction, multigrade class, academic performance*

**1. INTRODUCTION**

A multigrade class has two or more grade levels in the same classroom. There are various names for the multigrade structure, such as "composite", "combination classes", "double classes", "split classes", "mixed-age classes" and "vertically grouped classes" (Veenman, 1995). The multigrade class is defined as a classroom where students of different grade levels are grouped together, taught by one teacher for most, if not all, of the day (Mason & Burns, 1996; Veenman, 1995).

In the Philippines, several factors contribute to why various remote and secluded areas have adopted multigrade classes. Such factors include very low enrollment, a lack of classrooms, insufficient funding, and a teacher shortage. Thus, in the regions that had low populations and/or are geographically inaccessible, multigrade classes were implemented as a strategy to ensure Education for All (Villalino, 2010)

Education for All is an international initiative established by the United Nations Educational, Scientific, and Cultural Organization (UNESCO), which aims to provide quality education to all and help countries build prosperous, healthy, and equitable societies. The Sustainable Development Goal 4: Ensuring Inclusive, Equitable, and Quality Education and the Promotion of Lifelong Learning Opportunities for All aims to recognize the obstacles and attempts to address them by increasing opportunities through scholarships and creating educational facilities that are inclusive to all.

Multigrade courses were used in early government schools in North America and Europe (Brunswic & Valerien, 2004). The onset of the Industrial Revolution and rapid urban population growth led to the organization and classification of the growing number of students, paving the way for the introduction of the graded school system (Miller, 1989). However, remote areas have continued implementing multigrade classes as an essential school structure.

According to the 2019 Review of Current Situation and Practices of Multigrade Schools in the Philippines, there are 8,379 multigrade schools out of the 38,911 public schools in the Philippines. Section four of the Republic Act 896, known as the Elementary Education Act of 1953, authorized the organization of classes with more than two grades each. It provides that “where there are not enough children to meet the minimum requirements for organizing one grade of two-grade combination classes, the Secretary of Education may authorize the organization of such classes following terms set forth by the Board of National Education.”

Multigrade classes require the teacher's flexibility in instructing students to accommodate their varying learning rates; encouraging collaboration is another effective strategy. A combined class of students differs significantly from the traditional type of student class, which is typically a single grade. In a monograde class, students of varying ages and abilities are expected to perform uniform learning competencies and learn the same lessons. In multigrade classes, students of varying ages and abilities are expected to learn different lessons and meet different objectives based on their grade levels (Mirando, 2012). That means that how the students in the multigrade class should be taught must also be different.

Multigrade instruction necessitates innovative teaching and learning strategies, as well as effective classroom management, encompassing scheduling instructional time, diverse management styles, and discipline. However, according to survey research conducted by the Department of Education’s Bureau of Elementary Education and Southeast Asian Ministers of Education Organization – Regional Center for Educational Innovation and Technology (SEAMEO INNOTECH), most teaching personnel prescribed time allotment as being not enough for them to finish the lessons and cover all the targeted competencies of each lesson which often results to teachers resorting to spoon-feeding their students through passive lecturing. It is correct that the teacher's role in a multigrade classroom is multidimensional, or to be more precise, much more complex and demanding (SEAMEO INNOTECH, 2011).

Nevertheless, it is essential to recognize that not only teachers struggle in multigrade classes, but also pupils who are recipients of knowledge transfer. This limitation in multigrade classes is observed to contribute to pupils' low performance. Furthermore, situations in multigrade classes can also impact students' non-cognitive skills, as teachers employ different teaching approaches while pupils interact in a unique environment (Bacani, 2014).

This dilemma related to the complexity of multigrade classes is also applicable in one of the Divisions in Mindanao, which has various schools offering multigrade classes. Three schools implement pure or all multigrade classes in this division. There are also 6 schools that have both Multigrade and Monograde classes. As the researchers previously visited a class that implements the multigrade class structure, they observed that the school is located in a remote area. They asked two Grade 6 multigrade pupils if they were satisfied with being in a multigrade class. The researchers determined from the pupils' answers that the learning environment of the multigrade class is conducive to learning. However, they shared that because of the age and grade differences, the class was noisy during class discussions with the other grade while they were completing their assigned activities.

Thus, this quantitative study aimed to assess the satisfaction of multigrade pupils in the teaching-learning process in a multigrade class in terms of the teacher factor, student factor, and the learning environment factor, and its relationship to their academic performance.

**2. Review of Related Literature**

**2.1 The Multigrade Program in the Philippines**

Teaching pupils of various grades, ages, and skills in the same group is known as multigrade teaching. It differs from monograde teaching, when pupils within that grade appear to be more similar in terms of age and abilities (Haq et al., 2017). The multigrade program was established to uphold the provisions outlined in the Philippine Constitution. Article XIV, Section 1, of the 1987 Constitution provides that the state shall protect and promote the rights of all citizens to quality education at all levels and shall take all appropriate measures to make education accessible to all. The Department of Education through DO 96, s. In 1997, the government declared policies to provide schools in barangays whose enrollment and population growth trends necessitate the production of multigrade classrooms, alongside other barangays with public schools that offer all grade levels in elementary education. The minimum enrolment of eight pupils and the maximum of 35 pupils per class shall be observed (Seameo Innotech, 2012).

Multigrade schools are a popular alternative for enhancing rural education in developing nations. According to studies, they can be an efficient and affordable way to improve student performance and increase educational access in underdeveloped nations and areas (Benveniste & McEwan, 2000)

**2.2 Teaching-Learning Process**

The teaching-learning process in a multigrade class is much different from that in a monograde class because the diversity and differences among the learners are sharply increased in a multigrade class. Thus, the interaction processes and curricula aspects are affected (Burns & Mason, 1995). Therefore, knowing learners' satisfaction level in a multigrade class is important. The following factors are all parts of the teaching-learning process in a multigrade class.

