AY-AYAM: VIDEO-ASSISTED INSTRUCTION FOR COUNTING, VISUALIZING, AND REPRESENTING NUMBERS IN GRADE 1

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Abstract

Using games have become an interesting area in educational research. This study aimed to assess the effect of *Ay-ayam*: a teacher -made video- assisted instruction in improving the mathematics skills specifically visualizing, representing, and counting numbers of 21 Grade 1 learners. The research used one-group pretest – posttest research design. The learners' proficiency levels before and after the intervention were analyzed using mean, and t test to determine the significant differences. The result shows that in the pretest, the learners' proficiency level is " Approaching Proficiency," indicating that they had mastered the necessary foundational knowledge, skills, and core understandings and could transfer them through real-world performance tasks with little assistance from their teachers or peers. The learners acquired the level of "Advance" on the post-test, indicating that they have knowledge, abilities, and understandings that go above and beyond the minimum requirements and can apply them naturally and flexibly to real-world performance challenges. Moreover, there is significant difference in the level of proficiency of learners between the pretest and post-test. Thus, *Ay-ayam*, is an effective intervention to enhance the performance of Grade 1 learners in counting, visualizing, and representing numbers.

Keywords: video-assisted instruction, visualizing, representing, counting skills

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Context and Rationale

It is in Grade 1 level that learners learn the fundamental skills in Mathematics. It is the foundation for building mathematical concepts. Some learners understand, while others struggle with basic counting, visualizing, and representing skills.

Before solving algebra, geometry, fractions, and computation problems, learners must have a solid understanding of numbers. (Malofeeva, Day, Saco, Young, & Ciancio, 2004). Sometimes this is called *number sense* (Jordan, 2007; Kaminski, 2002; Wagner & Davis, 2010)or *early numeracy* skills (Aunio, Hautamaki, Sajaniemi, & Van Luit, 2009; Bryant et al., 2011; VanDerHeyden et al., 2011). According to Terry (2019) number sense incorporates counting by ones, twos, fives, tens, and more. Counting is the ability to put names to quantities. Students that struggle with math typically don't have a good number sense. On the other hand, children with strong number sense or early numeracy skills think flexibly and fluently about numbers. They can relate numbers to real-life problems by connecting them to their everyday world. They can compute mentally, take numbers apart and put them back together in different ways. They can visualize and talk comfortably about numbers (Reshma, 2022).

Also, as stated by Staff, (2019B) number sense involves understanding numbers, knowing how to write and represent numbers in different ways, recognizing the quantity represented by numerals and other number forms, and discovering how a number relates to another number or group of numbers. Regardless of the term used, the construct refers to the early numerical competencies that are foundational to building competence in mathematics. This collection of skills is referred to as early numerical competencies *(Powell & Fuchs, 2012).*

As early as Grade 1, the necessary mathematics skills and knowledge shall be inculcated to learners, and remediation be given to learners at risk to prevent problem in higher Mathematics. Because students who perform lower on early numerical tasks often demonstrate lower mathematics competence in later elementary and middle school (Duncan

et al., 2007); and early identification and early intervention are key solutions (Dowker, 2005).

In the Philippines, fifteen-year-old learners scored lower in reading, mathematics and science than those in most of the countries and economies that participated in PISA 2018.This is alarming, and teachers should find ways to improve learner's performance in Mathematics. Research indicates that early intervention can help students with their early numerical skills (Berch, 2005; Bryant et al., 2011 ; Fuchs et al., 2005a).

Many young learners struggle with early numerical competencies (Lembke et. Al, 2009). This was also observed from the Grade 1 learners in Sagubo Elementary School. They have difficulties in visualizing, representing, and counting (MT1BKP-Ia -c-1.1) which should be acquired for the first quarter. Different paper-pencils activities aside from Self Learning Materials (SLMs) were given to develop these numerical competences of the learners. However, out of 20 Grade 1 learners, 7 are having difficulty on counting, visualizing, and representing numbers from 1-100.

