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Litenum Game: Impact to the Literacy and Numeracy Performance of Grade One Pupils

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ABSTRACT

PURPOSE. This research study was undertaken to determine the impact of Litenum Game in the literacy and numeracy performance of grade one pupils in San Antonio Central School, S.Y. 2021 -2022.

RESEARCH PROBLEM. What is the impact of Litenum Game to the literacy and numeracy performance of Grade One pupils in San Antonio Central School?

METHODOLOGY. To achieve the purpose of the study, quasi-experimental method was used to measure the performance of Grade One pupils in literacy and numeracy before and after the use of Litenum Game.

CONCLUSIONS. Based from the gathered data, there is a significant difference in the performance of Grade One pupils before and after using Litenum Game. Thus, Litenum Game is an effective way of acquiring basic literacy and numeracy skills.

SIGNIFICANCE. This research project provided significant data on pre-test and post test result of the pupils' literacy and numeracy performance. Litenum Game has a distinct contribution in improving pupils' performance in basic literacy and numeracy.

Keywords: *Litenum Game, Literacy ,Numeracy Performance,*

INTRODUCTION

According to Mania Moayad Mubaslat (2012) games have a good effect on improving the achievement for the primary stage and create an interactive environment.

In addition, Alireza Abedizadeh (2020) stated that games have contributed a positive impact on not only the learning process but also enhanced student's enthusiasm and motivation. They improved student's active participation, confidence, and capabilities in their language skills. Game-based teaching creates good, enjoyable circumstances and reduces the boredom and stress of the learning process.

ISSN: 2799 - 1091
Page No. 124-130

Likewise, Katelyn Moore (2020) stressed that play-based learning is an effective literacy strategy to teach phonemic awareness and phonics skills when taught with an adult as a facilitator.

Moreover, Uraiwan Pantachord (2021) mentioned Math learning activities using games provides opportunities for learners to learn through games along with the competition according to the rules is an activity that had fun and gained knowledge without knowing it. Games were also an important medium that made students more interested in their studies. As a result, students have higher mathematical achievement and promote teamwork.

Furthermore, Manolitsis George et. Al (2013) concluded that both the home literacy and the home numeracy environments are important for early reading and math acquisition, but their effects are mediated by emergent literacy and numeracy skills.

Based on DepEd Order No. 33, s. 2016, Filipino children must develop literacy and numeracy skills and attitudes that will contribute to lifelong learning. With this, it is the goal of the department to improve the literacy and numeracy skills of kindergarten to Grade 3 learners.

Congruently, DepEd Memorandum No. 48 s. 2021, Brigada Eskwela SY 2021-2022 focuses on strengthening partnership engagements that complement DepEd's efforts to ensure quality basic education amidst the Covid 19 pandemic. Brigada Pagbasa as a form of Brigada Eskwela shall highlight the implementation to promote literacy and numeracy through the help of DepEd partners and volunteers.

San Antonio Central School have different intervention programs such as "Every Child a Reader and Writer (ECARAW) and Math 3.0 to provide solid foundation of literacy and numeracy skills to young learners, but school performance on reading and numeracy suffered this time of pandemic. School reading readiness assessment results also showed that most of the grade one pupils were not ready to read. Out of thirty – seven (37) pupils of Grade I-Masunurin, SY 2021-2022 only eight (8) or 22% are ready to read.

The present learning modalities greatly affect the literacy and numeracy performance of pupils. The complaints of parents on their difficulty in teaching reading as well as their clamor to have an intervention program that will help them teach their children to read at home, prompted the researchers to conceptualize an intervention program that will arouse pupils' interest to read.

Thus, **Litenum Game** - a package of literacy and numeracy games, was utilized by teachers, parents and other Brigada Pagbasa volunteers to develop learner's phonemic awareness, phonics and word recognition and number sense.

Research Problem

This research study was undertaken to improve the literacy and numeracy performance among Grade One pupils in SACS, SY 2021 -2022 using Litenum Game.

Specifically, this study sought to answer the following questions:

1. What is the result of literacy and numeracy performance of Grade One pupils before the implementation of Litenum game?
2. What is the result of literacy and numeracy performance of Grade One pupils after the implementation of Litenum game?
3. Is there a significant difference before and after implementation of Litenum game?
4. What is the implication of Litenum game to the Grade One pupils of San Antonio Central

ISSN: 2799 - 1091
Page No. 124-130

School during school year 2021-2022?

Hypothesis

There is no significant difference in the performance of pupils in literacy and numeracy before and after the implementation of Litenum Game.

Research Approach

The researchers administered pre-test to all Grade One pupils. Based on the result of the test, the researcher conceptualized intervention program that will improve the literacy and numeracy performance of pupils.

Parents were oriented on the Brigada Pagbasa Program using the **Litenum Game**. The games such as Tunog Ko Bigkas Mo at Anong Letra Ako; Pagsamahin Kami; Lundag-Pantig; Shoot Mo, Bilang Ko; Bilang Ko, Ikilos Mo and Next, were introduced to parents and learners together with recorded videos for the pupils to learn how to read and count numbers. Group Chat (GC) was also created to monitor pupils' performance in literacy and numeracy. Teacher-made instructional videos and pupils' performance output were uploaded to GC.

