IMPROVING THE PROBLEM-SOLVING SKILLS OF GRADE SIX-VIRGO PUPILS THROUGH TEACHER-CREATED SCREENCASTS VIA MOBILE TECHNOLOGY

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Improving The Problem-Solving Skills of Grade Six- Virgo Pupils Through Teacher-Created Screencasts Via Mobile Technology

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Abstract

Every teacher wants to support their pupils' development and success. They would go beyond the line to help them learn and improve. The paper presents one of the strategies teachers applied to their pupils. This presents the study conducted by the researcher on improving the skills of pupils as regards to the problem- solving in Mathematics by using teacher-created screencasts via mobile technology. This screencast via mobile technology is a teaching tool used for describing a step-by-step process. It explains a particular concept or presents a PowerPoint presentation with narration and multimedia elements. A video lesson in Mathematics taken from GIYA module using screencast application through mobile technology. The lessons were teacher created to attain the lesson objective of the week based on the MELC. It focused on problem-solving activities. This study has two groups, the control group, and the experimental group. Without any intervention, the pretest results for both groups were essentially the same. The result is low during the pretest for both the experimental group and the controlled group. However, using the strategy in the experimental group resulted in a higher outcome during the post-test. It shows that the intervention is effective since there is a significant difference in results between the post-test and pretest. This concludes that the teacher-created screencasts via mobile technology improved the problem-solving skills of ten Grade Six- Virgo Pupils. Lastly, based on the findings from both groups, it was advised that these teaching intervention strategies be put into place because they improve students' learning.

Keywords***:*** *learning mathematics fun way*; *screencasts; video mirroring*

Acknowledgment

I would like to begin by expressing my profound gratitude to the Almighty for His abundant blessings, which have enabled me to successfully bring this research to fruition.

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Context and Rationale

As a general education topic, Mathematical problem-solving, critical thinking, communication, reasoning, linking, representing, and making decisions in the real world all call for appropriate technology (DepEd K to 12 Basic Education Curriculum 2013). It is essential, so practically every area needs it as a subject. Nonetheless, challenges concerning the achievement of mathematics skills persist within the Philippine context and cannot be regarded as an area of strength.

A report from the 2013 Trends in International Mathematics and Science Study (TIMMS) revealed that Filipino students perform less favorably in mathematics tests compared to their counterparts in other Asian countries (Care et al., 2015). Programme for International Student Assessment (PISA) revealed that the mathematics literacy score of the Philippines was 353 points lower than the average score of 489 points achieved by other participating countries in the Organization for Economic Cooperation and Development (OECD).

Addressing this challenge in the context of the "new normal," the Department of Education (DepEd) was steadfast in its belief that the continuity of learning should remain uncompromised. Consequently, it made available Self-Learning Modules (SLMs) along with a range of alternative learning delivery methods tailored to the diverse needs of learners throughout the Philippines.

In Zamboanga Sibugay, the implementation of Guided Integrated Yearning Activities, abbreviated as GIYA, was a strategic choice for self-learning modules. GIYA was designed to cater to specific needs. This comprehensive approach aimed to guarantee accessibility to basic education during the ongoing challenges presented by the COVID-19 crisis.

In the context of the "new normal," the GIYA modules were structured with a clear sequence, encompassing specific topics, and adhering to instructional standards. These modules were designed to foster a uniform development of essential numerical skills and comprehension of fundamental mathematical concepts. Despite these efforts, there remained a persistent issue of underperformance in this subject.

With the modular learning modality, Ipil Heights Elementary School aimed at producing learners equipped with problem-solving skills. It was believed that with the mastery of these skills, everything else will follow.

Despite the researcher's intention to produce learners with high learning problem-solving skills adapting to the modular mode of learning, test scores in Mathematics proved to be a poor way to build a lifelong learner. Put differently, the method of instruction, whether it occurs in a traditional, in-person setting or through distance education, does not reliably determine the outcome of learning (Anglin and Morrison 2000; Berge and Mrozowski 2001, 21),

This is the foremost reason for the conduct of the action research. The action research study focused on the effectiveness of the intervention – Teacher Created Screencasts via Mobile Technology on pupils' problem-solving skills.