Similar problem was also observed in the past years by the researcher. For the School Years 2019-2020 and 2020-2021, there were five and eight learners respectively who had the same difficulty. Even if translated in the local dialect, *Kankanaey*, learners showed difficulties in simple mathematical operations. As an example, in adding 5 + 5 even if the parents or teacher would say "*pantapi em din lima ya lima"* (add 5 and 5) the learner cannot do the said operation because he/she does not know how to count and represent 5. This shows that there is a need to enhance visualizing, representing, and counting skills to Grade 1 learners before they proceed to higher grades. Hence, the intervention *Ay-ayam* was developed to be used teaching number sense in Grade 1. The *Ay-ayam* is a *Kankanaey* word for games or play. It is a video-assisted instruction to enhance the visualizing, representing and counting of Grade 1 learners.

This study intended to determine the effectivity of a game-designed teaching material that will enhance the number sense or early numerical skills of the learners. Using games in teaching persuades the interest of learners to listen and learn the lessons. According to

Victoria (2017), by playing games, learners become more motivated to learn, pay attention and participate in set tasks. Games help students to become part of a team as well as take responsibility for their own learning. It can also be a great classroom management tool, helping to motivate a class. Using games in teaching can help increase student participation, foster social and emotional learning, and motivate students to take risks. One study on the popular multiple-choice quiz game Kahoot found that it improved students' attitudes toward learning and boosted their academic scores.

Similarly, Mubaslat (2012) proved in her study that games have a good effect on improving the achievement for the primary stage and to create an interactive environment. The result revealed that the outcomes of the post test for the experimental group are so better than the controlled one which show that games have a good effect on improving the achievement for the primary stage and to create an interactive environment. The use of games in teaching English has increased the learners' attention and motivation and was proven to be very useful. The result of her study also showed that games create a rich environment full of interaction and stimulations for the students.

In addition, the findings of Yolageldili & Arda (2011) showed that games are important and necessary part of English language teaching and learning in the context of primary schools' English lessons simply because they provide EFL teachers with many instructional advantages. Games are one of the best ways to direct young learners' energy into language learning because young learners like to be physically active; moreover, they are imaginative and creative, and they learn subconsciously. Therefore, teaching young learners requires a special effort and challenge.

Furthermore, Selvi & Öztürk Çoşan (2018) proved that educational games are effective in teaching Kingdoms of Living Things. Within the scope of the study, the experimental group students' views on the use of educational games were obtained at the end of implementation, which were generally positive. The students found the games informative, entertaining and reinforcing their learning, and stated that they are effective in

enabling the retention of new knowledge, promoting collaboration with their peers, and increasing their interest and motivation for learning.

On the other hand, (Russo & Russo,2021) revealed that mathematical games were highly effective in achieving the pedagogical aims outlined in their survey such as engaging students in math lessons, maximizing on-task behavior, generating rich mathematical discussions, differentiating for different performance levels, focusing students on important mathematical ideas, supporting connections between home and school, building procedural fluency, building conceptual understanding, building mathematical reasoning, and building problem-solving skills.

Leslie, (2016) stressed that play in the classroom fosters improvement in such subjects as mathematics, language, early and socio-emotional skills, and it does so for children from both low- and higher-income environments. Because play's benefits are so extensive, play has been asserted as a revolutionary and developmentally important activity. Therefore, play should be viewed as a valuable classroom activity that enables children to develop a wide variety of social and academic skills. Through play, learners will also learn how to get along with others, solve problems, inhibit their impulses, and regulate their emotions. Likewise, in play, children make friends and learn to get along with others.

In the study of Rondina & Roble (2019), the learners who were exposed to mathematical game activities had a better achievement score than the students who were exposed to the traditional method of teaching in Algebra. Based also on the study of Taclay (2013) which was conducted at Nueva Vizcaya State University, the learners who were exposed to mathematical games strategy obtained higher achievement scores compared to students taught using the traditional method. This implication can be attributed to the fact that most learners could learn better if the teacher makes use of game-based strategy in teaching. Furthermore, Team, (2023) emphasized that using games for teaching improve learners' additional skills beyond the academic concept which build 21st-century social skills, problem-solving skills, and build community all while learning core subject material.

