Utilization of Self-Learning Module in the Development of Reading Comprehension of Grade Four Amethyst

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Abstract

This study aimed to assess the effectiveness of the self-learning module in the development of reading comprehension of grade 4 Amethyst pupils at Caesar Lanuza Elementary School in Brgy. Biñan, Pagsanjan, Laguna. It involved twenty-eight (28) respondents representing the 4th grade from whom the data was collected and answered two research questions raised, namely: the mean level of reading comprehension of pupils before and after the utilization of self-learning module; and the significant difference between the comprehension level before and after using the self-learning module in terms of frustration, instruction, and independence. Two (2) sets of a questionnaire and a self-learning module was issued to gather solutions to the foregoing problem areas investigated; it was given before and after reading the validated self-learning module using the pre-test and post-test. The significance of the pre-test and post-test scores of the pupils. The mean score of the pupils' pre-test was 5.0714 at 1.4067 standard deviation and a variance of 5.3280 while their post-test mean score was 8.1429 at 1.4067 standard deviation and a variance of 1.9788. When two sets of scores was compared and analyzed using paired t-test employing the Microsoft Excel Data Analysis at 5% level of significance and a degree of freedom equal to 27, the computed t-value of 8.13162 was higher than the critical value of 2.05183. Thus, it can be concluded that the level of the reading comprehension of pupils after the utilization of self-learning module was improved. These findings suggest that the self-learning module positively impacted the performance of grade 4 Amethyst pupils. The increase in the mean score indicated the progress and that the module was effective. The significance of the pre-test and post-test scores of the pupils in terms of Frustration. The mean score of the pupils' pre-test was 3.3125 at 0.9465 standard deviation and a variance of 0.8958 while their post-test mean score was 7.5625 at 1.3150 standard deviation and a variance of 1.7292. When two sets of scores was compared and analyzed using paired t-test employing the Microsoft Excel Data Analysis at 5% level of significance and a degree of freedom equal to 27, the computed t-value of 12.6711 was higher than the critical value of 2.1315. Thus, it can be concluded that the level of the reading comprehension of pupils before and after the utilization of self-learning module was significantly different. Based on the study "Effectiveness of Self-Learning Modules on Students' Learning in English" of Lumapenet (2022), there is an improvement on the results of the post-test scores of the pupils in comparison with the scores of their pretest. Therefore, the modular approach in teaching has a significant impact in improving the reading performance of the pupils. The significance of the pre-test and post-test scores of the pupils in terms of Instructional. The mean score of the pupils' pre-test was 6.4000 at 0.5477 standard deviation and a variance of 0.3000 while their post-test mean score was 8.2000 at 1.6432 standard deviation and a variance of 2.7000. When two sets of scores was compared and analyzed using paired t-test employing the Microsoft Excel Data Analysis at 5% level of significance and a degree of freedom equal to 27, the computed t-value of 1.96396 was lower than the critical value of 2.776445. Thus, it can be concluded that the level of the reading comprehension of pupils before and after the utilization of self-learning module was insignificantly different. The significance of the pre-test and post-test scores of the pupils in terms of Instructional. The mean score of the pupils' pre-test was 8.2857 at 0.4880 standard deviation and a variance of 0.2381 while their post-test mean score was 9.0000 at 0.8165 standard deviation and a variance of 0.6667. When two sets of scores was compared and analyzed using paired t-test employing the Microsoft Excel Data Analysis at 5% level of significance and a degree of freedom equal to 27, the computed t-value of 1.96396 was lower than the critical value of 2.776445. Thus, it can be concluded that the level of the

reading comprehension of pupils before and after the utilization of self-learning module was insignificantly different.

1. Introduction

Quality education plays a crucial role in shaping an individuals' life and fostering the progress of societies. It provides the basis for personal growth, social advancement, and economic prosperity. Recognizing the importance of quality education, nations worldwide strive to develop comprehensive curricula that provide students with the knowledge, skills, and competencies they need to succeed in a world that is over changing. While increasing access to education is important, the actual goal of providing schooling is to teach skills and transfer knowledge to students in the classroom.

Reading requires the fluent parsing and blending of various phonetic sounds to create words. Reading Comprehension, on the other hand, involves thinking about the words just read and deriving meaning for those words and the text as a whole. In simpler terms, reading comprehension is reading, understanding, processing, and recalling what was just read. With proper comprehension skills mean students understood what they read. Reading isn't making sounds in your brain or out loud but understanding important meanings, stories, and arguments. Through writing, our ancestors recorded necessary knowledge we can understand simply by reading. By understanding what we read, we pick up important information and understand scientific theories, past opinions, and new frontiers.

A foundational talent, reading comprehension opens the door to learning and subject-specific understanding. However, studies show that many Filipino pupils have difficulties with reading comprehension, which impedes their overall academic development. According to Programme for International Student Assessment (PISA), among 79 participating countries and economies, the Philippines scored the lowest in reading comprehension in 2018. Reading was the main subject assessed among 15-year-old students in the 2018 PISA. The Philippines had an average reading score of 340, more than 200 points below China (555) and more than 100 points less than the OECD average (487), boys' and girls' performances in reading both ranked lowest among PISA-participating countries.

