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Development and Acceptability of Video Instructional Materials on Research Management Guidelines for Public School Research Coordinators

Hel S. Patricio*, Jovel J. Oberio
Department of Education, Cadiz City, Negros Occidental, Philippines

*Corresponding Author Email: hel.patricio@deped.gov.ph

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Abstract. The MATATAG curriculum emphasizes supporting teachers through professional development and research expansion. This study assessed the acceptability and effectiveness of developed video instructional materials on the Research Management Guideline. Specifically, it evaluated the materials in terms of content, instructional, and technical quality, as rated by Learning Resource Evaluators. A pre-experimental design and descriptive-developmental method were used. The participants included 70 research coordinators from public schools in the Philippines, identified through purposive sampling. Two tools were used: a 15-item RMG Assessment and an Evaluation Tool for Video Instructional Materials. Results showed that the video materials received a "very satisfactory" rating in all evaluated areas. Teachers' understanding of the RMG significantly improved after using the videos, as shown by a highly significant difference between pretest and posttest scores ($p = .000$, $t = -13.186$). The materials aligned well with the Learning Resource Management Section (LRMS) standards regarding content, visuals, and digital effects. The study concludes that video instructional materials are effective supplementary tools for improving teachers' understanding of research processes. It recommends encouraging teacher collaboration in material development and reinforcing validation efforts by LRMS coordinators.

Keywords: MATATAG curriculum; Professional development; Video instructional materials; Research Management Guidelines.

1.0 Introduction

Edukasyong MATATAG highlights the fourth critical component: supporting teachers to teach better by providing professional development programs and training or other learnings, and the development of interventions and research for school leaders. The backbone that teachers are active in the development of education bears witness by knowing the problem in the classroom and taking action to resolve that problem (Lisnawati, 2021). Teachers become the spark plug for change and responsible communication channels for improving their classroom teaching and uplifting students' learning performance. Doing classroom research is by knowing what the problem is in the classroom and how that problem can be taken up in order to improve the teaching and learning process (Pakpahan, 2022).

It is evident that teachers are part of the environment where the problem occurs, and action research enables them to become aware of what went wrong and what could be done to resolve the issues. Research has become an important professional development program for teachers emphasized by the Department of Education and the

Commission on Higher Education (Julia et al., 2020). The Department of Education continues strengthening the culture of research and evidence-based decision-making in basic education. Corollary to this, it issued DepEd Order No. 16, s.2Ol7, titled Research Management Guidelines, to establish a comprehensive framework for managing research, including the Basic Education Research Fund. DepEd has also issued an order to all of its school heads, supervisors, and teachers to adopt the enclosed Basic Education Research Agenda, which promotes the conduct of education research in the country. The purpose of this is to identify teachers' and departments' concerns and problems and to recommend solutions based on the results of the findings made. However, doing action research in public elementary and secondary schools may not be as known as some of these teachers are not equipped with the necessary knowledge on what action research is and how to do it. Factors like tight teaching timetables and heavy teaching workloads (Mellisa & Yanda, 2019) are just a few of the reasons why some public school teachers are not motivated and have no interest in doing research.

DepEd Cadiz, the current Division Research Conference (DO 291 s. 2022) has revealed that only five percent of the teachers' population researched improving teaching-learning instruction. Even if doing research is a part of their annual performance evaluation, teachers tend to neglect the contribution it may bring to their performance evaluation score. Thus, this aims to develop video instructional materials for research to fill the literature gap along this line. This study aims to develop video instructional materials for research and to determine their effect on the level of teachers and their understanding of the research management guidelines in the Division of Cadiz City for the school year 2023-2024. Specifically, this study aims to answer the level of acceptability of the developed Research Management Guidelines (RMG)-aligned video instructional materials as evaluated by the Learning Resource Evaluators concerning content quality, i.e., instructional quality, technical quality, and other findings. The teachers' pretest and post-test scores on the Research Management Guidelines Assessment. Lastly, there is a significant difference between the pretest and post-test scores of the teachers on the Research Management Guidelines Assessment.

