

Development and Validation of Contextualized Video Lessons in Mathematics for Grade 7 Learners

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Abstract— This study aimed to develop video materials on the least learned competencies in Mathematics 7 of Mimbunga National High School, Gingoog City, Division of Gingoog, Misamis Oriental, Region 10. The topics of the developed video lessons are "Addition of Polynomials and Subtraction of polynomials". The evaluators of the video materials were 15 Grade 7 learners, three (3) Mathematics Teachers, and one Mathematics Supervisor. They were tasked to watch the video materials and rate them using the tools in evaluating video learning resources. Then, the video lessons were evaluated and validated by the Learning Resource Management and Development System (LRMDS) in this Division. After the evaluation, the contextualized video lessons were deposited in Learning Resource Portal, ready to use at the district level and for everybody who can use it. This research used the ADDE Model (Analysis, Design, Development and Evaluation). The findings of the study revealed the following: (1) The least learned competencies for Second Quarter in Mathematics 7 are adding polynomials and subtracting polynomials. (2) Video materials being developed and validated were based on the identified least learned competencies for Second Quarter in Mathematics 7. The topics were the addition of polynomials and the subtraction of polynomials. (3) Based on the comments and suggestions made by the learners, teachers, and expert, the video lessons only require minimal revision or enhancement. These include the font size or text must be increased, color combination and usage must be changed to light colors, the audio quality, and the appropriate music background in the video lessons. All of the feedback from the evaluators about the video lessons are satisfactory. (4) The video materials can be institutionalized at the district level after they pass on the requirements and standards set by the Learning Resource Management and Development System (LRMDS) in evaluating non-print instructional learning resources. The following conclusions are (1) The students lack prior knowledge and skills in adding and subtracting polynomials which is a pre-requisite lesson on the operation of integers. (2) The developed video lessons can be used as supplemental learning materials in teaching Mathematics 7. (3) The video materials were rated with minimal revisions. Therefore, the video lessons were accurately and appropriately developed. (4) Institutionalization of the video materials comes after the quality assurance process at the district level to assure instructional and technical quality.

Index Terms— contextualized video lessons.

1. Introduction

Today's students have grown up in a world different from

their forefathers and mothers. This generation has grown up constantly using technology and playing digital games (Roodt, 2017). Digital videos have been widely used to learn anything from farming to medicine. These video lessons give them interest and motivation to study because it uses gadgets like android phones that most millennial students possess.

With digital videos gaining popularity, it is more likely to use this platform in the education system. A number of multimedia application created as a result of information technology and cognitive theory advancement has been produced as one of the teaching technologies used in learning-teaching process. Interactive multimedia helps students learn more effectively and efficiently in their learning way and speed. It is anticipated that the learning process would be more effective and efficient through multiple representations-based multimedia Syahri, et al (2021).

According to Bevan (2017), digital videos continue to grow popular in educational settings. Students of today are maximizing educational videos to learn almost everything. Multimedia is the "platform where materials are combined with text, graphs, audio, and simulation. According to Mayer's Cognitive Theory of Multimedia Learning (2019), The numerous forms of media is the introductions of material with pictures or text. Additionally, E Dinc (2017) defines multimedia as the combination of digital platforms like text, audio, graph, animation, and visual. Shah & Khan (2015) added different data are used to illustrate a concept, an event, or a subject via multimedia sources made utilizing audio, video, visual, graph, animation, and text.

The utilization of educational videos is common here in the Philippine setting. It began in the 1990s with Sine'Skwela from the ABS-CBN Foundation. Currently, the Department of Education offers English, Science, and Mathematics remediation for learners in Educational Technology Unit (ETUlay). All students would be able to access it because it was broadcast on the primary DepEd social media pages and additional Deped Tayo Regional Facebook profiles. This initiative of the Department aims to offer a platform for online tutorials that is facilitated by education professionals for students and instructors. DepEd launched this ETUlay to

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provide parents and learners an easier way to answer the Self-Learning Modules (SLMs) in home learning. All episodes of this educational video were in line with the MELCs (Most Essential Learning Competencies). The video sessions can be live streamed or viewed on DepEd Edtech Unit and DepEd TV's Youtube channels (Manila Bulletin February 13, 2021) (OUA Memo 00-0121-0126). The lessons are presented in a tutoring manner, including instructions on how to complete tasks and explanations of the lesson's specifics.