After the implementation of the intervention program, post-test was conducted using the teacher-made assessment tool. The data collected were tabulated, analyzed, and interpreted using statistical treatment.

METHODOLOGY

Quasi-experimental method was used in this study since the researchers measured the performance of Grade One pupils in literacy and numeracy before and after the use of Litenum Games.

The study was conducted in San Antonio Central School, San Antonio District, San Antonio Quezon where the researchers are currently teaching.

All thirty-seven Grade One pupils of section Masunurin are the respondents of the study.

The researchers used teacher-made pre and post-tests to assess the literacy and numeracy performance of pupils. This tool was validated by the master teacher and principal of the school. Assessment tool and intervention materials are distributed during distribution and retrieval of modules. Pupils' literacy and numeracy level was defined using the scale below which was adopted from the DepEd Quezon's Brigada Pagbasa Monitoring Tool.

Literacy and Numeracy Level	
A. No. of Learners who cannot read any letter/number	Non-Reader
B. No. of Learners who can read letters (*4 of 5 letters/1 to 50)*	Struggling

International Journal of Arts, Sciences and Education
Volume 3 Issue 4 | October 2022
ISSN: 2799 - 1091
Page No. 124-130

C.	No of Learners who can read common words/number words *(4 of 5 words)*	Basic

To measure the level of literacy and numeracy performance of Grade One pupils, the researchers used the frequency and percentage.

Then T-test for dependent sample was used to determine the significant difference before and after the implementation of intervention program.

$$\mathbf{P} = \frac{f}{N} \text{ x } 100$$

where:

P = percentage
f = frequency
N = total number of cases

T-test

$$t = \frac{\overline{D}}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{n}}{n(n-1)}}}$$

Where t = t-value
D = mean difference
N = number of respondents
$\sum D^2$ = sum of square of difference
$\sum D$ = summation of difference

RESULTS AND DISCUSSION

Table 1

Level of Literacy and Numeracy Performance of Grade One Pupils

Table 1 presents the summary of the literacy and numeracy performance of Grade One pupils before and after the utilization of Litenum Game.

It reveals that before the utilization of Litenum Game, (29) or 78% of learners cannot read any letter/number which was considered as non-readers, and (8) or 22% of the learners can read letters/numbers (4 of 5 letters/1 to 50) which was considered as struggling readers. There were no learners that can read common words/number words (4 of 5 words). However, after the implementation, (25) or 68% of the learners can read common words/number words

ISSN: 2799 - 1091
Page No. 124-130

which was considered as basic readers and (12) or 32 % of the learners can read letters/numbers (4 or 5 letters/1 to 50). It also reveals that after the implementation of the intervention, there were no more learners who cannot read any letter/ number. This means that grade one pupils' level of literacy and numeracy performance improved after the implementation of Litenum Game.

Table 2

T-test Result on the Significant Difference between Pre-test and Posttest of Literacy and Numeracy Performance of Grade One Pupils

Variables Compared	df	Mean	Computed T-Value	Critical T-Value	Decision	Impression @ 0.05 level
Pretest Post test	36	2.38 15.73	15.06	2.028	Reject H_O	Significant

Before the Intervention			After the Intervention		
Literacy and Numeracy Level	**Total**	**Percentage**	**Literacy and Numeracy Level**	**Total**	**Percentage**
A. No. of Learners who cannot read any letter/ number	29	78%	A. No. of Learners who cannot read any letter/ number	0	
B. No. of Learners who can read letters/numbers (4 of 5 letters/1 to 50)	8	22%	B. No. of Learners who can read letters/numbers (4 of 5 letters/1 to 50)	12	32%
C. No of Learners who can read common words/ number words (4 of 5 words)	0		C. No of Learners who can read common words/ number words (4 of 5 words)	25	68%

ISSN: 2799 - 1091
Page No. 124-130

Table 2 presents the significant difference in the literacy and numeracy performance of the pupils before and after the implementation of Litenum Game. As shown in the table, there was significant difference in the literacy and numeracy performance of Grade One pupils. The computed t-value was15.06 which is higher than the t-critical value of 2.028 at 0.05 level of significance.

This only implies that the use of Litenum Game was effective in improving the literacy and numeracy performance of Grade One pupils.

The result is supported by the study of Ricky Montano (2019) who stressed that Game-Based Learning can be an effective intervention for struggling readers and fits the learning styles of today's learners, since they often engaged themselves on different games.

It is further strengthened by Sampson, L. K. et. al (2021) who stated that the integration of games in teaching and learning at the early grade level is one sure means of arousing learning interest in children.

CONCLUSION

Based on the findings of the study, the following conclusions were obtained:

1. There is a significant difference in the performance of pupils in literacy and numeracy before and after the implementation of Litenum Game.
2. Litenum Game improved the literacy and numeracy performance of Grade One pupils.
3. Litenum Game made reading and counting fun and enjoyable which is an effective way of acquiring basic numeracy and literacy skills.

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