Learners are becoming more interested in the usage of mobile devices in the teaching and learning of mathematics. The features of mobile devices increase the frontlines of mathematics instruction and learning outside of the classroom (Kaiser 2017). The integration of digital technology into mathematics education is a direct response to the challenges and inquiries that arise within the domain of mathematical education (Borba et al. 2017)

This is consistent with the claims (Higgins, Xiao, and Katsipataki 2012, 16), who contend that it is critical to examine closely the promising uses of technology that can make learning successful.

Accordingly, the researcher's approach to improving the grade Six-Virgo students' problem-solving abilities in mathematics was the Teacher Created Screencasts via Mobile Technology.

According to a post by Ben Davis from EdTech, adopting this new technology is simple. In the United States, the educational sector meets 50% of the world's demand for screen-sharing and screen-casting software.

The pupils who received screencast lectures were shown to be more successful in comparison to the others who had not been exposed to digital lectures (Guerrero, Baumgartel, and Zobott 2013, 173). The findings also indicated that screencast lectures allowed more class time to be dedicated to student-centered and problem-solving activities, enhancing student attitudes.

It was also taken into consideration that Teacher Created Screencast via Mobile Technology was not just an opportunity for the development of problem-solving skills. It was also to develop the enthusiasm of the pupils to strive harder in their studies. Students were refined and prepared for the future through this intervention and the researcher's unbiased dedication.

The purpose of the study was to present the effectiveness of Teacher-Created Screencasts via Mobile Technology. The reception of this teaching technique greatly affected the pupils' learning progress and eventually developed in-depth motivation for studying.

It came up with an analysis of the effectiveness of the Teacher Created Screencasts via Mobile Technology. The analysis then provided concrete ideas if such a technique had truly helped and improved the problem-solving skills of the Grade Six Virgo learners.

Innovation, Intervention, and Strategy

The thrust of the researcher was to develop problem-solving skills in Mathematics for the pupils in preparing them for the future. This was the core goal of the action research which was to help improve the problem-solving skills of the five Grade Six Virgo pupils through Teacher Created Screencasts via Mobile Technology.

Teacher-Created Screencasts stand out as a prominent educational tool. They serve the purpose of illustrating a sequential procedure, elucidating specific concepts, or delivering a PowerPoint presentation accompanied by narration and multimedia components.

A video lesson in Mathematics taken from GIYA module using screencast application through mobile technology. The lessons were teacher created to attain the lesson objective of the week based on the MELC. It focused on problem-solving activities.

Several intervening activities were conducted remotely to develop certain key areas of the pupils.

STEP I- Topic Identification- The researcher identified the topics from the GIYA and also provided examples not limited to GIYA alone. Practice exercises about the topic were taken from the Grade six books and the internet focusing on problem-solving activities.

Problem-solving exercises in Mathematics were carefully picked to attain the objectives of the GIYA's lesson.

STEP II- PowerPoint (PPT) Making- After identifying the topic, the researcher then created a PowerPoint lesson based on the topic from the GIYA.

STEP III- Screen casting/Screen Recording- After the making of the PowerPoint presentation, the researcher started recording and making the video lesson through the screencast application.

STEP IV-Video Sharing- After the video is crafted, the video was shared with the respondents through the respondent's phone via offline and online sharing platforms. This was done every Friday following the school's retrieval and distribution schedule.

This activity was done every two weeks and lasted for two months. Meanwhile, the Control Group was given the same material,, the GIYA, but without the intervention. The collection of modules was done every Friday following the school's schedule for the distribution and collection of GIYA modules. On Fridays, the researcher collected, checked, and recorded the respondent's output. The activities were undertaken repeatedly every week for two months.

Action Research Questions

The objective of this study was to determine the effectiveness of Teacher Created Screencasts via Mobile Technology, which helped in improving the problem-solving skills of ten Grade VI Virgo pupils.

It sought to shed light on the following questions:

1. What are the mean test scores of the pupils using the Modular Approach with Teacher-Created Screencasts via Mobile Technology (experimental group) and Modular Approach only (control group) as revealed by the pretest and posttest scores?
2. Is there a significant difference in the means of the scores in Mathematics in the pretest of the experimental and control group?
3. Is there a significant difference in the means of the scores in Mathematics in the posttest of the experimental and control group?
4. Is there a significant difference in the means between the pretest and posttests of the experimental and control groups?

