

The Development and Validation of a Digitized Instructional Material for Grade 6 Folk Dance

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ABSTRACT

The goal of this project was to build and test a digital teaching tool for sixth graders at Pareja Integrated School. The main focus was on teaching the Filipino folk dance Cariñosa. The study followed the methodical ADDIE method, which includes the steps of Analysis, Design, Development, Integration, and Evaluation. Physical education professionals looked at the digital content based on the Learning Resource Management and Development System (LRMDS) standards. The results demonstrated that the digital teaching tools were good for teaching the folk dance Cariñosa. It helps students get better at dancing, learn more about the art form, and enjoy it more. The study also found that using digital materials made teaching easier and faster. These results suggest that digitized materials can help make learning better, which is great news for schools, teachers, and students. Some ideas are to help instructors use digital materials, especially in physical education, and to get experts in education, technology, and cultural studies to collaborate together on future research.

Keywords: Digitized Instructional Material, ADDIE Model, Physical Education,

INTRODUCTION

Folk dance, valued as a generational art form, represents the customs, traditions, and values of a community, serving as an essential component of cultural identity. Education plays a vital role in protecting and passing down traditions by acknowledging the importance of folk dance in preserving culture (Dacanay et al., 2019). One of the primary purposes of education is to promote and preserve the Philippines' unique cultural heritage (Reyes et al., 2020). To teach folk dances effectively, teachers and students need access to high-quality instructional materials that can facilitate their learning. These tools help students learn in a fun and effective way, deepening their appreciation and understanding of dance and strengthening the cultural connection that education wants to preserve.

Although teaching folk dance is crucial for cultural preservation, there is a notable lack of scholarly research on the topic in the Philippines, mainly due to insufficient resources. (Lobo, 2023). This emphasizes the necessity for additional research to have a deeper understanding of the influence of instructional materials on the pedagogy and learning of folk dance. By conducting additional studies on the creation of instructional materials and their impact on the comprehension and appreciation of folk dance, significant insights can be obtained to improve the effective teaching of this art form. In the 21st century, new technologies have enabled the creation of various types of teaching materials for folk dance, including films and online lessons. Multimedia technologies can significantly enhance children's learning. (Naluwooza et al., 2023). Utilizing information technology in the classroom is an effective way to teach and enhance the curriculum. It keeps students interested and leads to successful and meaningful classroom education (Guan et al., 2018). For students who lack access to dance studios or instructors, utilizing instructional resources has also made learning folk dance easier.

In the Division of Butuan City, there is an annual Division Folk Dance Workshop. Its goal is to teach people new things and improve their knowledge, skills, understanding, and appreciation of folk and traditional dances. This helps bring together the cultures and people of the Philippines and Asia (Division Memorandum No. 258, series of 2022). In this session, teachers — whether new to the field or experienced — learn how to effectively teach their students folk and traditional dances. Sadly, teachers who lack extensive dance experience often struggle to learn the dances in workshops, making it more challenging for them to demonstrate them to their students effectively. Additionally, instructors struggle to incorporate dance into their classes, as they often lack sufficient teaching resources. This is especially true for primary school teachers, who teach a variety of courses and require a substantial amount of materials to teach folk dance alongside other subjects. It is essential to acknowledge and address this issue to foster a comprehensive educational experience that naturally incorporates cultural elements into all subjects.

The Physical Education teachers at Pareja Integrated School struggle to teach folk dance because they lack teaching resources. They cannot provide the students with all the help they need because they lack sufficient resources. Because of this, the students' performance needs to improve, which leads to low Mean Percentage Scores (MPS) and makes folk dance one of the least taught skills in Physical Education. The absence of teaching materials presents a considerable impediment, obstructing the students' educational experience and inhibiting their complete engagement with the subject matter. Providing the appropriate resources to address this issue significantly enhances students' understanding and appreciation of folk dancing, which in turn leads to improved academic performance. Consequently, this study seeks to provide significant insights to bridge this gap and enhance successful teaching practices in the field of folk dance education.