2.0 Methodology

2.1 Research Design

A one-group Pretest-Posttest Design or Pre-experimental Design was utilized in this study. Pre-experimental studies follow the basic feature of an experimental research design, wherein an independent variable is manipulated to see its effect on a dependent variable. It is one of the most frequently used quasi-experimental research designs in which a single group of research participants or subjects is pretested, given some treatment or independent variable manipulation, and then post-tested. Meanwhile, this will also employ a descriptive developmental research method for developing video instructional materials for research. Kapile et al. (2022) defined the developmental method as a body of research literature that pertains directly to instructional development; this means the output will be developed after conducting the research. In other words, the descriptive developmental method systematically studies the design, development, and careful evaluation of instructional programs, processes, and products that must meet the standard or criteria.

2.2 Research Participants

The study participants were a total population of seventy (70) Elementary and Secondary School Research Coordinators in the Division of Cadiz City for the school year 2023-2024. Of these, fifty (50) are elementary school teachers, and twenty (20) are secondary school teachers. Furthermore, to determine the seventy (70) research coordinators as actual participants, purposive sampling, particularly the total enumeration, was utilized. This study was conducted among the Public-School Teachers in the Schools Division of Cadiz City, Province of Negros Occidental, Negros Island Region. This study utilized 70 research coordinators from both elementary and secondary school teachers as the participants.

2.3 Research Instrument

This study utilized two (2) different instruments. One is the adopted 15-item Research Management Guidelines Assessment and the DepEd Standardized Evaluation Tool for Video Instructional Materials for Research. The Video Instructional Materials focus on the core competencies of enhancing research coordinators' skills in crafting action and basic research. The implementation of video instructional materials as an intervention was done on a scheduled basis by LAC and during in-service training. The video instructional materials for research have passed

through content validation using the Learning Resource Management and Development System (LRMDS) evaluation tool and DepEd guidelines in evaluating learning resource materials.

2.4 Data Gathering Procedure

The researchers sought permission from the Office of the Schools Division Superintendent of the Division of Cadiz City and the Schools District Supervisor to conduct the research instrument on the target participants. The approved letter was then presented to the participants to generate needed data. The developed video instructional materials for research were distributed to the school research coordinators. They were expected to read and apply fundamental skills to enhance their research-crafting competence. Their records of exercises like answer sheets and other activities were submitted and retrieved, and the activity was given again until the last scheduled implementation date. At the end of the quarter, the participants were given the posttest using the adopted 15-item Research Management Guidelines Assessment, and the scores were recorded, too.

In designing, developing, and validating video instructional materials, the researchers adopted the ASSURE, an instructional material design model developed by Heinrich and Molenda in 1999 (cited in Mehmet, 2021). Its goal is to design learning materials by integrating research crafting processes in order to enhance and produce more educational research (Mehmet, 2021). According to the model, the researcher will follow six stages based on the acronym of the model's name, ASSURE. 1) Analyzing Research Coordinators' Needs 2) Stating Standards and Objectives 3) Selecting Strategies, Technology, Media and Materials 4) Utilizing Technology, Media and Materials 5) Requiring Learner Participation 6) Evaluating and Revising.

2.5 Data Analysis

The researcher used descriptive and inferential statistics outlined in the problem statement to process the data. To answer the level of acceptability of the video instructional materials for research as evaluated by the Learning Resource Evaluators concerning content quality, instructional quality, technical quality, and other findings, the standardized tool used by the Department of Education in evaluating Teacher developed Printed Learning materials in the Learning Resource Management and Development System was applied. Mean, Frequency, and Standard Deviation were used to determine the pretest scores of the teachers on the Research Management Guidelines Assessment. Mean, Frequency and Standard Deviation were utilized to determine the teachers' post-test scores on the Research Management Guidelines Assessment. To measure the significant difference between the pretest and posttest of the teachers on the Research Management Guidelines Assessment, the T-test of the independent sample was utilized. The pretest and post-test scores of the teachers on the Research Management Guidelines Assessment were measured through a 15-item test.

2.6 Ethical Considerations

In adherence to the ethical issues, the following important considerations and protocols were observed: 1) Seek consent from the office of the school's division superintendent and district supervisor regarding the conduct of the study. The researcher shall secure consent, letting the school heads express their intention to allow their teachers to participate and help facilitate the study's conduct since teachers have their tasks at school. 2) Orientation for all the participants shall be conducted by the researcher emphasizing their rights as participants, such as the right to withdraw should they change their mind during the data gathering, the right not to participate, the right to anonymity, and the right to be treated with the highest degree of confidentiality of every data gathered from them. 3) To Ensure the confidentiality of the participants' real identities and responses, the completed questionnaires will be kept in the vault for a year and shredded after the study has been published.