The development of interventions like the *Ay-ayam* is significant to address the learning poverty that our learners experiencing as aftermath of the pandemic. The research will also give insight on using other possible interventions to address teaching-learning problems not only in Mathematics but also other subjects like English, Edukasyon sa Pagpapahalaga, Filipino and Mother tongue. This could also be used in developing innovation or interventions that would address problems in the teaching and learning process.

Action Research Questions

This study assessed the effect of Ay-*ayam*: a teacher-made video-assisted instruction in improving the mathematics skills specifically visualizing, representing, and counting skills of Grade 1 learners in Sagubo Elementary School, Kapangan, Benguet. Specifically, it answered the following questions:

1. What is the learners' proficiency level in the pretest and post-test?
2. Is there a significant difference in the learners' proficiency level in the pretest and post-test?

   H_o: There is no significant difference in the learners' proficiency level in the pretest and post-test.

Innovation, Intervention, and Strategy

Ay-ayam: A Teacher- Made Video- Assisted Instruction

Play nourishes every aspect of children's development—it forms the foundation of intellectual, social, physical, and emotional skills necessary for success in school and in life. Play "paves the way for learning" (Hewes, 2022). Similarly, play improves the cognitive, physical, social, and emotional well-being of children and young people (Nidirect, 2018).). Furthermore, Piaget's theory of cognitive development viewed play as integral to the development of intelligence in children. Child-led play and guided play have a fundamental role in children's development (Hamid,2018).

In connection to this, the proponent utilized *Ay-ayam*: A Teacher- Made Video-Assisted instruction in enhancing the visualizing, representing, and counting skills of Grade 1 learners. It is composed of different educational games. There are four set of games in this intervention. First set, Agyuyos Game and *Inan-anapan-Pinatpatukan* that enhanced visualizing skills of the learner. Second set "Libro-*libro-an"," Bilangem, Isulat Mo, Idrowing Mo*" which improved their representing skills. Third Set, "Kinalkal*ëban and Pinarparisan"* also enriched their counting skills. The last set is "*Ipatok Mo, Isulat Mo*" or "*Pinatpatukan-Sinulsulatan* "which enhanced all the skills such as visualizing, representing, and counting skills.

DepEd vision, mission, core values, and mandate emphasized that let us facilitate learning and constantly nurture every learner. This intervention *Ay-ayam* could be utilized by the participants to learn even without an internet connection or gadgets. It is simply printed for the learners to use. Materials for the games can also be laminated. Parents who cannot read can watch the video to understand how the games are to be played. Mother Tongue is used as the medium of instruction so that parents will easily understand.

Each game was played three times to be able to achieve the objective of every game and the objectives of this project. The first game was played with the guidance of the teacher or the parents if done at home. The second game and the third game were done by the participant independently. Before playing, the players watched the video which was made by the proponent for them to know the instructions on how to play the games.

Furthermore, activities and games are localized so that the learners can relate to and appreciate Mathematics. The objects or pictures used in this were taken from the community. This supports Republic Act (RA) 10533 which is the Enhanced Basic Education Act of 2013, Implementing Rules and Regulations of Enhanced Basic Education Act of 2013 provides that education should adhere to the standards and principles in developing enhanced basic education curriculum by being contextualized and global as well as by being culture sensitive.

***Agyuyos* Game**

The first game that enhanced the visualizing ability of the participants is the *Agyuyos* or sliding game. Usually in the sliding game the player plays in a sliding toy but in this *Agyuyos* game, the participants were given *agyuyo*s card and numbers (10, 20, 30, 40, 50, 60, 70, 80, 90, and 100). Their partner in the game places two numbers in the card. The player completes the numbers in the *Agyuyos* card placed by their companion playing the game.

After completing the numbers, the learner reads the numbers. Every correct number the learner puts in the *Agyoyus* Card was their point. But even if their answer is correct if they are not able to read the numbers correctly it will be the point of their opponents. In this game the participants will be familiarized with number 10, 20, 30, 40, 50, 60, 70, 80, 90 and 100.They will learn also skip counting by 10.

Figure 1

Sample of Agyuyos Card

Agyuyos card

Ex. If their opponent placed 30 and 50 learners should place 40.