To address the challenges associated with reading comprehension, our research aims to develop a module titled "Fostering Pupils' Comprehension Skills." By implementing this module in educational setting, we seek to equip pupils with the necessary skills and tools to improve their understanding. We also aspire to foster a love for reading, prepare students with lifelong comprehension skills, and enable them to explore and engage with the vast knowledge that can be accessed through reading.

This research aims to evaluate how well the "Fostering Pupil's Comprehension Skills" module develops reading comprehension skills in grade 4 Amethyst students of Ceasar Lanuza Elementary School. To assess the pupils' levels of comprehension, the researchers seek to compile data using appropriate methods, such as reading and writing materials. To improve the quality of education in the Philippines, the researchers hope to learn more through this research on how the self-learning module affects the growth and improvement of reading comprehension skills at the primary level.

1.1. Background of the Study

According to Senator Sherwin Gatchalian, chair of the Committee on Basic Education, worldwide large-scale examinations revealed that pupils already had difficulty attaining the minimally necessary proficiency in reading. He emphasized the demand for initiatives and programs to raise reading competence among Filipino pupils. The Philippines received the lowest reading score out of 79 nations in the 2018 Programme for International Student Assessment (PISA). The PISA also revealed that only one in five Filipino students aged

15 attained at least the minimum competency level in Overall Reading Literacy. Only 10% of the nation's Grade 5 pupils, according to the 2019 Southeast Asia Primary Learning Metrics, met the required competency after primary school.

According to UNICEF, less than 15% of Filipino pupils, or roughly three out of every 20 pupils, can read simple texts. This is a result of the COVID-19 pandemic's most extended school closure, which had lasted more than 70 weeks as of the middle of February 2022. A learning poverty rate of more than 85% is calculated based on the most recent UNICEF evaluation. According to the World Bank, this is the percentage of 10-year-olds who cannot read or comprehend a straightforward story. Even with the high grade, it is still significantly below the World Bank forecast from November last year, which was 90%. Before the epidemic, the World Bank's rating was 69.5% in 2019.

The Philippines has now officially joined the Organization for Economic Cooperation and Development's (OECD) Program for International Student Assessment (PISA). According to Frederick Sotto Perez, president of the Reading Association of the Philippines. The nation participated in the international study, which will "provide us with baseline data for our curriculum," he said. "People are alarmed by the results, and this alarm may inspire us to pursue a more reflective education. Children should be taught expository literature with a fact-based approach," according to Perez. Reading and comprehension ability is developed through practice. Poor connectivity in remote places contributes to Filipino pupils' poor performance, according to Perez, who also noted that the nation "lacks reading materials." Schools should actively promote a reading culture by actually making their libraries functional. "Books and printed text are essential. Reading culture may be promoted in schools through extended literacy projects and teacher book talks."

Additionally, pupils need to be taught how to assess trustworthiness. As he underlined that all educators should be "reading teachers." Perez noted that teachers and parents must also be given guidance in dealing with digital literacy. For our children to be able to conduct research, he recommended that all teachers complete training in reading instruction strategies. "Our students should know how to
read articles and facts, evaluate them, cite them, and distinguish fact from opinion," he stated. However, the responsibility for this rests with our reading teachers if our science, social studies, or math teachers cannot assist our pupils in acquiring these abilities.

This study was conducted at Ceasar Lanuza Elementary School to gauge the comprehension level of grade 4 Amethyst pupils through the researchers' module, "Fostering Pupil's Comprehension Skills." According to the Group Screening Test (GST) conducted by the adviser of grade 4 Amethyst, Mrs. Nery D. Sotelo, twenty (20) pupils got a comprehension score of 5% – 55%, which was interpreted as frustration, five (5) pupils got the comprehension score of 60% - 65% which interpreted as instructional, and three (3) pupils got 85% which interpreted as independent.

1.2. Statement of the Problem

The study focuses on the utilization of the self-learning module "Fostering Pupil's Comprehension Skills" in the development of comprehension skills in Literature of grade 4 Amethyst pupils of Ceasar Lanuza Elementary School. It seeks to answer the following questions:
1. What is the mean level of the reading comprehension of pupils before and after the utilization of self-learning module?
2. Is there a significant difference in the comprehension level before and after using the self-learning module in terms of:
  2.1 Frustration
  2.2 Instructional
  2.3 Independent

1.3. Objectives of the Study

The general objective of the study is to determine the utilization of the self-learning module "Fostering Pupil's Comprehension Skills" in developing the Reading Comprehension Skills in Literature of Grade 4-Amethyst pupils of CLES. The study specifically seeks to:
1. identify the mean level of the reading comprehension of pupils before and after the utilization of self-learning module;
2. assess the significant difference in the comprehension level before and after using the self-learning module in terms of frustration, instructional, and independent.