**2.2.1 Teacher Factor**

In a multigrade class, learners are diverse in a way that there are different grades and ages in one class that one teacher handles. In order to cater to the various needs of learners’, teachers are expected to use cutting-edge techniques, be progressive and creative while instruction is taking place, as well as be innovative and adaptable while setting up the classroom to support learning in many ways (Ministry of Basic and Secondary Education in Collaboration with the Learning Initiatives for Rural Education, 2008).

Erden (2020) states that various teaching approaches and methods must be employed to maintain higher attention and enhance pupils' learning levels. In a multigrade class, the teacher may need to transition between grades, so the curriculum, timetables, and time allocation must be flexible to implement them properly. Fast learners are often designated as student tutors to slow learners since they need more attention.

Teachers acquire certain skills to deliver a lesson effectively. They need to properly prepare their classes to try not to be pointless and to make the lesson understandable to the whole class (Taole & Mncube, 2012). However, because the teachers in multigrade classes lack training, it makes it difficult to create a curriculum for multigrade instruction, and teachers of multigrade classes typically use the monograde (Saqlain, 2015). According to Benson (2016), despite the lack of training, they now undergo pre-service and in-service training, and the effectiveness of the teachers’ management and practice through well-structured domains, strands, and indicators. With this, it can improve the teachers’ and learners’ knowledge, abilities, and attitudes to help them execute their jobs more successfully.

Brown (2010) states that enhancing the value of teachers' knowledge and abilities as crucial elements in multi-graded instruction and changing the evaluation methods are both necessary. In order to engage, motivate, and teach all learners at optimal levels, teachers must understand the learning process in general, understand and respond to students' emotional and cognitive profiles, and select effective instructional strategies and tactics for diverse learners. Core elements of multi-graded teaching have been identified as the positioning of teachers' attitudes, raising awareness levels, adapting curricula, communicating the philosophy of learning, designing learning tools, and organizing students socially.

Beukes (2006) stated that the process approach, moving away from an all-knowing facilitator, integrating related curriculum subjects across grades, and building flexible groups in the classroom are some of the strategies teachers should use for a multi-graded classroom. According to Juarez and Associates Incorporated (2003), active learning encourages students' individual learning, which teachers use to deliver a lesson effectively, and with that, students acquire knowledge. Multigrade teaching can be learner-centered because it caters to the multiple intelligences of students. The teachers of multigrade classes then use different strategies for the learners’ different learning styles such as cooperative learning and peer tutoring. In delivering the lesson and through interactions, lower-year students can learn from higher-year students and vice versa (Saqlain, 2015).

Sweller's Cognitive Load Theory examines how the cognitive capabilities of learners influence the learning process. Literature delves into the finite nature of attention capacity and advocates for instructional designs that effectively handle cognitive load. Strategies such as simplifying intricate information and presenting well-organized materials in a clear manner are underscored as approaches to engage and sustain learners' attention. In essence, the theory emphasizes the impact of learners' cognitive resources on the learning experience, emphasizing the need for instructional methods that streamline complex information and reduce mental effort for optimal learning outcomes (Sweller, 1988).

**2.2.2 Student Factor**

Multigrade classrooms are based on the assumption that diversity is not a problem. In reality, every classroom is unique. These classrooms recognize that each pupil is at a different stage of learning and focus on the learner's developmental stage; as a result, the focus shifts to individual learning along a continuum (Mamun, 2015). Pupils in a multigrade setting must take more initiative in their learning and be self-directed. Those who are motivated to explore and engage with the curriculum independently are more likely to be satisfied with their progress. According to Via Vita Academy (2016), pupils in a multigrade class are less competitive, reducing competition and creating a good learning ambiance.

Positive social relationships, cooperation, and collaboration with peers of various ages can all help improve the classroom experience. Students who feel supported and included by their classmates, regardless of age, are more satisfied (Song et al., 2009). Interaction with older and younger peers in multigrade classrooms can help pupils develop self-awareness (Vincent, 1999). Student engagement acknowledges the complexity of engagement beyond the domains of cognition, behavior, and emotion. It includes the historically situated individuals within contextual variables (such as personal and familial circumstances) that influence their level of engagement as individuals or groups in their learning at any given moment (Saeed & Zyngier, 2012).

Students in the multigrade classroom can work at their level of ability. They are also encouraged to learn independently rather than rely solely on teachers. Students in a multigrade classroom can literally learn independently or simultaneously while working together, and they also learn how to help one another and themselves as a group. Students are expected to develop independence at a young age through their work, such as their output, exams, and even recitation according to the Nueva Ecija University of Science and Technology (2022).

According to Vinnikas (2023), a learner has all the necessary resources to take charge of their education by researching and examining new information with less assistance from a teacher or organization. Instead of depending only on the materials their teacher or instructor offers them, students who engage in independent learning conduct their own study and pose questions. By establishing their own objectives and keeping track of their progress, they also assume responsibility for their educational journey. As the internet became more widely used, student-centric learning acquired enormous traction and saw exponential development during the COVID pandemic.

Students who enter a multigrade class with strong academic skills and knowledge foundation may find themselves more satisfied. Students with strong foundational skills are more confident in dealing with the academic challenges of a multigrade class (Murphy 2018). Students then, in the multigrade classroom, can work at their level of ability (Naparan & Alinsug, 2021). In a multigrade classroom, students have different abilities, so teachers use various materials to accommodate them. This way, students can work at their level and learn effectively. It is a great way to support every student’s unique needs (Ruiz 2020).