Mimbunga National High School adapted the modular distance learning modality. Learners are given printed modules weekly and retrieve the following week's answer sheets and modules. Mostly, students need help to answer the different activities in the Self-Learning Modules in some subjects, including Mathematics. Therefore, they need to approach their teacher for a further explanation during the timetable for module delivery and retrieval. Furthermore, not all of them will be catered to individually because of time constraints.

Hence, this study attempts to bridge the gap in the modular distance learning modality issues using technology-based supplementary materials. This research tries to develop video lessons in Mathematics 7 based on the identified least learned competencies. These video lessons are subject to validation to be institutionalized at the district level of the Department of Education Division of Gingoog City. The findings will be beneficial in formulating solutions that will best address teachers' challenges in developing video lessons for learners and justify that it helps improve the academic achievement of students in Grade 7 in mathematics.

2. Review of Literature and Studies

This section presents the review of literature and studies related to the present study.

According to Mayer (2016), words and images together have a deeper learning impact than just words alone. Graphics can help pupils understand not just by visually breaking up a boring black-and-white screen but also by visually breaking up a dull black-and-white screen. Visuals, in addition to text, can help students who are new to a complicated topic. Building mental graphical and linguistic representations of the content and connecting them mentally is essential to active processing. Multimedia classes combining words and graphics that communicate the same to-be-learned subject will likely achieve this purpose.

Mendoza *et al.* (2015) state that, the use of video presentations is beneficial to aid students' learning. This is especially useful in today's learning environment when students learn at their speed at home. As a result, they are more likely to grasp the lesson regarding their way of thinking.

Modular learning is the most popular in the Philippines, particularly in public institutions. The basic goal of modular distance learning is to establish a relationship with the student and provide guidance (Flip science, 2020). Modular Distance Learning is divided into two categories—modular distance learning, both printed and digital. Printed modules are preferred by students in off-the-grid regions without internet access. However, those with an internet connection were given the

option of using the digital format of the programs.

According to 2015 research, a major part of the educational curriculum includes mathematics which is necessary for daily living and is interrelated to study in other disciplines. It gives us a better understanding of the outside world and a productive approach to develop mental fortitude. Math promotes the use of reason, logic, creativity, abstract or spatial thinking, problem-solving abilities, and successful communication. Everyday activities like driving, timekeeping, and cooking as well as professions like accounting, finance, banking, engineering, and software all rely heavily on mathematics. These tasks call for both rigorous mathematical training and scientific research (Mahtab Alam Quddusi, 2018).

Most students dread mathematics (Langoban, 2020) because they do not understand what is and is not acceptable mathematic behavior. They cannot tell which behavior is proper and which is not. According to Clark and Mayer (2016), the cognitive theory of multimedia learning provides a framework for comprehending the procedures and potential benefits and drawbacks of video for learning.

Students have different learning styles. Three learning styles are based on our five senses: visual, auditory, and kinesthetic (VAK). According to a 2017 article published in *Frontiers in Psychology*, people learn better when they get information in their chosen learning style. (Dunning, 2021)

In a long time, several forms of video content have been employed for instructional reasons. Nonetheless, educational films in mathematics still need to be more frequent. With the growth of technology, more and more methods for teaching mathematics utilizing various devices have been devised. Learners can watch pre-recorded video courses at home to supplement their learning without the presence of a tutor. Video and audio recordings have been frequently employed particularly in blended learning environments with a variety of conditions such as modular distance learning. (Bollmeier *et al.*, 2010; Day and Folcy, 2006; Green *et al.*, 2012; Karnad, 2013; McGarr, 2015; Mettinen and Karjalainen, 2012; Owston *et al.*, 2011; Pinder-Grover *et al.*, 2011; Prodanov, 2012; Pursel and Fang, 2011; Secker *et al.*, 2010 and Soong *et al.*, 2006). The studies focused on how the students perform after using video lesson content.