1.4. Significance of the Study

The importance of this study is to determine the effectiveness of the module "Fostering Pupil's Comprehension Skills" in the development of comprehension skills in Literature. The result of this study will benefit the following: the teachers, pupils, school administrators, and parents.

Teachers
This study will help teachers be more creative and effective in explaining and giving questions to the pupils to see if some level of knowledge has been attained. This will also serve as their guide and tool for the pupils to enhance their reading and comprehension skills through the follow-up questions.

Pupils
If proven effective, the module "Fostering Pupils' Comprehension Skills" can be widely used in Elementary schools to foster high level of reading comprehension.

School administrators
This study will benefit the school administrators by determining the problem of the pupils with difficulties in comprehension skills. It can give them an idea on creating a strategy that would be effective for the development and improvement of every student.

Parents
Parents can be highly involved in reading session with the students since a module can be used at home. Parents can also provide guidance and support in order to attain high level of reading comprehension.

1.5. Hypothesis

The self-learning module "Fostering Pupil's Comprehension Skills" is not effective in developing the comprehension skills of grade 4 Amethyst pupils at Ceasar Lanuza Elementary School.

1.6. Scope and Limitations of the Study

This study examined the effectiveness of the self-learning module, "Fostering Pupil's Comprehension Skills" in developing comprehension skills in literature. The population involves the Grade 4 pupils at Caesar Lanuza Elementary School at Brgy.
Binan, Pagsanjan, Laguna. Data gathering started on May 30, 2023, and ended on June 30, 2023 in the school year 2022-2023.
The research focused on the result of the pupil's pretest and post-test after using the module "Fostering Pupil's Comprehension Skills," which will determine if the grade 4 pupils were able to develop

their comprehension skills in literature.

1.7. Definition of Terms

For a better understanding of the keywords used in this study, the following terms are defined.

Comprehension Skills. This refers to the understanding and interpretation of what is read.

Development. It is a process that creates growth, progress, positive change, or the addition of physical, economic, environmental, social, and demographic components.

Frustration. This refers to the percentage score of 58 below their comprehension reading level.

GST. Group Screening Test

Independent. This refers to the percentage score of 80 to 100 of their comprehension reading level.

Instructional. This refers to the percentage score of 59 to 79 of their comprehension reading level.

Literature. It is a written work, especially those considered of superior or lasting artistic merit.

OECD. Organization for Economic Cooperation and Development's

PISA. Programme for International Student Assessment

Pupils. It refers to a person who is studying at elementary school.

Spiral Progression. It exposes students to a wide range of concepts, subjects, and fields until they master them by repeatedly with varying degrees of complexity.

Teacher. The teacher will help the researcher to determine the importance of the K-12 Curriculum.

UNICEF. United Nations Children's Fund.

2. Review of Related Literature

This chapter presents the related literature and studies that the researchers considered in strengthening the importance of this research. It also presents the synthesis, theoretical and conceptual frameworks of the research for a better understanding of the study.

2.1. Comprehension Skills

Reading comprehension is a multifaceted process that requires the integration and coordination of several abilities, including word decoding (the ability to decipher or recognize written words) and speech or listening comprehension (the ability to comprehend what is decoded in spoken form) according to Gough and Tunmer (1986), as reported by Chen et al. (2020). Reading comprehension is our ability to know and retain what we have read, and it requires a different form to comprehend what the pupils read.

Reading is a vital skill for pupils to master early in life because it is the foundation for learning in all academic subjects (Sloat et al., 2013, as cited by Almutairi, 2018). Furthermore, improving reading skills before students enter third grade is crucial because students begin to read after third grade to obtain information and learn from academic content. It is vital to teach the pupils at an early age to develop their comprehension skills rather than just being familiar with the word. Pupils should learn and retain what they have read.

Similarly, engaging readers in shared inquiry due to a discussion-based reading model results in effective cognitive stimulation among students as they reflect and ponder questions in a complicated book. Reading engagement is a prerequisite for building attentiveness among students, resulting in independent pupils' performance in reading comprehension. The context of engagement is keeping readers cognitively and behaviorally engaged. Therefore, a mix of interest, self-regulation, motivation, reading attitude, and interaction with text should all be considered when gauging readers' engagement. (Roomy & Alhawsawi,

2019).

The study by Jingblad and Johansson (2017) means that kids lack motivation, because of which students must be intrinsically driven to establish autonomous and engaging reading habits. It can aid in improving reading comprehension in EFL learners by keeping them organically engaged in reading activities that increase their comprehension. According to Protacio (2017), reading engagement accounts for students' drive to read, participation in social activities that encourage reading, application of learning strategies when reading, and development of meaning from texts.

The K-12 Curriculum significantly contributes to the writing and comprehension skills of the students. Relucion and Palaoag (2020) stated that this leads to excellent performance even with the difficult area in a specific subject. The goal of K-12 is to reform and build new knowledge within the cognitive mind of a student. They also suggest that the Literature has something to do with the development of pupils' writing and comprehension skills with the approach's effectiveness.