One indicator of a successful classroom atmosphere is when students take ownership of their learning; in other words, they control the process of their own learning. According to Jones et al. (1995), one attribute is a student's capacity for self-direction, which is their capacity to mold and control change. In a multigrade classroom, there are opportunities for students to take charge of their learning before, during, and after instruction. Focusing on student efficacy and self-direction entails teaching and practicing particular techniques that allow students to choose their own paths and handle issues without constant guidance (Vincent, 1999).

Interaction is a fundamental component of early childhood education and should not be overlooked. One of the pedagogical justifications for intentional mixed-age grouping is the opportunity for students to learn from and with others by helping and interacting with one another (Friensen, 2018). Peer teaching, integrated teaching, and various groupings still oriented toward collaboration are additional teaching strategies used in multigrade teaching (Naparan & Alinsug, 2021).

As Ismail and Soliman (2010) stated, students discover that younger students can handle design difficulties and fieldwork more effectively when older students are on the team. This presumably results in less time spent socializing and fosters a favorable peer-learning attitude. But it could also be more straightforward for a person to become reliant, particularly in situations with big teams with seniors in the group, and poor management.

**2.2.3 Learning Environment Factor**

The learning environment refers to the physical set-up of the classroom, including the necessary learning areas and resources as well as the number of students. There is a significant difference between the classroom set-up in a monograde and multigrade class. Teachers in a multigrade must arrange the classroom to cater to all necessary activities and allocate enough space for movement.

Insufficient and lack of provision of resources such as customized textbooks and other learning resources for multigrade classrooms continue to persist and affect pupils’ satisfaction (Msimanga, 2019). Activity centers and workstations should be developed to enable many tasks to be carried out simultaneously in a multigrade classroom. A healthy, inviting, inclusive, and safe learning environment should be created in the classroom, so children from different backgrounds and grade levels can meet their educational needs (Erden, 2020).

A study conducted in India by Blum and Diwan (2007) addressed strategies for improvements in meaningful access to education and explored the state of small schools in the country. The reason for the existence of multigrade classes is the small number of pupils enrolled in the school or the number of available teachers. They stated that in 2004-2005, 55% of all primary schools in India had 100 or fewer pupils and 78% had three or fewer teachers. The environment, like limited resources, such as insufficient blackboards, books, and other instructional materials needed in a traditional classroom affects how pupils feel in the multigrade class. There is also insufficient bathrooms and computer resources in these rural areas catering to multigrade classes.

A study conducted in the Dominican Republic by Ureña et al. (2022), compared the learning outcomes achieved by both multigrade and monograde classes considering their subjects, classroom sizes, and cycles. They deduced that the size of the classroom impacted the results. They interviewed 4,292 elementary students, 32% of whom were in multigrade and 68% in monograde classes. The results they gathered using variance analysis showed that multigrade classes could enhance learning outcomes, in contexts similar to monograde one. This might be due to the fact that in a multigrade setting, the teacher can focus and cater to the varied learning styles of students as they have a low population as opposed to in a monograde setting with a significant number of students.

Kalender and Erdem (2021) interviewed participating teachers in multigrade classes and found that these teachers agreed that the facilities offered by schools were lacking in terms of infrastructure, physical facilities, and technological equipment. These results are consistent with those from Dursun (2006) and Little (2004), which also state that multigrade classrooms lack basic technological equipment and course materials, alternative activities and materials for making lessons with homework more effective are essentially nonexistent, school gardens are typically neglected, and problems may arise even in meeting basic needs such as food and shelter.

According to the Dominican Institute for Evaluation and Research of Educational Quality in 2016, the geographical location of schools in the Dominican Republic indicated educational inequalities. Transportation is a hardship for students and teachers, eventually leading to increased dropout rates, among others. Participants in the study also mentioned the lack of instructional resources, inadequate school buildings, unequal distribution of resources, and a lack of trained teachers in multigrade classes (Perez, 2020).

**2.3 Academic Performance**

Students' academic performance is a key feature (Rono et al., 2014) and one of the important goals (Narad & Abdullah, 2016) of education, which can be defined as the knowledge gained by the student, which is assessed by marks by a teacher, and/or educational goals set by students and teachers to be achieved over a specific period of time. Academic instruction is arguably the most important aspect of education. Schools are expected to have an impact on students' learning, socialization, and even vocational readiness. Despite the focus on a broad definition of educational outcomes, academic performance remains critical. Hijazi and Naqvi (2006) define academic performance as a multidimensional construct comprised of a learner's skills, attitudes, and behaviors that contribute to academic success in the classroom.

Martin et al. (2017) discussed that among these characteristics are emotional intelligence (management, facilitation, understanding, and perception), dimensions associated with personality traits (emotional impulsiveness, respect for others, sociability, negotiating skills, openness to experience, self-confidence), and, of course, the meaning of life, because the creation of meaning is related to each person's individual development, hand in hand with other processes such as identity formation.

With the prevalence of the COVID-19 pandemic, there was a change in how elementary teachers graded the pupils’ academic performance, The DepEd Order No.31, s. 2020, also known as the Interim Policy Guidelines for Assessment and Grading in Light of the Basic Education Learning Continuity Plan, has been used. This examines suggestions for the grading system to be applied this academic year and is still primarily based on DepEd Order No. 8, s. 2015, also known as Policy Guidelines on Classroom Assessment for the K to 12 Basic Education Program.

In line with this, the DepEd Order No. 8, s. 2015 mandated that following grading scales be used: Outstanding (grades between 90 and 100), Very Satisfactory (grades between 85 and 89), Satisfactory (grades between 80 and 84), Fairly Satisfactory (grades between 75 and 79), and Did Not Meet Expectations (grades below 75). In order to ensure that students were appropriately assessed and graded while they continued to learn throughout this epidemic, teachers utilized this grading system (DepEd, 2020).