Action Research Methods

Research Design

In this research study, a quantitative method using a specific approach called "quasi-experimental design" was chosen. Non-equivalent groups were also utilized, the researcher selected pre-existing groups that appeared similar, but only one of these groups underwent the intervention in a non-equivalent group design.

The selection of participants was chosen purposively. This method ensured that the individuals involved in the study were well-suited for the research objectives.

The study involved two discrete groups: experimental and control groups. Each group consisted of five carefully selected participants. This balanced selection process was intended to ensure fairness and robust comparisons between the groups.

It is acknowledged that the chosen research approach, quasi-experimental design, offers practical advantages, especially when applying the findings to real-life situations. However, it's important to exercise caution when making claims about cause and effect because the groups were not randomly assigned. Nevertheless, there is

optimism that this research will yield valuable insights and enhance understanding of the subject matter. Rigorous participant selection and thoughtful study organization have been employed to strive for meaningful and practical results.

Participants and Other Sources of Data Information

The study's participants were purposively selected and comprised five Grade Six Virgo learners from Ipil Heights Elementary School. These students constituted the experimental group, specifically identified by their previous teacher during data collection due to their poor performance in Math during the first week of the first quarter in the GIYA module. The control group, also comprised of five Grade Six Virgo learners also chosen purposively, included students who had similarly struggled with Math during the first week of the first quarter in the GIYA module. This group served as the study's comparison and used the GIYA module alone, without the additional application of Teacher Created Screencast via Mobile Technology.

Research Instrument

The experimental materials, including the pre-test and post-test consisting of a ten-item assessment, were sourced from the GIYA modules. These modules had undergone quality assurance and validation by the Division of Zamboanga Sibugay, ensuring their alignment with the Department of Education's educational objectives.

Data Gathering Procedure

In compliance with the Research Ethics Protocol, the researcher secured permission from the Schools Division Superintendent to carry out the study. Following approval, the researcher meticulously outlined the research procedures and shared details about the research without swaying the students' responses. Both parents and students were asked to confirm their agreement through an online assent and informed consent form to ensure their participation was voluntary. The students then proceeded to respond to the pre-test questions. It is important to note that all collected information was handled with the highest level of confidentiality.

In gathering the data, the researcher identified five learners who served as respondents for the experimental group and five learners for the control group. The researcher, without bias carefully grouped them through direct interviews with their previous teachers. Responses from teachers were the basis for the observation. Coherent results of responses from the feedback mechanism and observations followed the selection Group back-up by their general averages in Mathematics and their Week 1 result in the GIYA module.

Each Friday, the participants would receive screencast video lessons both offline and online using their mobile phones. These videos were distributed in conjunction with the GIYA modules.

Documentation and recording of GIYA scores in Math was done every week to track the progress of the respondent to the study. It mainly consists of examining existing data in reports and class records.

Following this, the post-test was conducted. Subsequently, the researcher compiled the data for statistical analysis. Finally, the researcher undertook the discussion and interpretation of the data.

Data Analysis

Before the study commenced, the researcher administered a pre-test on problem-solving to both groups and recorded the scores as a foundational reference for later

comparisons. In the eighth week of the study, a post-test was administered to both groups to evaluate the effectiveness of the intervention. The researcher employed a quantitative analysis, particularly mean, standard deviation, and Mean Percentage Score, as descriptive statistics to describe the level of performance of the learners in Mathematics.

The Mean Percentage Score (MPS) from DepEd Memorandum No. 160, s. 2012 were utilized to describe the mastery level of the learners: 96 - 100% = Mastered; 86 - 95% = Closely Approximating Mastery; 66 - 85% = Moving Towards Mastery; 35 - 65% = Average; 15 - 34% = Low; 5 - 14% = Very Low; 0 - 13% = Absolutely No Mastery.

Moreover, inferential statistical analysis, such as t-tests were utilized to assess if a significant distinction existed between the means of two groups, namely the experimental group and the control group, which could potentially be associated with specific characteristics. Paired-sample t-tests were utilized to assess the scores of two different variables within the same set of participants, whereas independent-sample t-tests were employed to compare the scores of the same variable across two separate sets of participants.