Framework

This study was based on the ADDIE model developed by Florida State University in 1970. ADDIE is a frequently used framework for designing lessons. The ADDIE model is a framework for designing lessons that consists of five steps: Analysis, Design, Development, Implementation, and Evaluation. It systematically determines learning needs, designs instructional components, produces resources, implements the program, and evaluates its efficacy for ongoing enhancement. Lev Vygotsky's (1978) sociocultural theory discusses the Zone of Proximal Development, which refers to the range of tasks that a learner can accomplish with the assistance of a more competent individual, such as a teacher or peer, but not yet independently. It signifies the cognitive developmental zone in which learning is optimized, as it gives challenges to the learner without inducing overload, hence promoting growth and skill acquisition. The theory provides a framework for understanding and addressing various aspects in the development and evaluation of digital teaching materials. The ADDIE model's systematic approach ensures that all learning demands are thoroughly analyzed, that design and development are done carefully, that implementation is consistent, and that evaluation is ongoing. This provides a disciplined approach to creating successful instructional content. At the same time, using ZPD helps determine the right amount of challenge for students, creating a material that strikes a good balance between support and challenge, which aligns with Vygotsky's sociocultural theory and makes the digital learning environment more engaging. ADDIE and ZPD work well together to provide adaptable and practical digital instructional materials that meet the needs of sixth graders who are learning folk dance.

Problem Statement

This research created, assessed, and implemented a digitized instructional resource for teaching Folk Dance. In particular, it answered these questions:

1. What are the content quality, instructional quality, and technological quality of the digitized material?
2. How do specialists judge the quality of the content, the quality of the training, and the quality of the technology in the digitized material?
3. What is the performance level of students who were taught with digital teaching materials compared to those who were taught without them?
4. Is there a notable disparity in learners' performance between those instructed with digitized instructional materials and those without?
5. What improvements could be suggested for the digital content?

Hypothesis

The study's null hypothesis was tested at a significance level of 0.05.

Ho: There is no significant difference in the performance levels of learners taught with digitized instructional material compared to those taught without it.

Literature Review

Creating and Testing Digital Learning Materials

Teaching and learning require instructional materials. They can be printed textbooks or digital resources. Teaching materials have become more individualized and interactive as technology has revolutionized education. The fast expansion of technology has transformed teaching and learning. Lim (2021) argued that educators must use modern tools to engage pupils because technology offers more resources. In the same post, the author noted that pupils who use the latest technology can learn more about many disciplines and develop new skills. Thus, UNESCO (2023) states that well-designed learning materials and well-trained teachers usually improve student performance. However, biases in teacher qualifications and school infrastructure could affect access and outcomes, highlighting the importance of considering the entire learning materials chain for a decent education. Obi & Obi (2019) emphasized the importance of improving and utilizing practical educational tools for work-related learning. They reported that using teaching materials made the classroom more engaging and fascinating, encouraged students to participate, helped them apply what they learned at home, and improved their grades. Also, DepEd Order 35 s. 2016 indicates that teachers must adapt resources to meet their pupils' needs, aligning national educational policy with local implementation and recognizing the Philippines' diverse cultural contexts. The curriculum includes folk dancing per Republic Act 10533. DepEd Order No. 35 (2016) encourages teachers to utilize films and PowerPoint presentations to enhance learning engagement. There are various arguments on the usefulness of digital textbooks. Physical and digital resources matter (Ra, 2018). Digital teaching resources are necessary to integrate folk dance into the curriculum in accordance with educational policies and student needs in the digital age. This improves schooling generally. Nabayra (2023) utilized teacher-generated videos to illustrate how adaptive internet education can be implemented during the Philippines' epidemic. Teacher-made films effectively met educational goals and enhanced information delivery, underscoring their importance in the evolving educational landscape.