In this study, the academic performance of the pupils was measured using their general average grades across all subjects in the Academic Year 2023-2024. This was used to determine if the challenges that multigrade pupils faced affected their academic performance.

**2.5 Academic Performance and Multigrade Class Satisfaction**

A study by Murphy (2018) sought to establish if pupils' academic performance in multigrade classes is similar to that of the performance outcomes for monograde classes. The analysis of the pupils' achievement was based on letting them answer assessment tests in Mathematics and Reading. Murphy uses Analysis of variance (ANOVA) to determine the significant difference in the outcomes of academic performances of pupils in multigrade classes and pupils in monograde classes. In his study, preliminary assessments showed that pupils in multi-grade classes correctly answered more mathematics test questions than in single-grade classes. While the overall academic outcome of the norm-referenced mathematics assessments appeared to be similar for pupils in multigrade and single-grade settings, boys’ outcomes in the multigrade setting were higher than girls. Students in single-grade and multigrade classes showed similar outcomes on the norm-referenced reading assessment. Pupils in multigrade classes correctly answered a similar percentage of questions in this exam as did students in single-grade classes. The results suggested that there was no significant difference in the outcomes of academic performances of pupils in multigrade classes and in monograde classes.

Regardless of grade or subject, even after controlling for teacher characteristics, a study conducted in Los Angeles discovered that being in a multigrade classroom consistently had small and negative impacts on student progress. None, though, was substantial enough to be noteworthy. If multigrade classroom benefits exist, they are unlikely to materialize without proper training and support for the teachers working in them (Mariano & Kirby, 2009).

**3. CONCEPTUAL FRAMEWORK**

To discuss the concepts of the study, the researchers used the predictor-criterion model.

**Figure 1** *Schema of the Study*

 (Predictor) (Criterion)

**Academic Performance of Multigrade Pupils**

**Satisfaction of Multigrade Pupils**

(Teacher Factor, Student Factor, and Learning Environment Factor)

Figure 1 presents the conceptual framework of the study. It consists of two variables, the academic performance of multigrade pupils as the criterion and the satisfaction they feel as the predictors.

In a multigrade class, there are two or more grades in a classroom handled by one teacher. These are implemented in far-flung or remote areas with low populations and cannot attend schools in the city due to their area, providing inclusive and quality education for all children in those areas. The low enrollment of students in the elementary grades and the lack of teachers are also reasons why multigrade classes exist.

In Figure 1, the predictor determines and assesses if the variables, such as the satisfaction in the teaching-learning process and the learning environment, can impact the pupils’ academic performance. The predictor recognizes the learner’s connectivity to the environment in which they live and strives to illustrate how this can influence learners' learning outcomes.

The criterion, which is the academic performance of multigrade pupils, pertains to the result of their assessment in the classroom, such as their performance on quizzes, performance tasks, oral recitations, and others, based on the learners’ intellectual level, skills, interests, habits, and motivation. The evaluation of their overall grades will be assessed to determine the level of influence of the predictor.

**3. methodology**

3.1 Research Design

This study employed descriptive-correlational quantitative research. It is descriptive since it describes the level of satisfaction of multigrade pupils in the teaching-learning process. Also, it is correlational because it aimed to determine the significant relationship between the satisfaction of multigrade pupils and their academic performance.

**3.2 Research Respondents**

This research was limited to one section of a multigrade class comprising 31 pupils from Grades 3 to 4. Pupils in these grades were purposely selected because the population in the classroom allowed the researchers the required minimum number of respondents to conduct the quantitative study. The 27 pupils in Grades 5 and 6 were the respondents in the pilot testing.

**3.3 Instrument of the Study**

To gather the data, the researchers conducted a survey using a researcher-designed questionnaire. The first set of questions focused on the level of satisfaction that the multigrade pupils felt regarding the teaching-learning process, specifically the instructional methods and the delivery of content. There were 21 questions for the first variable and 20 questions for the second variable that assessed the involvement of pupils in the multigrade class. The third variable initially consisted of 18 questions that assessed the experiences of multigrade pupils regarding the learning environment; however, it was revised to 15 questions based on the results of the pilot testing. As a result, the questionnaire had a total of 56 questions. This Likert scale questionnaire asked respondents to express their degree of satisfaction, ranging from 4 (very satisfied) to 1 (not satisfied at all).

Before conducting the survey, the researcher's questionnaire underwent a reliability test, which resulted in Cronbach's Alpha values of .756 for the teacher factor, .795 for the student factor, and .742 for the learning environment factor. Conclusively, the researcher-made survey questionnaire proved to be reliable based on the results obtained.

To determine the students’ level of satisfaction in the multigrade teaching–learning process, the following hypothetical mean ranges, along with their corresponding verbal interpretations, were used.

**Table 1. Hypothetical Mean Ranges for**

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| **Scale** | **Verbal Description** | **Hypothetical Mean Range** |  **Verbal Interpretation** |
| 4 | Strongly Agree | 3.26-4.00 | Very Satisfied |
| 3 | Agree | 2.51-3.25 | Satisfied |
| 2 | Disagree | 1.76-2.50 | Less Satisfied |
| 1 | Strongly Disagree |  1.00-1.75 | Not Satisfied at All |

To describe the respondents’ level of academic performance, the following hypothetical mean ranges with their corresponding verbal interpretation were used:

|  |  |  |
| --- | --- | --- |
| **Grading Scale** | **Hypothetical Mean Range** | **Descriptor** |
| 90-100 | 4.21-5.00 | Outstanding |
| 85-89 | 3.41-4.20 | Very Satisfactory |
| 80-84 | 2.61-3.40 | Satisfactory |
| 75-79 | 1.81-2.60 | Fairly Satisfactory |
| Below 75 | 1.00-1.80 | Did Not Meet Expectation |

3.4 Data Gathering Procedure

The researchers obtained approval from the division office by submitting a letter. After obtaining approval, the researchers visited the school principal to submit the letter of permission, accompanied by the attached approval from the Division Superintendent, to conduct the study. In addition, informed consent forms, signed by the researchers, were given to pupils in Grades 3 and 4 and their parents, with the assistance of their adviser. After getting the consent, the researchers distributed the questionnaire to the multigrade pupils. Items in the questionnaire were explained and translated into Cebuano-Visayan (the vernacular language) to help the pupils comprehend the questions effectively. The researchers then tallied the results, which served as the basis for assessing the multigrade pupils' level of satisfaction with the teaching-learning process.