Studies have been carried out to investigate the methods used, the influence, and the benefit of video lessons. For example, McGarr (2015) has examined podcasting and its uses: substitution (provided after the lecture), supplementary (additional resources), and creative use (students' generated podcasting). Supplemental video lessons are very effective, especially for those students who are visually inclined.

Accordingly, Greenberg *et al.* said that video lessons were widely adopted to replace classroom face-to-face learning. Technology can improve learning, according to several meta-analyses (Means *et al.*, 2010; Schmid *et al.*, 2015). According to several research (Allen & Smith, 2012; Kay, 2012; Lloyd & Robertson, 2012; Rackaway, 2012; Hsin & Cigas, 2013; Stockwell *et al.*, 2015), video may be a very effective instructional tool. According to Clark and Mayer (2016), students will learn effectively when graphics are used instead

of the black and white screen, especially those learners who are visually inclined.

According to the multiple intelligence's idea, a person has at least eight distinct intelligences, each with a different set of skills and preferences: linguistic, logical-mathematical, spatial, musical, bodily-kinaesthetic, interpersonal, intrapersonal, and naturalistic. (Gardner, 2006). "The methods in which people take in information, see the environment, and learn are determined by the relative strengths and weaknesses among and between this intelligence." (Marshall, 2002, p. 8). This is a major departure from the conventional definition of intelligence, which primarily takes verbal and computational skills into account. According to Gardner's argument, teachers should take all of this intelligence into account when planning lessons since it affects how well students can learn a subject. While traditional textbooks frequently adopt a primarily linguistic approach to learning, video's many formats may adopt several approaches in addition to linguistics, such as aesthetic, logical, or rational, meeting the needs of a wider range of learners. "These multiple entry points' into the content are precious in a formal educational setting, as they offer more extraordinary accommodation to the multiple intelligences of a diverse group of students," says one researcher.

According to Ali (2019), there is solid evidence that digital video lessons may significantly impact student performance. He also stated that pupils who use video lessons are more driven to study and participate in other activities, resulting in higher grades. According to Lee *et al.* (2016), incorporating supplemental video lessons boosted students' interest and confidence in acquiring skill, and pleasure in class.

Moreover, Klette *et al.* (2018) mentioned that using videos could increase students' participation. According to some researchers, employing educational films as a vital technique can increase students' engagement, as is a strategy advised in the field of education. Additionally, Lenn *et al.*, (2015) stress the significance of supplementary lesson content and the methodology of displaying video lessons, for it boosts students' creativity and cooperation. According to Guo *et al.* (2015), students frequently skip through significant portions of instructional films. (Doolittle *et al.*, 2015) Shorter films have been proven to be more interesting. The length of the segment of the video lesson should embed with the content on a particular topic solely so that the learners will not get bored. With these concerns, video design and implementation should consider the three elements: mental effort, participation of the students, and active learning. These components offer a strong foundation for creating and utilizing video as a successful teaching tool. (1) Memory contains several components, according to Sweller's (1988,1989, 1994) cognitive load theory. Sensory memory is transient and gathers data from the surroundings. Working memory has the partial ability to temporarily store and process information from sensory memory that has been chosen. (2) The film must be succinct, utilize conversational language, and talk fairly rapidly to ensure student attention. (3) Active learning: strategies should promote active learning, with interactive questions to enhance student self-evaluation by using guided questions and interactive

elements that offer students agency.

According to research by Yousef *et al.* (2015), using video-based learning enhanced learning results. The visual advantages of video act as a facilitator for expanding access to logical demonstrations. By giving them the chance to see close-up images and the choice to watch them more than once if necessary, students may learn from the subject matter experts (Ramlogan *et al.*, 2014).