3.0 Results and Discussion

3.1 Level of Acceptability of the Video Instructional Materials

In terms of Content

Table 1 shows the level of acceptability of the Video Instructional Materials for Research in terms of content. Based on the six parameters, a mean score of 4.00 was uniformly obtained, which was very satisfactory. Content shall adhere to LRMS standards. Applying standards to the process makes researchers' crafting of important concepts and skills a key factor in enjoying the teachings.

Table 1. *Level of acceptability of the video instructional materials for research in terms of content*

	Parameters	M	sd	Description
1.	Content is suitable to the student's level of development	4.00	.00	Very Satisfactory
2.	Material contributes to the achievement of specific objectives of the subject area and grade/year level for which it is intended.	4.00	.00	Very Satisfactory
3.	The material provides opportunities to develop higher cognitive skills, such as critical thinking, creativity, learning by doing inquiry, and problem-solving.	4.00	.00	Very Satisfactory
4.	Material is free of Ideological, cultural, religious, racial, and gender biases and prejudices.	4.00	.00	Very Satisfactory
5.	Level of difficulty is appropriate to the intended audience	4.00	.00	Very Satisfactory
6.	Material has the potential to arouse the interest of target learners.	4.00	.00	Very Satisfactory
	Mean	**4.00**	**.00**	**Very Satisfactory**

Scale: 3.26-4.00 - Very Satisfactory, 2.60-3.25 – Satisfactory, 1.76-2.50 – Unsatisfactory, 1.0-1.75 – Very Unsatisfactory

These parameters were particularly on content suitability to target audiences' level of development, on material contribution to achievement objectives, on material provision for higher cognitive skills, on material as gender-sensitive and culture-based, on the level of difficulty to the intended audience, and on material that potentially arouses the interest of learners. It has garnered an overall mean score of 4.00, which was interpreted as very satisfactory. The level of acceptability of the multimedia glossary regarding its content and materials used has adhered to the standards considering the skills and the audiences.

It was attested by Goel and Joyner (2019) that when preparing any learning materials, it is important that the teacher ensures the content used in the materials follows the principles of its construction. The most promising current resources used in the fields are those reviewed by the teachers and DepEd Authorities. These have significantly impacted the development of detailed review criteria and the reviewer's expertise. In addition, Reigeluth and Keller (2019) stated that the review of instructional materials, which precedes selection, will be based on standards. It is also assumed that local policies will determine the source of standards from the national and state levels down to the local level. This implies that, although the teachers know the importance of multi-media glossaries in delivering a lesson, they are not all inclined to develop them. Moreover, collaboration among teachers and their initiatives to craft such instructional materials is a big help. Typically, heads of schools are supposed to be instructional supervisors to ensure that instructions are followed and that students are provided with quality education and instructional resources.

In terms of Word Format

Table 2 elicits the level of acceptability of the research video instructional materials in terms of word format. It was apparent that all the word format parameters obtained an overall mean score of 3.85 with an SD of .23, which was very satisfactory. Screen text, spaces between letters, and digital effects are aspects of the resources that help visualize various situations and concepts of the lesson.

Table 2. *Level of acceptability of the video instructional materials for research in terms of word format*

	Parameters	M	sd	Description
1.	On-screen text is readable.	3.80	.45	Very Satisfactory
2.	Spaces between letters and words facilitate reading.	3.80	.45	Very Satisfactory
3.	Font is easy to read.	4.00	.00	Very Satisfactory
4.	Digital Visual is of good quality (i.e., no broken letters, even density, correct alignment, properly placed screen registration).	3.80	.45	Very Satisfactory
	Mean	**3.85**	**.23**	**Very Satisfactory**

Scale: 3.26-4.00 - Very Satisfactory, 2.60-3.25 – Satisfactory, 1.76-2.50 – Unsatisfactory, 1.0-1.75 – Very Unsatisfactory

Specifically, the parameter with the highest Mean Score of 4.00 was the fonts that are easy to read, while texts, word space, and digital visual effects settled in the mean score of 3.80. Simplifying texts and producing 'easy-to-read texts' are other ways of reducing the extraneous load to produce texts that align with readers' ability levels. On the other hand, poorly written, excessively complicated instructional text or instructions issued through a material can contribute to difficulty in understanding the text's message (Julia et al., 2020). Fiorella et al. (2017) emphasize that teachers could learn by extracting some digital teaching material contents. The so-called digital teaching material contents refers to multi-media materials, digitalized data, or contents presented with other digital methods. The implication of this finding to teachers relies greatly on the consideration of the texts, spaces between letters, and the visual quality of the learning materials, particularly on research video instructional

materials when used in teaching-learning DepEd Research. Teachers must be equipped with DepEd standards as to word format to be adopted for the delivery of the lesson.