Results and Discussion

Pupils' Performance. Mean test scores in the pretest and posttest during the first quarter highlight pupils' performance as a critical aspect of education that provides valuable insights into their learning journey. It helps educators tailor instruction, identify learning gaps, provide targeted support, and foster students' holistic development.

Table 1: Mean Test Scores in The First Quarter

Learning Approach	Test	Mean	SD	MPS	Descriptive Equivalent
Modular Approach with Teacher-Created Screencasts via Mobile Technology (Experimental Group)	Pretest	3.80	0.45	38 %	Average
	Posttest	8.40	1.14	84 %	Moving Towards Mastery
	MPS Increase			**46 %**	
Modular Approach (Control Group)	Pretest	4.00	0.71	40 %	Average
	Posttest	5.20	0.45	52 %	Average
	MPS Increase			**12 %**	

**MPS (DM 160, s. 2012): 96 - 100% = Mastered; 86 - 95% = Closely Approximating Mastery; 66 - 85% = Moving Towards Mastery; 35 - 65% = Average; 15 - 34% = Low; 5 - 14% = Very Low; 0 - 13% = Absolutely No Mastery*

Table 1 presented an overview of the mean test scores achieved by participants in the first quarter, specifically during the pre-test phase of the study. This table functioned as a visual representation of the initial performance levels exhibited by the participants before any interventions or instructional activities were implemented. It served as a crucial reference point for evaluating and comparing any advancements or enhancements in the participants' performance throughout the course of the study. The data showed that the Control group has a mean of 4.00 with a corresponding MPS of 40% and a descriptive equivalent of Average. And the experimental group has a mean of 3.80 in the pre-test exam in Mathematics with an average MPS of 38%. The results

of the research indicated that the computed mean has revealed that scores of Grade VI students in problem-solving skills without the use of teacher-created screencasts via Mobile Technology are higher in the control group during the pretest.

The table also displayed the participants' mean test scores during the study's posttest phase. The experimental group posted a mean 8.40, equal to an MPS of 84%, interpreted as Moving Towards Mastery. On the other hand, the control group reflected a mean score of 5.20 and an MPS of 52%, interpreted as Average. This table offered insights into how well the respondents performed after they had received the intervention or instruction using Teacher-Created Screencasts via Mobile Technology. The MPS increase of 46% in the experimental group is very substantial versus the MPS increase of 12% in the control group from pretest to posttest. It served as a reference point to assess any changes or improvements in the participants' performance compared to their initial pre-test scores.

Table 2: Comparing the Mathematics Pretest Results of the Experimental and Control Group Using Independent Samples T-Test

Group	Pretest Mean	t-value	Df	p-value	Remarks
Modular Approach with Teacher-Created Screencasts via Mobile Technology (Experimental Group)	3.80	-.535	8	0.608	No Significant Difference
Modular Approach (Control Group)	4.00				

Table 2 presents the results of an independent sample T-test that was conducted on the study participants' pretest scores for the mathematics test. This table provided statistical information about the comparison between two distinct groups, typically the experimental group and the control group, regarding their performance on the pretest. It served as a valuable tool for determining if there were any significant differences in the initial math test scores between these two groups before any interventions or treatments were administered.

When the data was statistically tested using an independent sample t-test, the t-value was -.535 with a significant value of .608, which is higher than alpha 0.05, Therefore, the results in the test of significant difference have revealed that there is no significant difference in the problem-solving skills among Grade VI learners between the experimental and control group without the use of teacher created screencasts via Mobile Technology. This indicated that students' problem-solving skills before the application of teacher-created screencasts via Mobile Technology were of the same level. This implies that the two groups had the same performance in mathematics.

Table 3: Comparing the Mathematics Posttest Results of the Experimental and Control Group Using Independent Samples T-Test

Group	Posttest Mean	t-value	Df	p-value	Remarks
Modular Approach with Teacher-Created	8.40	5.842	8	0.000	

Screencasts via Mobile Technology (Experimental Group)					With Significant Difference
Modular Approach (Control Group)	5.20				

Table 3 summarizes the results of an independent sample T-test that was conducted on the post-test scores of the mathematics test for the study's respondents. This table provided statistical data to compare two distinct groups, often the experimental and control groups, concerning their performance on the post-test. It helped determine if there were any significant differences in the math test scores between these two groups after they had received the intervention or instruction. The data shows that the Control group has a mean of 5.20 and the Experimental group has a mean of 8.40, which is higher than the Control group. When the data was statistically tested using an independent sample t-test, the t-value is -5.842 with a significance value of .000, which is lower than the alpha of 0.05.