**3.5 Statistical Treatment of Data**

The data was statistically treated, interpreted, and accurately analyzed according to the stated research problem. Weighted mean was used to analyze the levels of pupils’ satisfaction in multigrade class regarding the factors: teacher, students, and learning environment. Arithmetic Mean was used to determine the level of multigrade pupils’ academic performance. Lastly, Spearman's rho correlation was used to determine the significant relationship between pupils’ satisfaction level in multigrade class and their academic performance.

**4. results and discussion**

**4.1 Multigrade Pupils’ Satisfaction in the Teaching-Learning Process**

This study measured the multigrade pupils’ satisfaction in the teaching-learning process through teacher, student, and learning environment factors.

**4.1.1 Teacher Factor**

This factor refers to the influence and impact of the teacher on the level of satisfaction of students in Grades 3 and 4 in a multigrade class. It involves assessing various aspects of the teacher's role and teaching practices that may contribute to or influence students' experiences in the classroom. The indicators include the teacher's instructional methods, communication skills, ability to engage students, use of technology, time management, and overall effectiveness in teaching and learning.

Table 1 presents the survey results regarding the multigrade pupils' satisfaction with their teacher in the multigrade class. Each indicator is assigned a weighted mean score, and the overall general weighted mean is calculated, resulting in 3.42. This result simply indicated that the students were very satisfied with how their teacher delivered and assisted them with the lesson. Moreover, it confirmed how students felt towards their teacher, whether they were comfortable, motivated, listened to, and had their needs attended to. Although handling a multigrade class was challenging, the results showed that the teacher was successful in managing the class and was able to deliver what the pupils needed. As McClay (1996) put it, in a multigrade classroom, the teacher needs to consider how to cater to the specific needs of each student for them to be satisfied within the multigrade classroom. This overall rating can be attributed to several indicators that respondents rated as very satisfied.

Among the indicators, My teacher is good at helping us when we need help, got the highest weighted mean of 3.9 with a verbal interpretation of very satisfied. This implied that the respondents felt supported by the teacher in the classroom. Although they belonged to a multigrade class, they did not feel that they were not being attended to. The second highest indicator, I am motivated to enter the class every day because of my teacher (3.84) confirmed this. If pupils got confused in the multigrade setup and saw their teacher failing to deliver lessons, they would not have been motivated to attend their classes. It was very clear from the indicator that the teacher drove the motivation to enter the class. Thus, it can be inferred that the teacher was skillful enough to handle two grade levels in a class. Taole and Mncube (2012) explained that teachers must acquire certain skills to deliver lessons effectively. They need to properly prepare their classes to avoid being pointless and to make the lesson understandable to the entire class. According to Fat (2015), the achievement of multigrade teaching requires multigrade teachers to possess the necessary educational training to meet the diverse needs of students.

On the other hand, the indicator 'My teacher gives us the same lessons as the other grade level/s' received the lowest rating of 2.29, with a verbal interpretation of 'less satisfied'. This result revealed that the teacher gave fewer lessons similar to both grade levels. This means that the teacher gave lessons that were not usually the same for both grade levels, as the level of complexity of the lesson is anchored in the K-12 curriculum, a spiral curriculum. In this curriculum, the topic is designed to build on the same concepts at each grade level and develop in increasing complexity from one grade level to the next. According to Barber (2015), the spiral curriculum approach in multi-grade teaching practices involves lessons across the grades that share the same themes, but higher grades have more extended materials.

**Table 2. Perceived Level of Satisfaction of Multigrade Pupils’ in the Teaching-Learning Process in terms of Teacher Factor.**

|  |  |  |
| --- | --- | --- |
| **Indicators** | **Weighted Mean** | **Verbal Interpretation** |
| 1. My teacher is good at helping us when we need help.
 | 3.9 | Very Satisfied |
| 1. I am motivated to enter the class every day because of my teacher.
 | 3.84 | Very Satisfied |
| 1. My teacher allows us to ask questions during class.
 | 3.77 | Very Satisfied |
| 1. I like to participate in class because of my teacher.
 | 3.77 | Very Satisfied |
| 1. My teacher communicates with me very well.
 | 3.77 | Very Satisfied |
| 1. My teacher is good at time management.
 | 3.77 | Very Satisfied |
| 1. My teacher uses technological equipment in teaching a lesson.
 | 3.77 | Very Satisfied |
| 1. I learn from my teacher’s discussion in all our subject areas.
 | 3.74 | Very Satisfied |
| 1. My teacher allows us to work in groups or pairs during lesson activities.
 | 3.71 | Very Satisfied |
| 1. My teacher discusses every concept in class.
 | 3.68 | Very Satisfied |
| 1. My teacher provides us with materials equally.
 | 3.68 | Very Satisfied |
| 1. My teacher introduces a new topic to us interestingly.
 | 3.58 | Very Satisfied |
| 1. My teacher allows us to work independently.
 | 3.58 | Very Satisfied |
| 1. My teacher provides sufficient instructional materials when teaching.
 | 3.58 | Very Satisfied |
| 1. My teacher gives us a lot of activities during class.
 | 3.48 | Very Satisfied |
| 1. My teacher gives us feedback for better learning
 | 3.48 | Very Satisfied |
| 1. My teacher gives us assignments every day.
 | 2.77 | Satisfied |
| 1. My teacher allows us to perform an activity outside the classroom.
 | 2.61 | Satisfied |
| 1. I do not have any problem understanding my teacher even if the other grade is noisily doing their activities.
 | 2.61 | Satisfied |
| 1. My teacher integrates another subject to make class interesting.
 | 2.48 | Less Satisfied |
| 1. My teacher gives us the same lessons with the other grade level/s.
 | 2.29 | Less Satisfied |
| **General Weighted Mean** | **3.42** | **Very Satisfied** |