In terms of Illustration Format

Table 3 presents the acceptability of the research video instructional materials regarding illustration format. It was evident that the overall mean score of 4.00 was obtained in all the given parameters, which was described as very satisfactory. The well-designed diagrams or graphics used in the illustration format contribute high yields on learning through research video instructional materials because these can explain much more than text. Consequently, the six parameters similarly gained a mean score of 4.00. These parameters are particularly related to the simplicity of the illustrations, clarity of the content, labeling and captioning, appropriateness of colors, visual appeal, and culture-relatedness.

Table 3. *Level of acceptability of the video instructional materials for research in terms of illustration format*

	Parameters	M	sd	Description
1.	Simple and easily recognizable	4.00	.00	Very Satisfactory
2.	Clarify and supplement the text.	4.00	.00	Very Satisfactory
3.	Properly labeled or captioned (if applicable).	4.00	.00	Very Satisfactory
4.	Realistic /appropriate colors.	4.00	.00	Very Satisfactory
5.	Attractive and appealing.	4.00	.00	Very Satisfactory
6.	Culturally relevant.	4.00	.00	Very Satisfactory
	Mean	**4.00**	**.00**	**Very Satisfactory**

Scale: 3.26-4.00 - Very Satisfactory, 2.60-3.25 – Satisfactory, 1.76-2.50 – Unsatisfactory, 1.0-1.75 – Very Unsatisfactory

According to Safitri et al. (2020), the illustration format shall follow the following format namely: first, the color contrast that needs to be adjusted so that the background is easy to see, such as dark font colors used against a light background color, next, there should not be too many colors or defending on the targeted learners. Finally, there should not be too much information in one single page. The implication of this finding pertains to the attention to simplicity and suitability of the illustration format among teachers for whom the research video instructional materials are intended. Therefore, teachers should use and consider the illustration format parameters for a good reason.

In terms of Design and Layout Format

Table 4 shows the acceptability of the research video instructional materials regarding design and layout format. It was shown that it garnered an overall Mean Score of 3.70 with an SD of .33, which was described as very satisfactory. A lesson is only as practical as the material used to teach it. Therefore, teachers must create effective teaching materials anchored on DepEd layout standards to ensure they learn to their maximum potential. Specifically, the parameters with the highest mean score of 4.00 were related to the adequacy of the illustration of the text. The text's attractiveness, simplicity, and harmony garnered a Mean Score of 3.80 with an SD of .55.

Table 4. *Level of acceptability of the video instructional materials for research in terms of design and layout format*

	Parameters	M	sd	Description
1.	Attractive and pleasing to look at.	3.80	.45	Very Satisfactory
2.	Simple (i.e., not distracting the reader's attention).	3.40	.55	Very Satisfactory
3.	Adequate illustration of the text.	4.00	.00	Very Satisfactory
4.	Harmonious blending of elements (e.g., illustrations and text).	3.60	.54	Very Satisfactory
	Mean	**3.70**	**.33**	**Very Satisfactory**

Scale: 3.26-4.00 - Very Satisfactory, 2.60-3.25 – Satisfactory, 1.76-2.50 – Unsatisfactory, 1.0-1.75 – Very Unsatisfactory

Any tool used to convey information or test understanding is a chosen teaching material. This broad description includes layout elements of worksheets, videos, quizzes, and activities (Pakpahan, 2022). On the other hand, Bulkani et al. (2022) opined that teachers need to consider several factors when designing materials. By taking time to consider educational goals—and ways to create and deliver materials appropriate to the specific body of students being taught—teachers will be more successful in creating quality teaching material that promotes learning. The implication of this finding resides in the importance of layouts and designs in crafting teaching-learning materials. In some cases, facilitating students' learning with properly designed learning materials instead of presenting them with information, as is common in the traditional education system, is a big help nowadays. Changing the educational paradigm to develop learning materials can be highly effective and lead to increased comprehension.