If the partner of the learner placed 10 and 20 the learner should put 30.

Inan-anapan-Pinatpatukan Game

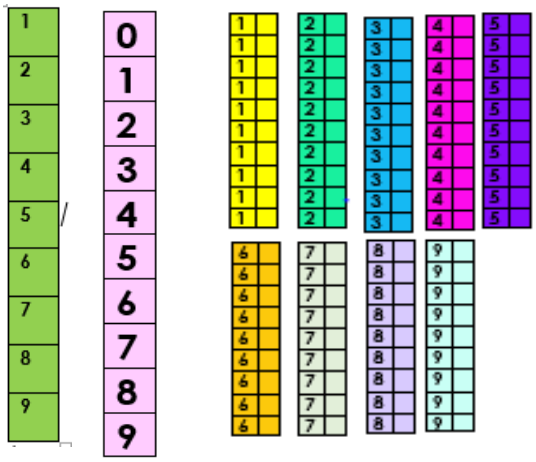
This game is adapted from the “hide and seek” game. In the usual game, the players will hide and one of them will find each player but in this game the participant will manipulate cards which was made by the proponent.

Each player was given cards written with numbers from 1-10. The opponent of the participant will read the number; the participant will find or seek the number, match the color, pair them and read all the numbers.

All the correct numbers the player showed, paired, and read correctly will be their points. The highest score is over 10. One point per card. Through this game, the participants will be familiarized from number 1-100.

Figure 2

Inan-anapan-Pinatpatukan Game



Libro-libro-an

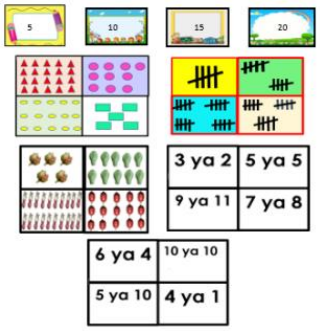
Each learner was given books with numbers in each cover. They cut the rectangles in each page. They counted the objects and tallies inside the rectangle. They pasted it on their books. If the objects, drawing or tallies are 5 then they pasted it on their book under 5. If the total of the objects or tallies is 10, they pasted it on their book under 10.

They put together the number written in each rectangle together and they paste it on their books. If the answer of the two numbers is 20 then they pasted it under 20. If the answer is 15 then they pasted it under 15.

Pictures are localized for the learners to appreciate their own and to enjoy the game**.** The score is over 20. Every picture, tallies and numbers that they pasted on their books correctly was considered one point.

Figure 3

Libro-libro-an Card



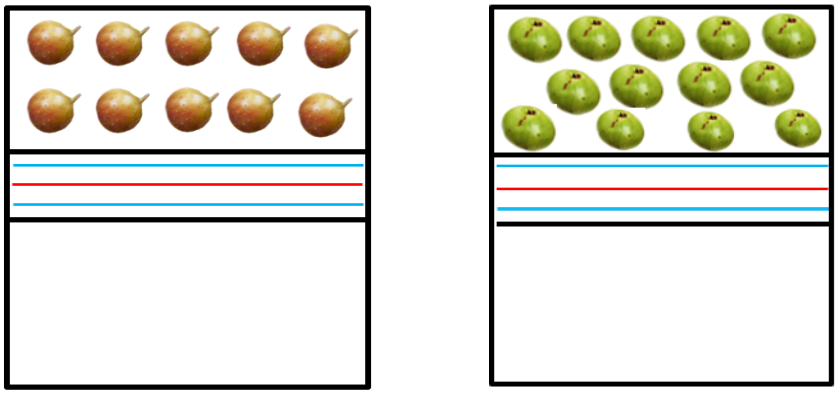
Bilangem, Isulat Mo, Idrowing Mo

In this game, pictures are localized also for the participant to relate on their experience. The participants were given cards with drawing of objects in each card. They counted the objects or pictures. They wrote the total number of the objects they counted on the line below the drawing. They draw any object/s that represented the number they have written in the space provided.