2.2. Spiral Progression

The term "progression" refers to a student's educational path and how they acquire, use, and develop their skills, knowledge, and understanding in progressively more complex contexts. Continuity concerns how the educational system organizes learning and offers students enough challenge and advancement within a recognizable curricular environment. Consequently, a spiral progression approach is a strategy or method for implementing the spiral curriculum. The use of spiral progression in science instruction and the learner's performance will assist the science teacher in creating a course, activities, or project focusing on developed thinking.

The law enhances the Philippine Basic Education System by strengthening its curriculum and adding several years for primary education as cited by Igcasama (2021). SPA is used to teach the subject in the current k-12 curriculum, where the students improve their learning based on previous knowledge. Students are also expected to have mastery of competencies because it involves going from basic to more complex knowledge and skills. The goal of the spiral progression approach is lead to boost cognitive development. The spiral curriculum is used to teach the subject in the current k-12 curriculum to improve their learning to the previous knowledge that is expected of mastery of learning.

The sense Spiral curriculum is based on three areas of conceptual training focused on the main educative axes related to developing persons in Vocational Education and Training schools. The grades are not defined based on the classification of education in the different countries but based on the personal and social development of the students. For the specific aims of the Spiral Curriculum, we have re-discussed the classification to consider the impact of emotional skills in the 30 development of the students and the peculiarity of the school environment. (Babylon M, 2021)

Does one approach fit all when it comes to curriculum design? In debates on curriculum design, educators have argued that a curriculum model should consider the different knowledge structures of other subjects. Subjects such as math and science are generally defined as well-structured knowledge domains characterized by linearity in learning objectives and well-defined and predictable learning outcomes. However, less structured subjects such as the arts and humanities could benefit from models that encompass a different approach to learning. Two competing perspectives on curriculum design have emerged: the spiral model developed by Bruner in 1960 and non-linear models based on learning processes in different knowledge domains. (Ireland J and Mouthaan M, 2020)

2.3. Literature

An empirical study that directly manipulates intrinsic text properties and extrinsic reader expectations of literary merit for science-fiction and narrative-realism stories is used to test the literariness of

genre fiction study by Chris Gavaler and Dan.

Johnson (2019). The participants were informed that they would be reading either a story of low literary merit or one of high academic merit, and then they would read one of two identical stories, except for one word that determined the genre. In terms of literary merit perception, text comprehension, and inference effort for a theory of mind and plot, there were no differences between the story's science fiction and narrative realism versions. For the science fiction version, participants did, however, put in the more theory-of-world effort, also known as world-building. The more surmising exertion sci-fi lecturer devoted to the hypothesis of the world, the more intellectually and sincerely drawn in they were. These results demonstrate a "literary genre effect" rather than the assumption that science fiction cannot achieve literacy.

Nearly a century after the term literariness was coined, the discussions at the Paris Conference on Literariness in 2017 took place. In 1921, Roman Jakobson was the one who introduced it (Jakobson R. 1987). Boris Eichenbaum (1926–1971) synthesized Jakobson's ideas on literariness in a pregnant formula in his essay "The Theory of the Formal Method." Literature is not the subject of study in literary works; instead, what makes a given work a literary work is its literariness, as cited by Salgaro (2018)

Separate specification of a text's perceptible mode of representation, a reader's mode of engagement with a text as perceived, and the generative (e.g., creative, expressive) effects of the interaction between this mode of representation and mode of reader engagement are required for the articulation of an interactive model of literariness, stated by Don Kuiken and Shawn Douglas (2018). Two aspects of metaphoric textual representation are identified by a model that we present: structured recitations of nominal metaphors and quasi-metaphoric structures, with or without metaphoric construal. Additionally, they said this model identifies two distinct modes of reader engagement: integrative comprehension and expressive enactment (Kuiken & Douglas, 2017)

The convenience and criterion sampling methods of purposeful sampling were utilized in a study by Duygu Cetingoz (2023). All participants identified creative thinking techniques as a 21st-century skill and technology-based activities to develop children's 21st-century skills based on their experiences with developing preschoolers' 21st-century skills. They all also said that teachers' digital literacy skills help students develop skills for the 21st century and that families should have control over how their children use technology. They all agreed that schools' technological infrastructure and conditions often need to teach kids skills for the 21st century better. As a solution, they suggested making an activity guide that teaches kids skills for the 21st century. The discoveries show that the members have some information about the improvement of 21st-century abilities in youngsters and have planned exercises in light of this information to assist kids with gaining these abilities during their preschool period. However, they encountered some challenges when they planned and carried out these activities. Additionally, they all emphasized their experiences with children's technological skill development. Preschool teachers' professional experiences with developing 21st-century skills, the current situation and the activities they design, teaching challenges, and preschool teacher needs are all the focus of this study.