The results of the test of significant difference have revealed a significant difference in the problem-solving skills among Grade VI learners between the experimental and control group after using teacher-created screencasts via Mobile Technology. This indicated that students' problem-solving skills with the application of teacher-created screencasts via Mobile Technology are significantly higher, as indicated in the scores of the experimental group.

Table 4: Comparing the Mathematics Pretest and Posttest Results of the Experimental and Control Group Using Paired Sample T-Test

Comparison	t-value	Df	p-value	Remarks
Pretest Vs. Posttest Modular Approach with Teacher-Created Screencasts via Mobile Technology (Experimental Group)	-7.667	4	0.002	With Significant Difference
Pretest Vs. Posttest Modular Approach (Control Group)	-3.207	4	0.033	With Significant Difference

Table 4 illustrates the mean test scores of the participants in the control group during both the pre-test and post-test phases of the study. This table offered a direct comparison of their performance before and after the study's intervention or instruction. It served as a visual representation of any potential changes or improvements in the control group's test scores throughout the course of the study.

Table 4 summarizes the outcomes of a paired sample T-test that was conducted on the pre-test and post-test scores of the control group in the mathematics test. This table provided statistical insights into how the control group's performance had evolved from the initial pre-test to the subsequent post-test. It helped determine if there were significant changes or improvements in their math test scores because of the study's intervention. The mean of the experimental group in the pre-test is 3.80, while it is 8.400 in the post-test. It can be observed that there is a significant increase in the mean score

of the experimental group in the post-test. When data is statistically tested using paired sample t-test the t value is -7.667 with a significance value of .007 which is lower than alpha 0.05. When data is tested using paired sample t-test, the t value is -3.207 with a significance value of .033, which is lower than alpha 0.05, which means the control group performs better in posttest compared to the pre-test.

The results in the test of significant differences in pre-test and post-test have revealed a significant increase in students' problem-solving skills scores especially after the application of teacher-created screencasts via Mobile Technology as indicated in the experimental group. This implies that the figures in the test of significant difference revealed that utilizing the teacher-created screencasts via Mobile Technology is effective in increasing the mathematics performance or problem-solving skills of students.

This implies that the Teacher-created Screencast via mobile technology as an intervention employed by the researcher is effective in improving their problem-solving skills (Guerrero et al. 2013) that the pupils who received screencast lectures were shown to be more successful in comparison to the others who had not been exposed to digital lectures. The fact that the control group, without the use of screencasts, outperformed the experimental group initially highlights the need for a deeper understanding of how technology can be effectively integrated into mathematics education. It's clear that simply introducing technology is not a guaranteed solution; it must be implemented thoughtfully and strategically.

However, the most promising aspect of this study is the significant improvement observed in the experimental group after the application of teacher-created screencasts via Mobile Technology. This demonstrates the potential for technology to act as a catalyst for enhancing problem-solving abilities in mathematics.

As educators and researchers, we are presented with an exciting opportunity. We can explore the nuances of how technology should be incorporated into the classroom, identify the specific areas where it adds the most value, and develop best practices for its utilization. Moreover, we can investigate the varying impacts on students of different learning styles and abilities.

This research underscores the importance of staying open to innovation in teaching mathematics. It challenges us as educators to adapt our methods, embrace technology, and continuously seek ways to empower our students to become more proficient problem solvers. The potential benefits are substantial – not just in improved test scores but in equipping our students with essential skills for their future endeavors. Though getting a positive result, the researcher subjects this study for an opportunity for refinement and proposes the submission of guidelines for the application in the form of policies.

Conclusion and Recommendation

This study intended to describe and test the effects of using Modular Approach with the use of teacher-created screencasts via Mobile Technology in Mathematics, particularly through problem-solving skills. Results in the test of significant difference have revealed no significant difference in the problem-solving skills among Grade VI students between the experimental and control group revealed that there is a significant difference in the problem-solving skills among Grade VI students between the experimental and control group after the use of teacher-created screencasts via Mobile Technology. This indicated that students' problem-solving skills with the application of teacher-created screencasts via Mobile Technology are significantly higher as indicated in the scores of the experimental group. Hence, utilizing the teacher-created screencasts

via Mobile Technology is effective in increasing the mathematics performance or problem-solving skills of students.