In terms of Digital Presentation Format

Table 5 depicts the acceptability of the research video instructional materials in digital presentation format. It gained an overall mean score of 3.90 with an SD of .23, which was interpreted as very satisfactory. The balanced and simultaneous use of audio, text, multi-colored images, and other special effects provides ample and exceptional opportunities for learners to develop a capacity for high-quality learning and increase their ability to be highly innovative in thinking and practice. This category includes only two parameters: the balanced use of sounds, graphics, animations, and videos, which garnered a mean score of 4.0, and the logical and consistent layout of the screen, which obtained a Mean Score of 3.80 with an SD of .45.

Table 5. *Level of acceptability of the video instructional materials for research in terms of digital presentation format*

	Parameters	M	sd	Description
1.	Make balanced use of sounds, graphics, animation, and videos.	4.00	.00	Very Satisfactory
2.	The screen layout is logical and consistent.	3.80	.45	Very Satisfactory
	Mean	**3.90**	**.23**	**Very Satisfactory**

Scale: 3.26-4.00 - Very Satisfactory, 2.60-3.25 – Satisfactory, 1.76-2.50 – Unsatisfactory, 1.0-1.75 – Very Unsatisfactory

Sounds and animation, as applied in instructional materials development, are discovered to be very important in the teaching process. If properly used, it provides a learning environment that will help learners to be more effective. The application of such to teaching depends on the teachers' knowledge of the principles and practice guiding its application, the learners' characteristics, and the lesson's objectives (Lisnawati, 2021). In highlighting the importance of sounds and animation in the instructional process, Safitri et al. (2020) noted that the importance of animation in the educational process is quite evident; animation holds great promise in the instructional process and has dominated instructional practices in recent times. The implication of this finding is that graphics and animation are reliable applications for the teaching and learning process. These bring life to inanimate objects, concretize learning, and make teaching-learning fun, as applied in research video instructional materials.

In terms of Format Size and Weight of Resources

Table 6 shows the acceptability of the research video instructional materials in terms of format size and weight of resources. It garnered an overall Mean Score of 4.00, which was very satisfactory. A multimedia glossary can also be handy and stored as easily as any other digital learning material. Moreover, the best part is that these files can be uploaded or removed fast and efficiently. Moreover, this category fell under two parameters: the easy uploading and storing of files and the relatively light features that obtained mean scores of 4.00.

Table 6. *Level of acceptability of the video instructional materials for research in terms of the format size and weight of resources*

	Parameters	M	sd	Description
1.	Easy to upload and store.	4.00	.00	Very Satisfactory
2.	Relatively light.	4.00	.00	Very Satisfactory
	Mean	**4.00**	**.00**	**Very Satisfactory**

Scale: 3.26-4.00 - Very Satisfactory, 2.60-3.25 – Satisfactory, 1.76-2.50 – Unsatisfactory, 1.0-1.75 – Very Unsatisfactory

Nowadays, research materials such as numerous video resources and virtually any type of digital learning material can also be added. Moreover, the best part is that these files can be uploaded or removed fast and efficiently. Wasting valuable time with printers has been replaced with a couple of clicks that allow learners to update documents and other files (Goel & Joyner, 2019). This is an era in which learners' lives are rapidly becoming more convenient and significantly less cluttered. Gone are those days when learners and teachers struggled to find a place to store piles of folders with printed material (Fiorella & Mayer, 2018). The implication of this finding addresses the file feature of the learning material. Research video instructional materials with light storage capacity enhance productivity, efficiency, and easy and comfortable access to information. This works wonderfully for students mainly because they will no longer need to find a suitable place to store all the bulky material. By storing these files digitally, accessibility, productivity, and efficiency are significantly increased.

In terms of Format in Presentation and Organization

Table 7 shows the acceptability of the Research Video Instructional Materials regarding format presentation and organization. Accordingly, it has garnered an overall Mean Score of 3.84 with an SD of .17, which was satisfactory. Presentation and organization of learning materials must be considered to offer teachers and learners engaging and interesting resources. On these parameters, the parameters with the highest Mean Scores of 4.00 were both on an engaging and interesting presentation and on the vocabulary level adapted to the target readers. While the rest

obtained a mean score of 3.80 with an SD of .45, which were the logical and smooth flow of ideas and the length of sentence usage.