2.4. Theoretical Framework

Spiral curriculum, a teaching approach widely attributed to American Psychologist and Cognitive Theorist Jerome Bruner - learning theory- refers to a course of study in which fundamental ideas are presented repeatedly throughout the curriculum, but with increasing levels of difficulty / complexity in lessons and reinforcing previous learning.

The spiral approach allows for the earlier introduction of complex ideas that were previously reserved for later stages of the learning process after learners have mastered some key themes that require deeper understanding, but it may discourage students who wish to apply their conceptual learning to real-world applications.

Jerome Bruner's spiral curriculum is a type of learning that fosters the revisiting of themes and

essential concepts, building on previous course content in a cyclical and spiraling way. Teachers can encourage improved learning outcomes by allowing students to gradually build on their knowledge and understanding over time, rather than focusing solely on the memorizing of isolated information. Finally, the spiral curriculum is an excellent method of improving student learning outcomes by developing a deep comprehension of essential ideas and ensuring that learners feel secure applying their knowledge in real-world circumstances.

Howard Gardner developed Multiple Intelligences ideas. According to the theory of multiple intelligences, pupils can learn in various ways. Others study better if they can touch and manipulate the material, while some pupils learn better when standing and moving. This approach is relevant for students who want to increase their reading comprehension and fluency. Some pupils' reading comprehension will improve simply by listening to the teacher discuss strategies. Some pupils' reading levels will rise as they participate in theatrical productions, while others will gain fluency as a result of a deeper comprehension of the material.
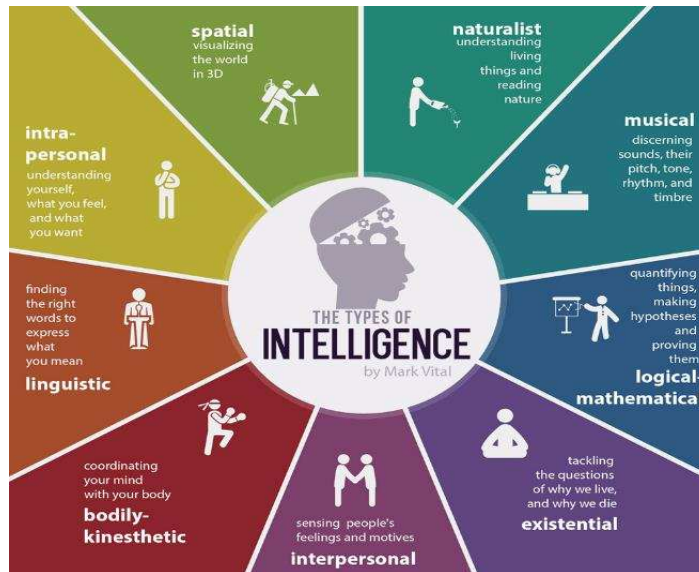

Figure 1. Frames of Mind: The Theory of Multiple Intelligences by Howard Gradner
Source: Adioma.com

2.5. Conceptual Framework

This figure shows the pupil's dependent and independent variables in the study entitled, "Utilization of Self-Learning Module in the Development of Reading Comprehension of Grade Four Amethyst."

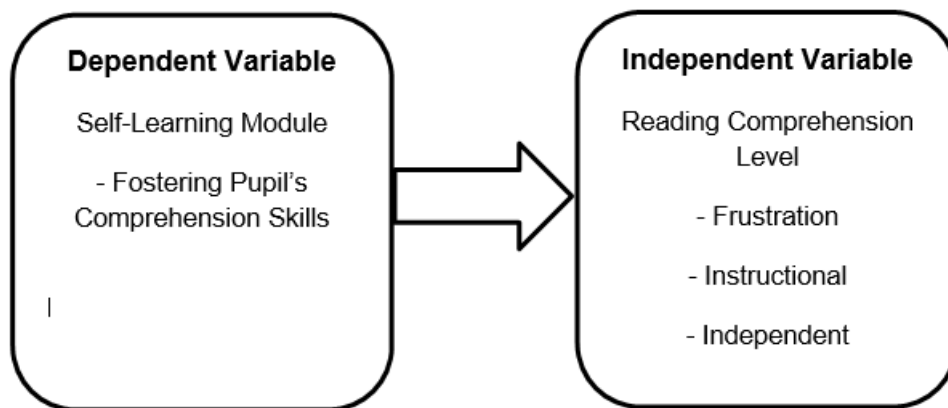| Dependent Variable		Independent Variable
Self-Learning Module - Fostering Pupil's Comprehension Skills	→	Reading Comprehension Level - Frustration - Instructional - Independent

Figure 2. Research Paradigm of the study

2.6. Synthesis

Teachers use any written work, especially a short story, to help the pupils develop their comprehension skills. The module significantly influences the pupils' comprehension skills in Literature as it is taught from simplest to complex form. The self-learning module made by the researchers entitled "Fostering Pupil's Comprehension Skills" that is validated by the three (3) teachers from Caesar Lanuza Elementary School, helped the grade 4 pupils develop their comprehension skills through re-reading and revisiting until the pupils mastered the content.