*Legend: 3.26 – 4.00= Very Satisfied 1.76 – 2.50 = Less Satisfied*

 *2.51 – 3.25 = Satisfied 1.0 – 1.75 = Not Satisfied at all*

**4.1.2** **Student Factor**

It involves assessing how specific characteristics or actions of the students themselves may influence their satisfaction in the teaching-learning process in the multigrade classroom. The indicators include the pupils' engagement in learning, their interactions with peers and teachers, their independence in completing tasks, and their overall attitudes and behaviors within the classroom.

As shown in Table 2, the data reflect students' satisfaction with various factors related to their engagement and participation in the learning process. The overall general weighted mean is 3.33 and is interpreted as very satisfied, indicating the most positive perspectives among multigrade pupils regarding their behaviors and attitudes in the classroom.

Among all the indicators, *I always finish my activity with my ability* (3.84) and *I explore and discover new information by myself* (3.74) were rated very satisfied. This means that the pupils could take their learning into their own hands without constantly relying on the teacher's guidance. This also implies that pupils’ educational goals are clearly set, enabling them to learn and develop independently. According to Mamun (2015), pupils in the multigrade classroom can work at their own level of ability. They are also encouraged to learn for themselves rather than relying solely on teachers. Additionally, the results clearly support Naparan and Alinsug (2021), who stated that despite their differing abilities in the classroom, pupils can complete a task using differentiated materials and activities.

Based on the table, there are 13 indicators rated as 'very satisfied' and six indicators rated as 'satisfied'. This implies that the students have positive attitudes and relationships in the classroom. The students were individually well-driven and capable of setting their objectives and tracking their progress. It can be inferred that the students were generally satisfied with their relationships with their classmates and their learning process in school. There are positive social relationships among pupils in which everybody gets along, and nobody is left behind. This demonstrates that students, regardless of age, who feel supported and included by their classmates are more satisfied (Song et al., 2009).

However, among all the indicators, the one that received the lowest rating is the indicator 'We do group work with other grade levels in the classroom,' which received a rating of 2.39, indicating a verbal interpretation of 'less satisfied. ' This implies that the pupils do not usually do group work with the other grade level; instead, they only do group work with their classmates in the same grade level. The study did not reveal any factors associated with non-grouping among other grade levels. One could only speculate that teachers prepared separate activities for the two levels. Based on previous results, assigning individual activities to the two grade levels was effective, so teachers did not place much importance on group activities involving all students. However, it would have been better if the teacher had tried this collaborative strategy, as according to Ismael and Soliman (2010), younger grade-level students tend to discover and learn more when grouped with higher-grade-level students and become dependent on and/or reliant on them.

**Table 3 Perceived Level of Satisfaction of Multigrade Pupils’ in the Teaching-Learning Process in terms of Student Factor**

|  |  |  |
| --- | --- | --- |
| **Indicators** | **Weighted Mean** | **Verbal Interpretation** |
| 1. I always finish my activity with my ability.
 | 3.84 | Very Satisfied |
| 1. I explore and discover new information by myself.
 | 3.74 | Very Satisfied |
| 1. I help my classmates if they need help.
 | 3.68 | Very Satisfied |
| 1. I actively participate in the discussion of my teachers.
 | 3.65 | Very Satisfied |
| 1. I exert efforts in doing my school work.
 | 3.65 | Very Satisfied |
| 1. I am motivated in doing my tasks.
 | 3.61 | Very Satisfied |
| 1. I can learn from my classmates.
 | 3.61 | Very Satisfied |
| 1. I study and prepare for my quizzes and exams.
 | 3.52 | Very Satisfied |
| 1. I work collaboratively in groups or with peers.
 | 3.45 | Very Satisfied |
| 1. I am able to express myself freely.
 | 3.42 | Very Satisfied |
| 1. We can finish a group task together without the teacher's help.
 | 3.39 | Very Satisfied |
| 1. I interact with my classmates and teacher positively.
 | 3.35 | Very Satisfied |
| 1. I am confident in asking questions with my classmates.
 | 3.26 | Very Satisfied |
| 1. I can finish doing tasks by myself.
 | 3.19 | Satisfied |
| 1. I am confident in solving my academic challenges.
 | 3.13 | Satisfied |
| 1. I do not feel left out in the classroom.
 | 3.06 | Satisfied |
| 1. I establish positive relationships with my classmates.
 | 2.9 | Satisfied |
| 1. I do not rely on my teacher too much.
 | 2.87 | Satisfied |
| 1. I do not compete with my classmates.
 | 2.81 | Satisfied |
| 1. We do group work with the other grade level in the classroom.
 | 2.39 | Less Satisfied |
| **General Weighted Mean** | **3.33** | **Very Satisfied** |

*Legend: 3.26 – 4.00= Very Satisfied 1.76 – 2.50 = Less Satisfied*

 *2.51 – 3.25 = Satisfied 1.0 – 1.75 = Not Satisfied at all*

**4.1.3 Learning Environment Factor**

One of the factors to consider in pupils' satisfaction in a multigrade class is the learning environment, specifically the physical climate of the classroom. Multigrade classrooms, where students of different ages learn together, are becoming increasingly common. While this approach offers unique benefits, it also presents challenges in ensuring a positive and effective learning environment for all students. Assessing learner satisfaction in a multigrade learning environment is not just about measuring their level of enjoyment; it is also about enhancing the learning environment to make it more engaging and effective, so that all students can succeed in multigrade settings.