Table 7. *Level of acceptability of the video instructional materials for research in terms of format in presentation and organization*

	Parameters	M	sd	Description
1.	Presentation is engaging, interesting, and understandable.	4.00	.00	Very Satisfactory
2.	There is a logical and smooth flow of ideas.	3.80	.45	Very Satisfactory
3.	Vocabulary level is adapted to the target reader's likely experience and level of understanding.	4.00	.00	Very Satisfactory
4.	The length of sentences is suited to the comprehension level of the target reader.	3.80	.45	Very Satisfactory
5.	Sentences and paragraph structures are varied and interesting to the target reader.	3.60	.55	Very Satisfactory
	Mean	**3.84**	**.17**	**Very Satisfactory**

Scale: 3.26-4.00 - Very Satisfactory, 2.60-3.25 – Satisfactory, 1.76-2.50 – Unsatisfactory, 1.0-1.75 – Very Unsatisfactory

Sentence structure is the text level consisting of ideas that convey information sentence by sentence. One by one, sentences communicate ideas that add up to make meaning (Julia et al., 2020). Another claim by Mellisa and Yanda (2019) precedes Research Video Instructional Materials that include pictures, photographs, and video selection, which is an effective material for teaching and learning, especially to improve students' vocabulary mastery. So, learning vocabulary with authentic material makes students familiar with the target language, particularly in learning vocabulary. The implication of these findings pertains to the maximum benefit from these resources, which can only be achieved through proper presentation and organization of format. Teachers' adherence to these may enhance the use of technology in developing materials for vocabulary instruction.

In terms of Accuracy and Up-to-date Information

Table 8 elicits the acceptability of Research Video Instructional Materials regarding accuracy and up-to-date information. It was evident that the overall mean score of 4.00 in all the given parameters was obtained, which was very satisfactory. The steps in conducting a grammatical error analysis of learning materials will be followed: collecting data, identifying errors, classifying errors, quantifying errors, analyzing the source of error, and revising errors. Particularly, these parameters are conceptual errors, factual errors, grammatical errors, computational errors, obsolete information, and typographical errors.

Table 8. *Level of acceptability of the video instructional materials for research in terms of accuracy and up-to-date information*

	Parameters	Mean	sd	Description
6.	1. Conceptual errors.	4.00	.00	Very Satisfactory
7.	2. Factual errors.	4.00	.00	Very Satisfactory
8.	3. Grammatical errors.	4.00	.00	Very Satisfactory
9.	4. Computational errors.	4.00	.00	Very Satisfactory
10.	5. Obsolete information.	4.00	.00	Very Satisfactory
11.	6. Typographical and other minor errors (e.g., inappropriate or unclear illustrations, missing labels, wrong captions, etc.).	4.00	.00	Very Satisfactory
	Mean	**4.00**	**.00**	**Very Satisfactory**

Scale: 3.26-4.00 - Very Satisfactory, 2.60-3.25 – Satisfactory, 1.76-2.50 – Unsatisfactory, 1.0-1.75 – Very Unsatisfactory

On sentence-level errors, Fiorella and Mayer (2018) stated that it has a significant role in any write-ups. Teachers should first emphasize one of the most fundamental skills, an essential element of writing, which is developing a good sentence before students push to perform any language and vocabulary drills. In addition, conceptual and factual error analysis applied for learning materials development is important because these provide a framework for organizing the ideas logically. Using a clear paragraph structure helps the learner understand the lesson better (Reigeluth & Keller, 2019).

3.2 Effectiveness of the Video Instructional Materials

Table 9 discusses the level of understanding of the teachers of the Research Management Guidelines obtained in pretest and posttest. It is evident that during the Pretest, the teachers garnered a mean score of 22.73 with an SD of 8.16, which was described as average. This shows that the teachers' understanding of the research management guidelines before implementing research video instructional materials was deemed on the average level below the National Standard of 75 percent. On the other hand, after the implementation of the research video instructional materials were incorporated into teaching and learning research, the teachers obtained a Mean Score of 36.66 with an SD of 3.25, which was described as very high. In other words, the proper development of research

video instructional materials was considered and proven effective in enhancing teachers' understanding of the research management guidelines.