According to the survey and interview, video lessons aid students' learning in several ways. It includes comprehension, recollecting facts, giving different perceptions, igniting enthusiasm, inspiring, and expanding knowledge (Leo & Puzio, 2016; Mennella, 2016; Seery, 2015). Studies revealed a significant difference in test scores for students accessing video materials to supplement problem-based instruction. Tutorial videos also use to learn practical skills (Back *et al.*, 2016).

Ljubojevic (2015) confirmed that respondents get a higher level of comprehension if the videos are presented in a segmented manner. They proved that the accurate design and presentation of multimedia teaching tools really matter. Several situations where supplemental video is used in the classroom are more efficient if the educational content has been displayed.

As a method to improve the caliber of instruction, video courses have moreover demonstrated a high level of efficacy (Calandra & Rich, 2015). Shabiralyani (2015) said that no matter the types of materials in a language learning content, a large proportion of the learning that takes place depends on the materials used, which might range from hand-outs, listening, and even videos. This means that localized materials are essential in understanding the learning context. Shabiralyani added that the learners' performance is better when using localized materials since it is familiar to them and motivates them. In addition, using localized materials promotes the cultural and social identity of the learners. In this case, it will bridge the gap in learning cultural diversities. Thus students will understand better, and their performance will eventually increase. Therefore, localized video lessons will aid the students in answering their self-learning modules and find it more interesting with these localized video lessons. Therefore, it is the most effective and efficient way in reaching our learners in distance learning modality.

Furthermore, "The Mathematical Association Journal," mentioned that video lessons can provide demonstrations not ordinarily available in the classroom. This makes sense in the modality that we are having right now. The video also provides a unique understanding of mathematically induced circumstances. It can describe a situation or link the answer to a genuine problem and demonstrate how the two are related through animations or other methods.

Likewise, Rajhi (2016) affirmed that multimedia presentations (videos) could help teachers and students. He found out that most students preferred multimedia presentations over printed materials. Videos can encourage pupils whose learning styles are visual. It increases students' interest, attracts attention, and increases focus and understanding. Students have the chance and freedom to play, stop and watch the videos repeatedly; thus, it increases students' comprehension, analysis,

and retention of the learning content (Bevan, 2017).

Technology plays a vital role in this phenomenon; online and emergency remote teaching are strengthened. Crawford (2017) added that online teaching is underpinned by an interest in the advantages and possibilities of digital technology. However, teachers are forced to reinvent themselves in emergency remote education with previous preparation. Therefore, particular attention should be paid to the digital competence of educators. Redecker (2017) said that digital educators or 21st-century educators must possess the knowledge and skills to use digital technologies and skills relating to teaching and methodologies.

Furthermore, according to research, the media may be employed as a message distributor to reach the goal of education. Multimedia presentations can be used to enhance modular distance learning courses. The educator is responsible for constructing and designing active learning activities that will enable students to satisfy expected learning outcomes, enhance specific capabilities, and be prepared to fulfill the requirements of the 21st century job. This is backed up by Oktovianus Nau Lalian (2018), who claims that employing video media in mathematics learning significantly impacts students' academic performance.

A. Framework

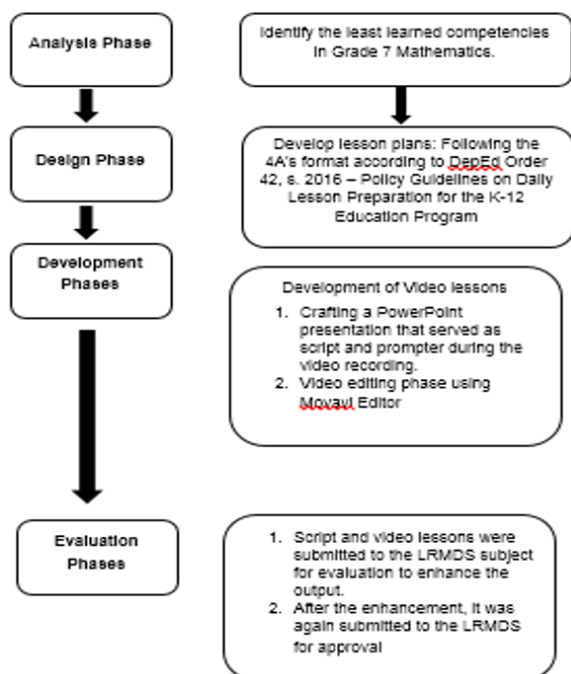


Fig. 1. Steps in the development of the video using ADDE model

B. Objectives of the Study

The study aimed to develop and validate video lessons on the least learned competencies in Mathematics for Grade 7 learners of Mimbunga National High School, Gingoog City School Year 2021-2022.