As shown in Table 3, the overall general weighted mean is 3.59, interpreted as very satisfied, indicating that students generally had positive views of their learning environment. Among all the indicators, *my school has enough resources, got the highest* rating of 3.97 with a verbal interpretation of very satisfied. Respondents expressed satisfaction with the abundance of resources, including textbooks, materials, tables, and chairs. The physical aspects of the classroom, encompassing space, ventilation, and neatness, were positively perceived. Kaminski et al. (2009) said that sufficient resources help meet a range of requirements and academic levels. The study by Aina et al. (2018) highlighted the positive impact of creative resource utilization in multigrade settings.

The use of readily available materials, technology, and community resources helped create engaging learning experiences. The presence of learning tools such as reading corners, educational charts, and designated areas for activities contributed to a favorable learning atmosphere. Parsad and Lewis (2008) and Hargreaves (2001) highlighted the impact of the physical environment on student satisfaction. A clean, organized, and well-decorated classroom with sufficient space and resources can foster comfort, concentration, and positive learning experiences. The pupils were comfortable with the shared space, expressing a sense of mutual usability while finding the classroom conducive to learning despite the presence of another grade.

Additionally, the provision of separate comfort rooms for males and females further contributed to the positive overall perception of the learning environment. This collective feedback underscores a well-equipped and organized setting that enhances the students' educational experience. According to Erden (2020), a healthy, inviting, inclusive, and safe learning environment should be created in the classroom, allowing children from diverse backgrounds and grade levels to meet their educational needs.

Overall, the results suggest that the learning environment is well-equipped, organized, and conducive to effective learning. This positive perception bodes well for the overall educational experience of the pupils. However, continuous monitoring and improvements, especially in areas that might have received slightly lower scores, can contribute to sustained positive learning experiences.

**Table 4 Perceived Level of Satisfaction of Multigrade Pupils in the Teaching-Learning Process in terms of Learning Environment Factor**

|  |  |  |
| --- | --- | --- |
| **Indicators** | **Weighted Mean** | **Verbal Interpretation** |
| 1. My school has enough resources.
 | 3.97 | Very Satisfied |
| 1. The instructional materials and supplies we will use in activities are readily available inside our classroom.
 | 3.77 | Very Satisfied |
| 1. Our classroom has enough tables and chairs for everyone.
 | 3.74 | Very Satisfied |
| 1. I find my classroom conducive to learning despite the presence of the other grade.
 | 3.74 | Very Satisfied |
| 1. There are educational charts and corners in our classroom.
 | 3.71 | Very Satisfied |
| 1. I can concentrate on my work when the teacher is discussing the lesson with the other grade/s.
 | 3.68 | Very Satisfied |
| 1. My classroom has a comfort room for male and females.
 | 3.68 | Very Satisfied |
| 1. I do not have a problem sharing the classroom with the other grade.
 | 3.58 | Very Satisfied |
| 1. Our classroom has a reading corner filled with books.
 | 3.55 | Very Satisfied |
| 1. We have enough space in the classroom.
 | 3.52 | Very Satisfied |
| 1. Our classroom is always neat and tidy.
 | 3.48 | Very Satisfied |
| 1. There are work areas inside and outside the classroom.
 | 3.39 | Very Satisfied |
| 1. Both grade levels can comfortably use the classroom.
 | 3.39 | Very Satisfied |
| 1. I have complete textbooks in all subject areas.
 | 3.32 | Very Satisfied |
| 1. Our classroom is well-ventilated.
 | 3.32 | Very Satisfied |
| **General Weighted Mean** | **3.59** | **Very Satisfied** |



**4.2 Level of Academic Performance of the Respondents**

Academic performance of students is a key feature (Rono et al., 2014) and one of the important goals (Narad & Abdullah, 2016) of education, which can be defined as the knowledge gained by the student, and which is assessed by marks assigned by a teacher, and/or educational goals set by students and teachers to be achieved over a specific time. Academic instruction is undoubtedly the most important aspect of education. According to Hijazi and Naqvi (2006), academic performance is a multidimensional construct that comprises a learner's skills, attitudes, and behaviors, which collectively contribute to academic success in the classroom. The dynamics of academic performance take on a new dimension in multigrade education, extending beyond the traditional boundaries of a single-grade classroom.

The data show that the mean of the respondents' grades is 84, indicating that the multigrade pupils' academic performance is ‘satisfactory’. It also indicates that the overall performance of multigrade pupils in all subjects meets expectations. As shown in Table 4, 61% of respondents have ‘satisfactory’ academic performance. The findings indicate that the pupils are capable of meeting the new guidelines outlined in DepEd Order No. 31, series of 2020. Though the average is satisfactory, it can be gleaned from the table that there were two pupils with outstanding performance and 10 pupils with very satisfactory performance. This implies that even if they belong in a multigrade classroom, they are still able to perform satisfactorily.

Hijazi and Naqvi's (2006) perspective on academic performance is especially relevant in multigrade settings, where students of varying ages and abilities coexist in a shared learning environment. Academic performance in this context is not only a reflection of individual skills, but also of the collaborative attitudes and behaviors that foster a supportive learning community. The multigrade classroom, by definition, emphasizes learners' interconnectedness, necessitating a holistic approach that takes into account the diverse skills, attitudes, and behaviors that contribute to academic success across different age groups and developmental stages.