The results of this research have implied that the application of teacher-created screencasts via Mobile Technology as a tool in teaching mathematics can increase mathematical skills among students by increasing their problem-solving skills. Thus, Mathematics teachers must utilize and implore innovation in teaching mathematics in their classroom to ensure improvement in students' problem-solving skills.

The findings of this research present a compelling case for further investigation and intervention in the realm of mathematics education, particularly in the context of using teacher-created screencasts via Mobile Technology. Reflecting on these results, it becomes evident that technology can play a transformative role in enhancing students' problem-solving skills. In conclusion, the study's results serve as a call to action for educators and researchers alike. It's an invitation to delve deeper into the realm of technology-assisted education, refine our strategies, and ensure that we are providing the best possible learning experiences for our students. By doing so, we can contribute to the growth and development of their problem-solving skills, ultimately preparing them for success in mathematics and beyond.

The following recommendations were made based on the findings and conclusions revealed in this study.

For DepEd Central Office. Video lessons through screencasts are essential in all learning modalities. Thus, the Department of Education must look for ways and means for the issuance of tablets for all learners to help improve their performance. Issuance of 1:1 laptop for teachers is also highly recommended.

For the Division of Zamboanga Sibugay. The study has provided vital information on the importance of screencast lessons and their effect on the learner's performance hence, the researcher recommends that a seminar on Screen casting or Screen Recording for all teachers be implemented in the whole division.

For the School Administrators. To guarantee that all students excel academically, it is imperative for the school to prioritize teacher training. As a result, a Learning and Collaboration (LAC) session will be arranged to disseminate the findings of this study among the teaching staff.

For the Teachers. The teacher-created screencast is not limited to Mathematics only; this intervention can also be applied to other disciplines for remediation or reinforcements of learning thus, it is recommended that the teachers must undergo ICT training, specifically screen casting or screen recording for professional advancement. Utilization of this intervention is highly encouraged.

For the Parents. Screencasts lessons shared through mobile phones help improve the problem-solving skills of the learners, as revealed in this study. However, exposure to radiation poses health hazards to the learners if used without limitation; therefore, parents must monitor and enforce an hour or two will be the maximum number of hours a child will use the intervention.

For the Learners. Learners must be taught about the utilization of the teacher-created screencast video responsibly.

Action Plan

Objectives: At the end of the study, the researcher aims to do the following

1. Informs the result of the study to thirty-six IHES teachers,
2. Shares the innovation and strategy used in addressing the problem-solving skills in Mathematics of Grade Six-Virgo learners,
3. Demonstrates to the teachers how a Teacher-Created screencast is made

Activities	**Persons Involved**	**Timeline**	**Expected Output**
Pre-Implementation Phase			
1. Prepare LAC Plan on the results of the study.	Researcher	February 2022	LAC Plan
2. Submit LAC Plan to the District Office	Researcher	February 2022	LAC Plan
During Implementation			
1. Conduct LAC session and cascade the results of the study	Researcher	February 2022	Thirty-six IHES Teachers joined the LAC Session
2. Demonstrate how Teacher-Created Screencast is made	Researcher, ICT Coordinators	February 2022	Thirty-six IHES Teachers joined the LAC Session
3. Return demonstration on how Teacher-Created Screencast is made	Researcher, ICT Coordinators	February 2022	Thirty-six IHES Teachers joined the LAC Session
Post-Implementation			
1. Prepare an Accomplishment report on the LAC session conducted	Researcher	March 2022	Accomplishment report prepared
2. Submit the Accomplishment report to the Division Office	Researcher	March 2022	Accomplishment report submitted

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Financial Report

Financial Report

These are the consecutive expenses incurred during the conduct of the action research.