The learner wrote the correct total of the objects they counted. The objects they have drawn must tally with the number they have written for them to have 1 point, by doing this game, their representing skills were developed.

Figure 4

Bilangem, Isulat Mo, Idrowing Mo



Kinalkalëban

The learners were given 10 stones or 10 cover of gallons for the game *kinalkalëban.* They put the 10 stones/cover of gallons on their table. Their partner covered any number of

stones or covers of gallons he/she wanted. He/she removes the stones or cover of gallons he /she covered. The learner counts the stones or cover of gallons that were left. If the learners' answer is correct, it was their point.

Pinarparisan

The learners were given set of numbers. Instead of finding their partner, the partner shows one pair of number. The answer of the numbers that he/she paired when put together should be the number shown by their partner. The card utilized for this game was teacher made.

Example, when the partner shows 4, the other partner will show a pair of number which will sum up to 4. Example 2 and 2, 3 and 1, 4 and 0. When the learner shows one pair of numbers, and it is correct it will be their points.

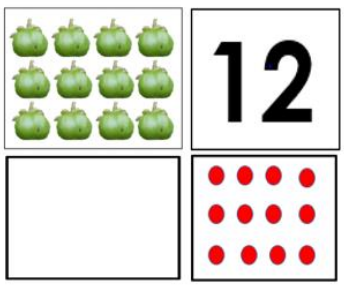
***Pinatpatukan- Sinulsulatan* Game**

Each learner was given two sets of cards. The first set is printed numbers. The second set is cards with ovals. The first game is *Ipatok Mo*. The learner counted the ovals inside the cards. If the total of the ovals is 10, they get the printed number 10 and put it on top of the ovals which are 10. The second game was *Isulat Mo*. The learner will copy number 10 and draw tallies at the back of the card.

This card and the game were invented by the proponent to enhance the visualizing, representing, and counting skills of the participants. If the printed number, they put on top of the ovals was correct it was their point. If the number, they wrote and draw on the card is correct it will an additional point.

Figure 5

Pukapukan- Sinulsulatan Card



Action Research Method

Research Design

The research used one-group pretest – posttest research design. A pretest was given before the intervention and a posttest after the intervention to measure their levels of proficiency. All the learners in the class had undergone the intervention, *Ay-ayam.*

Participants and /or Other Sources of Information

The participants were 21 grade 1 learners of Sagubo Elementary School in Kapangan, Benguet. There were 10 boys and 11 girls in the school's one Grade 1 class, all of whom were between the ages of 6 and 7. Parents were also asked for feedback and observations on the implementation of the intervention.

Data Gathering Methods

The level of proficiency of the learners were determined through their scores in the 25 items pretest and post-test. The tests include items that measured their proficiency in counting, visualizing, and representing numbers. The tests materials were validated before utilization.

Data Analysis

The learners' proficiency levels were determined and analyzed using Mean Percentage Scores (MPS) and mean adopting the rating of learning outcomes in DepEd Order No. 73, s. 2022 (Table 1). The significant differences in the learner's proficiency level between the pretest and post-test were analyzed using a t-test.

Table 1

Level of Proficiency

Mean Percentage Score	Level Of Proficiency	Description
90 and above	Advanced	The learner exceeds the core requirements in terms of knowledge, skills, and understandings, and can transfer them automatically and flexibly through authentic performance tasks.
85 – 89	Proficient	The student at this level has developed the fundamental knowledge and skills and core understandings and can transfer them independently through authentic performance tasks.
80-84	Approaching Proficiency	The learner has developed the fundamental knowledge and skills and core understandings and, with little guidance from the teacher and/or with some assistance from peers, can transfer these understandings through authentic performance tasks.
75 -79	Developing	The learner possesses the minimum knowledge and skills and core understandings but needs help throughout the performance of authentic tasks.
74 and below	Beginning	The learner struggles with his/her understanding; prerequisite and fundamental knowledge and/or skills have not been acquired or developed to aid understanding.