Specifically, it sought to answer the following questions:

- What are the least learned competencies in Grade 7 Mathematics?
- From the least-learned skills, what video materials can be developed?

- Based on the comments of experts and students, how can the contextualized video materials be improved?
- Finally, how can the contextualized video materials be institutionalized in the district?

3. Methodology

This section presents the research design for developing and validating video materials, the ADDIE Model, and Modified Learning Materials Development using the ADDIE Model.

Research and development (R&D) are the research method employed. Research and development are a procedure for creating and approving educational and learning-related goods. The ADDIE development model was employed. One of the models for systematic learning design, it. Widyastuti, Eri, and Susiana (2019) claim that ADDIE is designed and programmed with sequences of systematic activities to address learning issues associated with learning resources that adhere to students' requirements and traits.

The standard procedure used by instructional designers and training developers is called the ADDIE model. A dynamic, adaptable framework for creating efficient training and performance support tools, the five phases of analysis, design, development, implementation, and evaluation (Castro & Tumabay, 2021). These five stages were used in developing the video materials in Mathematics 7.

A. Development ADDIE Model

In this research, the researcher developed video materials based on the least learned competencies in Mathematics 7 using ADDIE's model as a guide.

1) Analysis Phase

The instructional problem is defined, the instructional goals and objectives are set, the learning environment is determined, and the learner's current knowledge and abilities are noted during the analysis phase. This phase includes a requirements analysis, audience analysis, context analysis, and task analysis. With the aid of this data, the solution and objectives may be determined.

2) Design Phase

Learning objectives, assessment tools, activities, content, subject matter analysis, lesson preparation, and media choice are all part of the design phase. The design process need to be methodical and precise. A logical, methodical approach to defining, creating, and assessing planned methods for achieving the project's objectives is referred to be systematic. Specific means that every component of the instructional design strategy needs to be implemented with care.

3) Development Phase

Instructional designers and developers produce and put together content assets that were outlined in the design process. The designers produce storyboards and visuals during this stage. The project is then examined and altered in light of the comments.

4) Implementation Phase

During the implementation phase, a process for training the facilitators and learners is designed. The course content, learning objectives, delivery strategy, and assessment processes should all be included in the facilitators' training. The learners

must be trained on new tools (hardware or software), and they must register as students as part of the preparation process.

The project manager also makes sure that the learning application or Web site is operational throughout this phase, together with the books, practical materials, CD-ROMs, and software.

5) Evaluation Phase

The evaluation step is divided into formative and summative components. Each level of the ADDIE process includes formative evaluation. Summative assessment includes exams created for criterion-related referenced items that are domain-specific and offers user response options.

4. Modified ADDE Model

A. Need Analysis

Need analysis is vital to make a good product for the student. A variety of analyses will be performed, including learning environment analysis, user analysis, identifying teaching goals, and so on. It is the stage for identifying the problem and how to solve it. The goal of conducting analysis is to ensure that the design of the video materials will meet the needs of the students. In need analysis, the researcher conducted a test on 40 selected participants in Grade 7. They were given a 30-item multiple choice test comprising the six topics in second in Mathematics 7. The pre-test result was collected and analyzed to identify the least learned competencies. The identified least learned competencies were the basis for developing video materials in Mathematics. Based on the test result, the learners got a meager score on the two topics: addition and subtraction of polynomials. So, these two topics were considered the least learned competencies in Mathematics 7. As a result, the researcher created and developed video materials about the addition and subtraction of polynomials.

5. Results and Discussion

Problem 1. What are the least-learned competencies in Grade 7 Mathematics?