Recognizing the complex relationship between individual accomplishments and the collective achievements of students from various backgrounds is required for understanding academic performance within a multigrade framework. In essence, the multigrade environment challenges traditional notions of academic success, encouraging educators to foster a comprehensive understanding that extends beyond individual accomplishments and encompasses the collaborative partnership inherent in a diverse and inclusive educational setting.

**Table 5 Level of the Academic Performance of the Respondents**

|  |  |  |  |
| --- | --- | --- | --- |
| **Grading Scale** | **Descriptors** | **Number of Pupils** | **Percent****(%)** |
| 90-100 | Outstanding | 2 | 7 |
| 85-89 | Very Satisfactory | 10 | 32 |
| 80-84 | Satisfactory | 19 | 61 |
| 75-79 | Fairly Satisfactory | 0 | 0 |
| Below 75 | Did Not Meet Expectation | 0 | 0 |
|  **x̄ = 84 *(Satisfactory)*** | **31** | **100** |

**4.3 Relationship between the Levels of Satisfaction of Grade 3 and Grade 4 Multigrade Pupils in the Teaching-Learning Process and Their Academic Performance**

It can be observed from Table 5 that there is a very weak positive correlation between the academic performance of Multigrade pupils in Grade 3 and Grade 4 and their satisfaction in the Multigrade class. The results are presented in terms of correlation coefficients (Spearman's rho), p-values, and verbal interpretations.

In the context of the teacher factor, the correlation coefficient is very close to zero, **0.0102**, and the p-value of **0.9566** is greater than the typical significance level of **0.05**. It indicates that there is no significant relationship between the academic performance of the multigrade pupils and their level of satisfaction in the teacher factor. This finding corroborates with the studies of Khan and Iqbal (2016) and Dryden et al. (2010) which revealed no correlation between students' satisfaction and their academic performance. However, this finding contradicts the finding of Wells (2009), stating a positive relationship between satisfaction and academic performance of the students.

For the student factor, the correlation coefficient of **0.1066** is relatively small, and the p-value of **0.5682** is higher than 0.05. This indicates that there was no statistically significant correlation between the level of satisfaction of multigrade pupils’ in the teaching-learning process and academic performance when considering the student factor. The study by Checci and De Paola (2018) demonstrated that placing pupils in multigrade classrooms encourages them to develop an internal locus of control, meaning they perceive their achievements and setbacks as within their influence rather than as the result of external factors. The study found a negative effect on students’ performance in both literacy and numeracy standardized test scores, indicating that there is no guarantee that pupils’ satisfaction in the multigrade classroom will positively impact their academic performance. The study of Borbély et al. (2021) which states that between the first and second-graders there is no evidence that the presence of younger first-graders in the classroom has a negative or positive impact on those second-graders who make up the older component of multi-grade classes, demonstrating that even if students in a multigrade setting have a positive relationship with their peers, there is no guarantee that this will affect their academic standings in the classroom.

Similarly, in the context of the learning environment factor, the correlation coefficient of **0.1581** is weak and the p-value of **0.3957** is still above 0.05. Therefore, there was no statistically significant correlation between the level of satisfaction of multigrade pupils in the teaching-learning process and their academic performance, considering the learning environment factor. The results simply imply that the physical climate of the learning environment did not affect the academic performance of a multigrade student. According to Murphy (2018), the learning environment can be conducive to learning, but it does not guarantee that a student will significantly excel in their academics solely because of this factor, just as it does in the monograde setting.

Based on these results, there was no substantial evidence to suggest a significant correlation between the satisfaction of Grade 3 and Grade 4 students in a multigrade class and their academic performance, considering the teacher, student, and learning environment factors. Although there was a very weak positive correlation, the level of satisfaction of multigrade pupils in terms of teacher, student, and learning environment factors did not significantly influence their academic performance. Furthermore, as demonstrated by the findings of this study, students' academic performance may be influenced by a variety of factors that were not considered in this study. Finally, student satisfaction in the teaching-learning processes, as measured by the teacher, the student, and the learning environment, was not the primary reason why students excelled in the multigrade classroom setting; rather, other factors may have significantly influenced and affected their academic performance.

**Table 6 Relationship Between the Satisfaction of Grade 3 and Grade 4 in the Multigrade Class and Their Academic Performance**

|  |  |  |  |
| --- | --- | --- | --- |
| Dimensions | Spearman's rho | P-value | Verbal Interpretation |
| Teacher Factor | 0.0102 | 0.9566 | Not significant |
| Student Factor | 0.1066 | 0.5682 | Not significant |
| Learning Environment Factor | 0.1581 | 0.3957 | Not significant |

 p<0.05

**5. Conclusion**

While students expressed high satisfaction with teachers, themselves, and the learning environment, the lack of a significant correlation with academic performance suggests that other factors may contribute to pupils' achievements in a multigrade setting. Although there was a high level of satisfaction among the multigrade pupils in the teaching-learning process, it did not guarantee an impact on their academic performance.

ETHICAL APPROVAL AND CONSENT

The researchers considered the research ethics, the conduct of the data-gathering procedure, and the confidentiality of the data collected from respondents. The researchers followed the proper process and went through the necessary channels to ensure that the data gathering was conducted ethically. Parental consent and informed assent were obtained prior to the study's conduct. The names of the respondents would not be disclosed to other studies. All records gathered for this study were kept confidential and private. No information that could be used to identify a respondent was included in any report that would be published. The information gathered was saved on the researchers’ hard drive and would not be accessible or shared with anyone.

**DISCLAIMER (ARTIFICIAL INTELLIGENCE)**

Authors hereby declare that ChatGPT was used in the editing of this manuscript.

**Competing interests**

Authors have declared that no competing interests exist.

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