Ethical Issues

Consent of the authorities was sought by the researcher**.** Thus, permission was asked from the School Head and District Supervisor. Likewise, orientation was conducted to inform the parents and participants about the purpose of the research and their roles. Parents gave time to their children in playing the educational games at home. They assisted them in every game and activities they brought at home. Similarly, participant

participated actively and sincerely during the implementation which improved their skills in numbers. The proponent acted as a facilitator.

Furthermore, consent was signed by the parents that they allowed their child to join the *Ay-ayam*: A Teacher-Made Video-Assisted Instruction Enhancing Grade 1 Skills in Numbers. All Grade 1 handled by the proponent underwent the intervention. It started every 3:30-4:00 in the afternoon after their regular class. Sometimes snacks were provided to the participants during the conduct of the study.

Moreover, results were confidentially kept by the researcher. The results will solely be utilized for planning and implementing procedures without prejudice to the learners who had been subject to the study. Resources were cited, are acknowledged by proper citations and referencing. The DepEd guidelines was followed in the progress of this research.

Discussions of Results and Reflection

The *Ay-ayam* is an intervention used among Grade 1 learners to improve their performance in counting, visualizing, and representing numbers. The learner's level of proficiency was determined by their scores in the pretest and post-test.

Level of Proficiency of Learners

Table 2 shows the learners' proficiency level in the pretest and post-test. In the pretest, the participants level of proficiency is “Approaching Proficiency” with and overall mean of 81% which means that the learner has developed the fundamental knowledge and skills and core understandings and, with little guidance from the teacher and/or with some assistance from peers and can transfer these understandings through authentic performance tasks. The learners were able to count but some learners can count from 1 to 10, 1 to 20 and most have difficulty in the higher numbers. The learners can count but they have difficulty in representing the numbers. For example, they know how to count 20 but if asked to draw, they draw less or more than 20. Moreover, for visualizing, the learners have difficulty in identifying the numbers, when showing them the visual number 50, they identify it as 15. The finding implicate that the learners can count, visualize, and represent lower numbers (some learners from 1-10,some learners from 1-20), but still have difficulties in the higher numbers

(21 and above). The result agrees with Powell & Fuchs, (2012) that many young learners struggle with early numerical competencies.

On the other hand, the level of proficiency of the learners in the post-test is "Advanced" shown by the overall mean of 95% indicating that the learner exceeds the core requirements in terms of knowledge, skills and understandings, and can transfer them automatically and flexibly through authentic performance tasks. After the use of the intervention, the learners were able to count 1 to 100 and were able to identify these numbers when visuals are shown to them. The learners can also draw or represent the numbers correctly and completely. According to some parents, they observed that the learners were interested or eager in using the *Ay-ayam* as compared when using the printed wherein the parents usually have difficulty in encouraging their child to answer the material. This was also observed by the teacher during class hours that the learners prefer to use the Ay-ayam than the printed material. The intervention also involved pairing among the learners, which they enjoy and preferred because they play with one another. Moreover, sportsmanship among learners were noticed during the games and peer-teaching were evident. The learner that wins help or coach his/her opponent and other classmates.

This means that the intervention, *Ay-ayam*, was able to improve the performance of the learners in counting, visualizing, and representing numbers. The result agrees with the findings of Taclay (2013) and Rondina & Roble (2019) that learners exposed to mathematical games obtained higher scores compared to those learners subjected to the traditional method.

In addition, the Ay-ayam, enhanced the interest and social skills of learners. According to Mubaslat (2012) using games to teach English has improved learner's attention and motivation and give access to a rich environment that is that is filled with excitement and engagement. In addition, Team, (2023) stressed that using games for teaching improves students' additional talents beyond the academic notion, which build 21st-century social skills, problem-solving skills, and community building all while studying core subject content.