The general objective of the study was to determine the utilization of the self-learning module "Fostering Pupil's Comprehension Skills" in developing the Reading Comprehension Skills in Literature of Grade 4-Amethyst pupils of CLES. The study

specifically seeks to identify the mean level of the reading comprehension of pupils before and after the utilization of self-learning module "Fostering Pupils' Comprehension Skills", and assess the significant difference on the comprehension level before and after the utilization of the self-learning module of Grade 4 Amethyst pupils.

3. Methodology

The study assessed the effectiveness of self-learning module in the development of reading comprehension of grade four Amethyst pupils. The research design, research locale, population of the study, research instrument, data gathering procedure, and treatment of data were covered in this chapter.

3.1. Research Design

This study determined the effectiveness of self-learning module in developing the reading comprehension skills of grade 4 Amethyst pupils at Caesar Lanuza Elementary School.

Quasi-experiment research is a quantitative research method. It tests a dependent variable with an

independent variable before and after reading the validated self-learning module using the pretest and post-test (Stratton, 2019). Moreover, this study involves numerical data collection and statistical analysis.

Grade 4 Amethyst pupils answered the pretest and post-test. The researchers briefly discussed the instructions on how to answer the pretest. After providing the necessary instructions, copies of the questionnaire were distributed to all Grade 4

Amethyst pupils. Once the pretest was completed, the researchers guided the pupils using the self-learning module "Fostering Pupil's Comprehension Skills" that was validated by the English teachers of Caesar Lanuza Elementary School. After using and reading the module, the researchers conducted a post-test. The result of the pretest and post-test were determine if the validated module used by the researchers was effective in developing comprehension skills of grade 4 Amethyst pupils.

3.2. Research Locale

The study was conducted during the academic year 2022-2023 at the Grade 4 Amethyst in Caesar Lanuza Elementary School in Brgy. Binan, Pagsanjan, Laguna. The institution was selected to determine the effectiveness of the self-learning module in developing comprehension skills in Literature of Grade 4 Amethyst pupils.
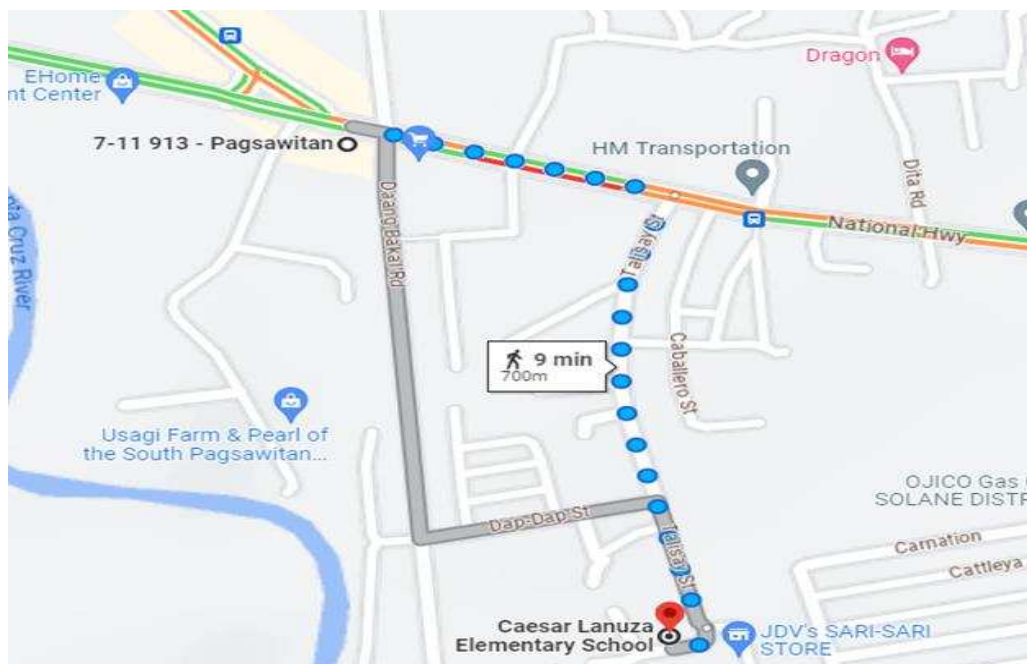

Figure 1. Map of Caesat Z. Lanuza Elementary School
Source: Google Map

3.3. Population of the Study

The target respondents of the study were the Grade 4 pupils from Ceasar Lanuza Elementary School. Using complete enumeration, this method determined that 28 grade 4 Amethyst pupils were the respondents.

3.4. Research Instrument

The research instruments were a pre-test, a self-learning module, and a post-test. The pre-test consisted reading passages with questions such as ten (10) multiple-choice, and ten(10) identification. The total number of questions was twenty (20) items. It was made of reading passages with activities to be answered by the pupils, and it has different exercises that elevate their comprehension, such as a Venn Diagram, Graphic Organizer, Story Map, Plot diagram, and a set of five-item (5) quiz. At the same time, the post-test had reading passages and a set of questions, five (5) identification, and five (5) multiple choice with total number of ten (10) questions. The test required 1 hour to read and answer. The self-learning module required five days to read and answer.