There are six competencies in Grade 7 Mathematics which include translating English phrases to mathematical phrases; evaluating algebraic expressions for given values of the variable; classifying algebraic expressions according to the degree & number of terms; addition and subtraction polynomials; derivation of exponents; multiplication and division of polynomials. These competencies were the basis for the test to determine the least learned competencies in Grade 7 Mathematics.

Table 1 shows the percentage of students who answered each competence correctly and the percentage of students who answered incorrectly. Thirteen out of 40 students, or 33%, got correct answers in translating English phrases to mathematics

phrases, and 27 out of 40, or 67, got incorrect answers. Furthermore, the table shows that 17 out of 40 students, or 42% got correct answers in evaluating algebraic expressions for given values of the variables, and 23 out of 40, or 58% got incorrect answers. It revealed that 16 out of 40, or 41% got correct answers in classifying algebraic expressions according to the degree & number of terms, and 24 out of 40 students, or 59% got incorrect answers. Nine out of 40, or 23% of the students, got correct answers in addition and subtraction of polynomials, and 31 out of 40, or 77%, got incorrect answers. Additionally, 16 out of 40 students, or 40%, got correct answers in deriving the laws of exponents, and 24 out of 40 students, or 60%, got incorrect answers. Twelve out of 40 students or 30% got correct answers in multiplication and division of polynomials and 28 out of 40 students or 70% got incorrect answers.

The results show that the competencies in addition and subtraction have the lowest number of students with correct responses. This will mean that the competency on addition and subtraction of polynomials is the least learned among the six competencies in Grade 7 Mathematics. This is supported by a study by Soso (2020) on the ability of Grade 7 to solve equations and problems involving polynomial functions. This implies that the learners need a higher mastery level on this competency based on DepEd Memorandum # 160 s. 2012 Using the National Achievement Test (NAT) Results to Their Fullest Potential in Order to Improve Underperforming Schools.

Problem 2. Based on the least learned competencies, what video materials can be developed?

The advanced video materials focused on the addition and subtraction of polynomials as the least learned competencies in Grade 7 Mathematics. Each video lesson follows the flow reflected on the crafted lesson plan using the 4A's format: Activity, Analysis, Abstraction, and Application. The students, teachers, and experts evaluated and validated these contextualized video lessons.

There were activities embedded in the video lessons that served as a review or motivation for the learners, followed by the proper discussion of the lesson. Questions were asked in the video during the discussion so the learners could interact as they watched them. Activities or tasks were included in each video lesson that students may accomplish during the application and evaluation phase. The learners may stop or pause the video while answering the given tasks. The answers to those activities were given after the given time.

After the videos were created, it was then evaluated and validated. Fifteen students in Grade 7 were evaluators of the video materials. They were allowed to watch the videos and tasked to answer the evaluation tools after watching the video materials. They were also urged to comment on the video

Table 1
Results of test to determine the least learned competency in grade 7 mathematics

Competencies	Students with correct responses (n ₁)		Students with incorrect responses (n ₂)	
		%		%
Translating English phrases to mathematical phrases and vice versa	13	33	27	67
Evaluating algebraic expression for given values of the variables	17	42	23	58
Classifying algebraic expression according to the degree & number of terms	16	41	24	59
Addition and subtraction of polynomials	9	23	31	77
Derivation of the laws of exponents	16	40	24	60
Multiplication and division of polynomials	12	30	28	70

content. The video materials have been enhanced or improved using the evaluators' suggestions, comments, and recommendations.

Problem 3. Based on the comments of experts and students, how can the contextualized video materials be improved?

Considering the evaluations' remarks and recommendations, the contextualized video materials can be improved by enhancing the color of the background used in the presentation. Some learners commented that the background music is quite different. It was also suggested that some of the text or font size must be big enough to see it clearly, even for the last students sitting at the back. There were comments that the learners wanted more examples to clarify the topic. The audio of the materials can be enhanced since there was a portion that needed to be better spoken by the teacher. The rest of the comments from the learners were good. The majority of the learners like and love the video materials, and they learn from these videos. Comments of the evaluators are presented in Tables 8 and 9 below. The evaluators of the video materials were 15 Grade 7 learners, 3 Mathematics teachers, and one Mathematics Division Supervisor.