Table 2

Level of Proficiency of Learners in Counting, Visualizing, and Representing Numbers

Learner	Pretest			Posttest		
	Score	MPS (%)	Description	Score	MPS (%)	Description
A	23	92	Advanced	25	100	Advanced
B	25	100	Advanced	25	100	Advanced
C	19	76	Developing	23	92	Advanced
D	15	60	Beginning	23	92	Advanced
E	10	40	Beginning	20	80	Approaching Proficiency
F	18	72	Beginning	23	92	Advanced
G	25	100	Advanced	25	100	Advanced
H	25	100	Advanced	25	100	Advanced
I	20	80	Approaching Proficiency	25	100	Advanced
J	25	100	Advanced	25	100	Advanced
K	24	96	Advanced	25	100	Advanced
L	19	76	Developing	23	92	Advanced
M	20	80	Approaching Proficiency	24	96	Advanced
N	20	80	Approaching Proficiency	23	92	Advanced
O	15	60	Beginning	23	92	Advanced
P	25	100	Advanced	25	100	Advanced
Q	25	100	Advanced	25	100	Advanced
R	11	44	Beginning	22	88	Proficient
S	25	100	Advanced	25	100	Advanced
T	13	52	Beginning	22	88	Proficient
U	25	100	Advanced	25	100	Advanced
Weighted Mean	20	81	Approaching Proficiency	24	95	Advanced

Difference in the Level of Proficiency Between the Pretest and Post-test

The significant difference in the level of proficiency between the pretest and post-test is presented in table 3. The result shows that the p-value is lower than .05 which indicate that the null hypothesis is rejected. There is a significant difference in the level of proficiency between the pretest and post-test of the learners. This means that the use of the intervention, *Ay-ayam*, a game-based video-assisted instruction is effective in enhancing the performance of Grade 1 learners in counting, visualizing, and representing numbers.

According to Russo & Ruso, (2021)'s research, mathematical games were extremely successful in fostering student engagement in math lessons, maximizing on-task behavior, fostering rich mathematical discussions, differentiating for different performance levels, focusing students on key mathematical concepts, fostering connections between home and school, and developing procedural fluency, conceptual understanding, and mathematic proficiency.

Table 3

Difference in the Pretest and Post-test Scores of the Learners

		Mean	**t-computed**	**t-critical**	**p-value**	**Decision**
Math	Pretest	20	-4.31	2.09	0.0003	**Reject the Null Hypothesis**
	Post-test	24				

0.5 Level of Significance

Reflection

Ay-ayam: Teacher-Made Video-Assisted Instruction motivated the learners. It brings high level of participation during the learning process. They are motivated to learn. It improved their socialization skills. Their patience to wait and their sportsmanship was developed. Thus, games are very effective in teaching.

Learners learn best when they are the one who manipulate objects. They learn more when they perform or do the activities hands on. So, as a teacher I should serve as a facilitator inside my classroom and let my learners play educational games and let them

explore. I will be using the *Ay-ayam* in enhancing the visualizing, representing, and counting skills of my learners which is very effective to my learners.

Ay-ayam was successfully implemented through the active participation of my Grade 1 learners with the support from their parents as they allow their children to be the participants. Sir Stephen Bulalin, our District Supervisor, our School Head and my Co-teachers give also their moral supports and encouragement. Likewise, Ma'am Crisanta Pantaleon coached me in countless ways from the proposal to the final implementation of this intervention. The BERF also funded this research, so I was able to produce the needed materials for this *Ay-ayam*. Finally, through the support of my family.

Games in this *Ay-ayam* can be upgraded to be used by higher grades. In the game *Inan-anapan-Pinatpatukan*, more blanks will be added to make the numbers higher to be used in the higher grades. Under *Bilangem, Isulat Mo, Idrowing Mo*, letters may be pasted at the back of each card. During the game, letters will be distributed. If the teacher will read same letter of what they are holding, they will get their cards and play the game. So that their skills in letter recognition and letter sounds will be develop. For the *Kinalkaleban*, letters or syllables can be written on the cover of gallons, aside from counting the number of the cover of the gallons they will also read the letters or syllables written on it.

Likewise, *Ay-ayam* may also be utilized in inculcating other competencies in Mathematics such as, composes and decomposes a given number. e.g., 5 is 5 and 0, 4 and 1, 3 and 2, 2 and 3, 1 and 4, 0 and 5 (M1NS-Ic-4); visualizes, represents, and compares two sets using the expressions "less than," "more than," and "as many as." (M1NS-Id- 6); visualizes, represents, and orders sets from least to greatest and vice versa (M1NS-Ie-7); visualizes and counts by 2s, 5s and 10s through 100 (M1NS-Ie-8.1); reads and writes numbers up to 100 in symbols and in words (M1NS-If-9.1); and identifies the 1st , 2nd, 3rd, up to 10th object in a given set from a given point of reference.(M1NS-Ii-16.1).