Activity	First Month	Second Month	Third Month	Fourth Month	Fifth Month
Procurement of Supplies and Materials	100.00	100.00	100.00	100.00	100.00
Reproduction, Printing & Binding	50.00	50.00	50.00	50.00	50.00
Communication Expenses	300.00	300.00	500.00	500.00	300.00
Domestic Travel Expenses	500.00	0	0	0	0
Food Expenses	1,000.00	0	0	0	0
Research Dissemination	0	0	0	0	2,000.00
Total Cost/ Month	1,550.00	550.00	750.00	750.00	2,550.00
Total Research Cost					6,150.00

Appendix A

Appendix A: Assent Form

Dear Parents,

I am Ve Amor V. Sampuro, a Grade Six-Virgo adviser for School Year 2020-2021. I am a Master Teacher at Ipil Heights Elementary School. One of my tasks is to identify problems related to the curriculum and look for the best solutions to address them. This can only be done through detailed observations and careful studies, hence this action research.

For this school year, I have observed that learners were having a hard time coping with their lessons due to the absence of teachers. With the current modality used, learners cannot grasp the entirety of the lesson, thus the researcher will introduce a screencast lesson to be shared with your children, via an offline platform; Bluetooth or Share It applications.

In this connection, you are being informed that your child is being selected purposively since your child has the gadget to manipulate the said intervention that will be used.

Should you allow your child to be part of this study, just check the box below. Rest assured that the results of this study will be used for educational curriculum advancement only.

To go ahead with this study, I need to know that you are willing to participate and that your choice to do so is entirely voluntary. Please review your rights at the bottom of this page and sign below if you agree to participate.

Very truly yours,

VE AMOR V. SAMPURO

IF YOU AGREE TO BE IN THE STUDY, PLEASE SIGN YOUR NAME BELOW

Name and Signature of the Parent: _____ Date _____

Name and Signature of the Learner: _____ Date_____

The rights below are the rights of every person who is asked to be in a research study. As a research subject, you have the following rights:

1. To be informed of the topic, issue, or region being examined.

2.To be informed of what will occur and the steps involved.

3.To be informed of any potential dangers or discomforts associated with the study.

4.You should be informed if you may anticipate any advantages from taking part, and if so, what those advantages might be.

5.Being able to inquire about the study at any time, both before and after choosing to participate.

6.Can decline to participate in the study or to stop once it has begun.

7.To not feel obligated when deciding whether to participate in the study.

Appendix B

Research Instrument

Pre-Test/Post-Test in Mathematics

Name:_____ Date:_____
Grade:_____ Score:_____

Directions: Solve the following fractions. Express the answer to the simplest form or lowest term, if needed. Write your answers on your answer sheet.

1. The Santos family visited three places during their family trip. They stayed 1 1 /6 hours at Dela Rosa's Dairy Farm, 4 /6 hours at Eden's Garden, and 3 3 /4 hours at Jasmine's Beach Resort. How long did they take their family trip?
2. Annie is selling cashew nuts. She was able to sell 1/ 2 of the box plus 1 1 /2 kg on Sunday. On Monday, she sold 1/ 2 of the remaining cashew nuts from the box plus 1 1 /2 kg. Then, sold the remaining 5 1 /4 kg on Tuesday. How many kilograms of cashew nuts are there in the box?
3. Jerlin spent 2 8/ 10 hours doing her Math homework and 2/ 5 hours doing her English homework. How much time did Jerlin spend on doing her Math homework than on English homework?
4. Mother bought 1 1/ 2 kilograms of ground pork. She used 3 /5 kilograms for her spaghetti. How many kilograms of pork were left?
5. Emy gave away 3 1/ 4 kilograms of sweet potatoes and 5 1 /2 kilograms of corn to her neighbors. How many more kilograms of corn than potatoes did she give away?
6. Ana spent 3 1 /2 hours doing household chores. She spent 1 1 /2 of it washing clothes. How much time did she spend washing clothes?
7. Nina's garden is 4 2 /3 feet long and 1 1 /8 feet wide. What is the area of the garden?
8. Joseph harvested 5 3 4 kilograms of pechay from his vegetable garden. He sold 1 2 of them to his neighbors. How many kilograms were sold?
9. A farmer has 2 sons and 10 1 2 hectares of rice field. He gave 1 4 of his land to the eldest and 3 7 to the youngest. How many hectares of land did the farmer give to his sons?
10. Janice bought 3 1 /2 meters of cloth. She used 3/5 of it to make a pair of pants. What part of the cloth did she use?