Table 9. *Level of understanding of the teachers of the research management guidelines obtained in the pretest and post-test*

Test Period	Mean	sd	Description
Pretest	22.73	8.16	Average
Post-test	36.66	3.25	Very High

Scale: *33.0-40.0 (Very High), 25.0-32.0 (High), 17.0 – 24.0 (Average), 8.1 – 16.0 (Low), 1.0 – 8.0 (Very Low)*

The benefit of research video instructional materials is that they take advantage of the teachers' brain's ability to make connections between verbal and visual representations of content, leading to a deeper understanding, which in turn supports the transfer of learning to other situations (Kapile et al., 2022). This is important in today's 21st-century education, as schools are preparing learners for a future requiring higher-level thinking, problem-solving, and collaborative skills (Akmalia & Nufus, 2021). These findings are particularly valuable when innovative instructional strategies are represented by teachers or when the materials use new technology. The provision of training and support for the use of the materials to help ensure roll-out is a fair test of the quality of the instructional materials.

Table 10 shows the significant differences between the Pretest and Posttest on Research Management Guidelines. With the p-value of .000 and t -13.19, the findings, therefore, are highly significant. This justifies a significant difference in teachers' understanding of the Research Management Guidelines in pretest and posttest. Using images, video, and animations alongside a text stimulates the learners' brains; thus, their attention and retention increase. Under these circumstances, using video instructional materials, learners can understand more easily compared to the scenario where teaching is made possible only by textbooks (Sabieh, 2023).

Table 10. *Differences in the pretest and post-test scores of the participants*

Test Given	Mean	sd	t	df	P	Interpretation
Pretest	22.73	8.16	-13.19	39	.00	Significant
Post-test	36.68	3.25				

According to Bulkani et al. (2022), experiencing positive emotions makes people see more possibilities. Using multimedia during instructions impacts students' moods during the learning process. With a positive attitude, they learn better and are more proactive. The implication of this finding presumes the significant impact of research video instructional materials on teachers' understanding of Research Management Guidelines. It directly affects learning DepEd Research and even honing research crafting competence. This effect differs and cannot be achieved as easily while using traditional learning materials.

4.0 Conclusion

Based on the study, the content of the Developed RMG-Aligned Research Videos Instructional Materials adhered to the DepEd Learning Resource Management System (LRMS) Evaluation Standards - these are based on specific research format and learning goals. Screen text, spaces between letters, and digital effects were aspects of the resources that helped visualize various key points and concepts of the DepEd RMG-Aligned research format. Further, the well-designed diagrams or graphics used in the illustration format of the research videos instructional materials contributed high yields on learning through videos because these can explain much more than text alone. This study discovered that public elementary and secondary school teachers' understanding of the Research Management Guidelines fell on an average level below the National Standard. Hence, an intervention must be done. Also, it was found that the competence of the teachers after the implementation of research video instructional materials was deemed on a very high level, which was on the National Standard of 75 percent. This justifies a significant difference in the Teachers' understanding of the Research Management Guidelines in pretest and posttest. Therefore, applying Research Video Instructional Materials to learning and crafting DepEd Research was proven effective.

5.0 Contributions of Authors

The researchers of this study have taken full responsibility for the entire process, from conception to completion. They independently designed and conducted the study, ensuring that each phase—from data collection to analysis—was carried out with the utmost attention to detail and integrity. The processes involved in this research, including the formulation of the research questions, the development of the methodology, and the execution of the data collection, were all undertaken with careful planning and consideration to ensure accuracy and reliability. Furthermore, they were responsible for interpreting the results and ensuring rigorous analysis aligned with the study's objectives. The researchers strived to maintain the highest ethical

standards and scientific objectivity throughout the study. While receiving valuable feedback and guidance from the Research Adviser and other mentors, the analysis, interpretation, and conclusions were drawn from the findings.

6.0 Funding

This research study was conducted without any external funding or financial support. It was made possible through personal dedication, resourcefulness, and an unwavering commitment to advancing knowledge in the field of education.

7.0 Conflict of Interests

The researchers understand that conflict of interest refers to situations in which financial or other personal considerations may compromise their judgment in evaluating, conducting, or reporting research. They hereby declare that there is no personal conflict of interest that may arise from the application and submission of this research paper. It is further understood that this research paper may be returned if it is found that there is a conflict of interest during the initial screening. Transparency about potential conflicts, such as funding sources or personal relationships, is crucial for maintaining public trust and safeguarding the peer review process. Ethical research requires full disclosure of any conflict of interest to allow for informed evaluation, while regulatory bodies and journals enforce strict guidelines to protect the validity of published studies.

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