Summary of Findings

Based on the results, the findings of the study are:

1. The level of proficiency of learners in the pretest is " Approaching Proficiency" which means that the learner has developed the fundamental knowledge and skills and core understandings and, with little guidance from the teacher and/or with some assistance from peers and can transfer these understandings through authentic performance tasks. The learners' level of proficiency in the post-test is " Advance" which means that the learner exceeds the core requirements in terms of knowledge, skills and understandings, and can transfer them automatically and flexibly through authentic performance tasks.
2. There is a significant difference in the level of proficiency of learners between the pretest and post-test.

Conclusions and Recommendations

Conclusions

Founded by the findings of the study, it is concluded that:

1. The intervention, *Ay-ayam* improved the level of proficiency of the Grade 1 learners in counting, visualizing, and representing numbers.
2. The intervention, *Ay-ayam* is effective in enhancing the performance of learners in counting, visualizing, and representing numbers.

Recommendations

Based on the conclusions, it is recommended that:

1. The intervention, *Ay-ayam* will be used in teaching counting, visualizing, and representing numbers for Grade 1 learners.
2. The intervention, *Ay-ayam* will be utilized by other teachers and/or schools in teaching counting, visualizing, and representing numbers for Grade 1 learners.

Action Plan

The result of the study will be disseminated during the Kapangan District IYAMAN 2023. The final copy of the research paper and soft copy of games and score sheets will be given to Sagubo Elementary School Library and to other interested teachers. Final copies of games will be shared also to interested Grade 1 teachers in Kapangan or other districts. The result will also be included or briefly discussed during a General PTA meeting and SLAC session to inspire other teachers in Kapangan to include games in their lessons.

The intervention will be used by the researcher in the next school year, and possible modifications will be done to suit the needs of the learners. It will also be recommended for adoption by Math teachers and/or schools. The research could also be used as reference in future research and development of similar interventions not only in Math subject but other subjects.

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Financial Report

A. Supplies and Materials					Total	Actual Cost
Activity	Item	Unit	Quantity	Estimated Cost		
Implementation the Study and preparation of Research Papers ,instructional materials /worksheets and other documents.	A4 bond paper	ream	10	250	2,500.00	2,500.00
	A4 Folder Tagboard with fastener	pc	25	20	500.00	500.00
	Printer ink black	bottle	5	300.00	1500.00	1,550.00
	Printer ink cyan	bottle	2	300.00	600.00	620.00
	Printer ink magenta	bottle	2	300.00	600.00	620.00
	Printer ink yellow	bottle	2	300.00	600.00	620.00
Domestic Travel expenses						
Submission of First Tranche Deliverables wet signatures.	Sagubo ES to RO	PUJ	2	300	600	600
C.Food and other incured expenses the conduct of the research.						
Snacks of participants during the implementation of the study (8 weeks).		Snack	21	300	6,300	6,300
D.Reproduction,Printing,and Binding Cost						
Lamination of card games and score Sheets.	Inan-anapan-Pinatpatukan Card	1 pc x 21learners	21	15	315.00	315.00
	Bilangem,Isulat Mo,Idrowing Mo	20pcs x21 learners	420	15	6,300.00	6,300.00
	Agyuyos Card	2 x 21 learners	42	15	630.00	630.00
	Pinatpatukan – Sinulsulatan	3 pcs.X 21learners	63	15	945.00	945.00
E.Communication expenses for the Implementation /Conduct of the study						
Validation of Instruments	Load of validators/ Experts	card	3	300.00	900.00	900.00
Implimentation of the study - Data Gathering /Collection ,Preparation and submission of research papers and other ducuments.	Regular Load of the proponent	card	6	500.00	3,000.00	3000.00
	Internet Load of the proponent	card	6	500.00	3,000.00	3,000.00
					28,290.00	28,400.00

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