Problem 4. How can the contextualized video materials be institutionalized in the district?

The researcher requested approval from the Office of Schools Division Superintendent thru the Learning Resource Management and Development System (LRMDS) Section to present the video materials for evaluation. After the approval of the Schools Division Superintendent, the researcher consulted the LRMDS Section on how the learning resource can be institutionalized at the district level. The LRMDS Manger required the researcher to the video materials must be evaluated and validated by the subject expert or the Supervisor in Mathematics. In order to pass the requirement, several documents were needed, including an Evaluation Tool for Content ADM-DepEd-developed Modules, an Evaluation Rating Sheet for Non-print materials, an Inventory of Third-Party Contents, and an Inventory of Original contents. In addition, the learning resource materials shall be evaluated to ensure their content, instructional, and technical quality. After the quality assurance process, this follows the issuance of a Specialty Clearance.

After the approval of the LRMDS Manager of the learning resources, the video lessons were forwarded to the district level for the institutionalization of the contextualized video lesson with the knowledge of the Public School District Supervisor in East 2 District. The LRMDS Manager required the researcher to sign a waiver or Writer Assignment Agreement form. This form permits anybody to use the materials since it has already been deposited in the Learning Resource Portal and is for public use.

6. Conclusion

Using the study's findings as a basis, the following conclusions are made.

- The students lack prior knowledge in the operation of integers and the identification of similar and dissimilar terms.
- The accompanying video lessons can be used as additional resources for teaching Mathematics 7. This

is helpful, especially for students needing help in terms of comprehension. Learning and re-learn are necessary to have a high mastery level. One hour per subject in a classroom setting is insufficient to catch up with a particular lesson's details. Therefore, these video materials help students understand the lessons because they can watch them repeatedly until they fully understand the content.

- The video materials were rated in color combination and usage, font size, audio quality, and technical quality. These features of a video lesson are necessary in order to have quality output video materials.
- The Learning Resource Management and Development System (LRMDS)'s quality assurance procedure, which ensures instructional and technical excellence, is followed by institutionalization of the video materials.

A. Recommendations

The following suggestions are made for your consideration based on the findings reached.

School Head. School heads can motivate and encourage teachers to conduct a diagnostic assessment to determine the learners' strengths and shortcomings. Identified least learned competencies could be the basis for developing contextualized video lessons to be used as supplementary materials in teaching. *Mathematics Teachers.* Teachers may strengthen teaching strategies by giving enough time to the least learned competencies to master the skills and knowledge of learners in Grade 7 Mathematics.

Parents. Cooperation and collaboration of parents are essential for students learning development. They are reminded to support their children in motivating and providing for their needs in school by giving them ample time to use gadgets for educational video lessons that will improve their academic performance.

Learners. Learners are encouraged to utilize their gadgets for school works purposes. For example, instead of playing online and offline games for several hours, they can use the gadgets to watch video lessons that will help them understand the lessons. With these, the learners can benefit from using gadgets for educational change, including active participation, promoting learning, and academic accomplishment.

Acknowledgment

The following individuals have become instrumental in the completion of this study. Dr. Elizabeth L. Baguio, her adviser, for sharing her expertise and sparing her quality time to fast-track the completion of this study. Dr. Levita B. Grana, Dr. Isidro M. Biol Jr, and Dr. Fernando T. Herrera, the panel members, for their brilliant and outstanding suggestions and comments guiding her to complete the study. Mr. Fernando C. Herodico, Jr., Mimbunga National High School's School Principal, for giving this study the go-ahead. Margarito A. Amper Jr, her husband, for the love and untiring support throughout this journey. Steven Bliss and John Garreth, her two sons, for being an inspiration that radiates her tired disposition. A special thanks goes out to the All-Powerful and Merciful

God, who is the source of knowledge and understanding, and for making these things possible via His divine intervention.

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