The researchers adapted the reading passages and questions from the DepEd Self-Learning Module which made the instrument valid and reliable. Venn Diagram, Graphic Organizer, Story Map, and Plot Diagram were used in the module can help improve the pupils' reading comprehension. The self-learning module made by the researchers entitled "Fostering Pupil's Comprehension Skills," was validated by three (3) teachers from Caesar Lanuza Elementary School. The self-learning module had five exercises with different difficulty level which helped the researchers measure their comprehension skills.

Reading Comprehension Level	Ranges
Independent	80-100%
Instructional	59-79%
Frustration	58% and below

3.5. Data Gathering

The researchers provided a pre-test and post-test tool from the Phil-IRI. After validating the materials, including the self-learning module made by the researchers entitled "Fostering Pupil's Comprehension Skills," the researcher multiplied it by the number of copies sufficient for the respondents. At the same time, the researchers also provided a request letter and another copy of the questionnaire and module to the school to formally get permission to conduct the data gathering process. During the delivery of the letter and the copies of the instrument, the researcher explained the details to help the respondents accomplish the questionnaires. The results of the retrieved copies of the questionnaire were tabulated analyzed and interpreted by the researchers.

The data gathering process of the study started on May 31, 2023, and ended on June 28, 2023.

3.6. Treatment of Data

1. To determine the level of reading comprehension of the chosen respondents and after the utilization of the self-learning module, mean was used.

$$\text{Mean} = \frac{Sum\ of\ all\ Data\ Points}{Number\ of\ Data\ Points}$$

2. To get the significant difference in the comprehension level before and after the utilization the self-learning module of Grade 4 Amethyst pupils, paired t-test was used.

https://www.biologyforlife.com/t-test.html

$$t = \frac{(x_1 - x_2)}{\sqrt{\frac{(s_1)^2}{n_1} + \frac{(s_2)^2}{n_2}}}$$

4. Presentation, Analysis and Interpretation of Data

This chapter presents, analyzes, and interprets the data gathered from grade 4 Amethyst pupils of Caesar Lanuza Elementary School in determining the effectiveness of the self-learning module in developing comprehension skills in Literature.

Table 1. Mean level of the reading comprehension of pupils before and after the utilization of self-learning module

Statistical	Assessment Test	
Treatment	Pre-Test	Post-Test
Mean	5.0714	8.1429
SD	1.4067	1.4067
Variance	5.3280	1.9788
t-computed	8.13162	
t-critical	2.05183	
Interpretation	significantly different	

Table 1 shows the significance of the pre-test and post-test scores of the pupils. The mean score of the pupils' pre-test was 5.0714 at 1.4067 standard deviation and a variance of 5.3280 while their post-test mean score was 8.1429 at 1.4067 standard deviation and a variance of 1.9788. When two sets of scores was compared and analyzed using paired t-test employing the Microsoft Excel Data Analysis at 5% level of significance and a degree of freedom equal to 27, the computed t-value of 8.13162 was higher than the critical value of 2.05183. Thus, it
can be concluded that the level of the reading comprehension of pupils after the utilization of self-learning module was improved.

These findings suggest that the self-learning module positively impacted the performance of grade 4 Amethyst pupils. The increase in the mean score indicated the progress and that the module was effective.

Table 2: Significance Between Pre-test and Post-test Scores (FRUSTRATION)

Statistical	Assessment Test	
Treatment	Pre-Test	Post-Test
Mean	3.3125	7.5625
SD	0.9465	1.3150
Variance	0.8958	1.7292
t-computed	12.6711	
t-critical	2.1315	
Interpretation	significantly different	

Table 2 shows the significance of the pre-test and post-test scores of the pupils in terms of Frustration. The mean score of the pupils' pre-test was 3.3125 at 0.9465 standard deviation and a variance of 0.8958 while their post-test mean score was 7.5625 at 1.3150 standard deviation and a variance of 1.7292.

When two sets of scores was compared and analyzed using paired t-test employing the Microsoft Excel Data Analysis at 5% level of significance and a degree of freedom equal to 27, the computed t-value of 12.6711 was higher than the critical value of 2.1315. Thus, it can be concluded that the level of the reading comprehension of pupils before and after the utilization of self-learning module was significantly different.

Based on the study "Effectiveness of Self-Learning Modules on Students' Learning in English" of Lumapenet (2022), there is an improvement on the results of the post-test scores of the pupils in comparison with the scores of their pretest. Therefore, the modular approach in teaching has a significant impact in improving the reading performance of the pupils.

Table 3: Significance Between Pre-test and Post-test Scores (INSTRUCTIONAL)

Table 3: Significance Between Pre-test and Post-test Scores (INSTRUCTIONAL)		
Statistical	**Assessment Test**	
Treatment	**Pre-Test**	**Post-Test**
Mean	**6.4000**	**8.2000**
SD	**0.5477**	**1.6432**
Variance	**0.3000**	**2.7000**
t-computed	**1.96396**	
t-critical	**2.776445**	
Interpretation	**insignificantly different**	

Table 3 shows the significance of the pre-test and post-test scores of the pupils in terms of Instructional. The mean score of the pupils' pre-test was 6.4000 at 0.5477 standard deviation and a variance of 0.3000 while their post-test mean score was 8.2000 at 1.6432 standard deviation and a variance of 2.7000. When two sets of scores was compared and analyzed using paired t-test employing the Microsoft Excel Data Analysis at 5% level of significance and a degree of freedom equal to 27, the computed t-value of 1.96396 was lower than the critical value of 2.776445. Thus, it can be concluded that the level of the reading comprehension of pupils before and after the utilization of self-learning module was insignificantly different.

Table 4: Significance Between Pre-test and Post-test Scores (INDEPENDENT)

Statistical	**Assessment Test**	
Treatment	**Pre-Test**	**Post-Test**
Mean	**8.2857**	**9.0000**
SD	**0.4880**	**0.8165**
Variance	**0.2381**	**0.6667**
t-computed	**1.96396**	
t-critical	**2.776445**	
Interpretation	**significantly different**	

Table 4 shows the significance of the pre-test and post-test scores of the pupils in terms of Instructional. The mean score of the pupils' pre-test was 8.2857 at 0.4880 standard deviation and a variance of 0.2381 while their post-test mean score was 9.0000 at 0.8165 standard deviation and a variance of 0.6667. When two sets of scores was compared and analyzed using paired t-test employing the Microsoft Excel Data Analysis at 5% level of significance and a degree of freedom equal to 27, the computed t-value of 1.96396 was lower than the critical value of 2.776445. Thus, it can be concluded that the level of the reading comprehension of pupils before and after the utilization of self-learning module was insignificantly different.

5. Summary of Findings, Conclusions and Recommendations

This chapter presents the summary, conclusions and recommendations derived in the conduct of the study, which probe on the effectiveness of self-learning module in developing the comprehension skills of the Grade 4 pupils of Caesar Lanuza Elementary School.

5.1. Summary of Findings

The main objective of this paper was to determine the mean level of reading comprehension of the pupils before and after utilization of the self-learning module. Another goal was to find out if there was a significant difference in the comprehension level before and after using the self-learning module in terms of frustration, instructional and independent?

Mean, and T-test paired were used to determine the mean level and significant difference in the development of comprehension skills in Literature among Garde 4 Amethyst pupils at Caesar Lanuza Elementary School.

The following are the significant findings of the study:

1. Mean level before the utilization of self-learning module on Grade 4-Amethyst: Comprehension skills of the Grade 4 Amethyst pupils were assessed using a pre-test. Sixteenth (16) pupils out of 28 obtained frustrations in comprehension level, five (5) pupils classified as instructional, and seven (7) classified as independent. The mean score obtained was 5.0714, indicating an overall performance.

2. The researchers further evaluated the development of comprehension skills in literature among Grade 4 Amethyst pupils using post-test after the utilization of self-learning module. The results showed that 21 pupils classified as independent, and 7 pupils obtained the comprehension level of instructional. Based on the results of post-test, there is a progress in the comprehension skills after using the module, with the mean value of the pupils' post-test mean score 8.1429 at 1.4067 standard deviation and a variance of 1.9788.

3. The Grade 4 pupils' comprehension skills before and after the utilization of self-learning module showed a substantial improvement when the mean scores of the pre–test (5.0714) and post–test (8.1429) were compared. The statistical analysis showed that the null hypothesis was rejected, further demonstrating the efficiency of the self-learning module, with a degree of freedom of 27 and t-value of 1.9639.

Based on these findings, it can be concluded that the validated self-learning module implemented at Ceasar Lanuza Elementary School was effective in developing the comprehension skills in literature among Grade 4 Amethyst pupils.

5.2. Conclusion

Based on the findings of the study, the researchers concluded to:

1. Null hypothesis was rejected. That the self-learning module was not effective in the development of comprehension skills of grade 4 Amethyst pupils at Caesar Lanuza Elementary School.

2. Alternative hypothesis was accepted. That the self-learning module was effective in developing the comprehension skills in Literature of grade 4 Amethyst pupils at

Caesar Lanuza Elementary School.

5.3. Recommendation

The following recommendations are based on the findings and conclusion of the study.
1. More practice and effective tools such as reading materials are needed to enhance and develop the comprehension skills of the Elementary school pupils.
2. The Self-Learning Module used in this study entitled "Fostering Pupil's Comprehension Skills" can be improved in the future for a guaranteed development of Elementary school pupils.
3. Providing more self-learning modules will develop the reading comprehension of the pupils. Reading materials such as self-learning modules play a vital role in enhancing pupil's reading comprehension skills.

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