The Learning Resources Management and Development System must be implemented worldwide, as mandated by the Department of Education Order No. 76 (2011). It encourages LRMDs teachers to produce and share instructional tools. This strategy ensures that local schools have a quality assurance system tailored to their needs, making it easy for teachers nationwide to share resources. In "The use of the ADDIE model for designing blended learning applications at vocational colleges in Malaysia," Stapa and Mohammad (2019) used the Systematic Framework for Analysis, Design, Development, Implementation, and Evaluation to apply instructional design. The study employed a Content Validity Index (CVI) and a Technology Acceptance Model (TAM) to assess the reliability of the instructional design and student acceptance. Assessing academic success is a comprehensive way to evaluate instructional design. At the University of Tabuk in Saudi Arabia, Alnajdi (2018) demonstrated how to plan a Practical Interactive Lesson using the ADDIE approach. Alnajdi employed a quasi-experimental method to compare the performance of the experimental and control groups, assessing the effectiveness of the lesson. The experimental group's learning performance improved statistically, demonstrating the benefits of a well-structured, practical, and participatory session. Instructional tools are crucial to quality education and optimal learning outcomes in folk dance. Teaching resources are crucial for teaching DepEd students about cultural topics, such as folk dancing. These products provide relevant and interesting information, allowing pedagogical methods to be modified to meet diverse student needs and fostering an inclusive and culturally enriched educational experience. The creation of digital teaching resources makes folk dance more fascinating and accessible to modern learners. Folk dancing sessions with instructional tools enhance overall education. Thus, students not only learn about their cultural history but also have the tools and resources to fully grasp and appreciate cultural expression in the context of learning and personal growth.

Teaching Folk Dance

Dance teachers help pupils express themselves, learn about various cultures, and develop a lifelong appreciation for the art form, in addition to teaching them dance. In *Dance Teaching Methods and Curriculum Design*, Kassing and Jay (2020) advise that dance teachers should be familiar with various dance genres, styles, and choreography. They should know educational theories. They should be able to organize, conduct, and evaluate dance lessons and programs while adhering to organizational and national guidelines. Dance education helps grow and preserve dance in the community, according to the book. In contrast, a 2019 study in Samar, Philippines, found that Music, Arts, Physical Education, and Health (MAPEH) teachers in the Catbalogan City division were unable to teach the time signature, step pattern, and movements of Samar folk dances. According

to Dacanay et al. (2019), "MAPEH teachers' competency in teaching Samar Folkdances was notably near the ground; it is evidence that there is a need to enrich knowledge and skills to contextualize application in the classroom and other cultural presentations". A 2020 Russian study, "Folk Dance as a Means of Formation and Creative Education of Primary School Children's Personality," found that folk dance helped young children build personalities. They advised the state to emphasize spirituality, morality, and creativity in education. They also claimed that family and school are the best ways to develop morality. They investigated children aged 6–10 during a period when their bodies and minds are undergoing rapid maturation. The writers believed that artistic activities in primary school should help children develop morality. Folk dance can be used for innovative teaching, generational transmission, ethnocultural expression, aesthetics, self-organization, self-education, self-regulation, self-esteem, and physical activity (Oparina et al., 2020). Mustafa & Sacarani (2019) employed Albert Bandura's Social Learning Theory in their Malaysian study, "Learning Strategies Based on the Approach of Modelling by the Coach in the Internalization Process of Wau Bulan Folk Dance." The research showed that Albert Bandura's (1969) and Nana Degjana Dance's (1989)'Modelling Theory' emphasizes cognitive and psychomotor factors in dance learning techniques. The study found inductive and deductive reasoning, experiential learning, demonstration, and play-based methods helpful. The concept is effective for both cognitive and psychomotor dance learning, demonstrating that multiple teaching methods are functional. A 2019 Czech case study showed a prototype mobile augmented reality interface for folk dance learning. The study digitized a folk dance using professional dancer recordings and compared it to a big back-projection system in a controlled lab setting. Sixteen individuals were compared to professional dancers using motion capture. Augmented reality improved folk dance learning in experiments (Kico & Liarakapis, 2019). However, research suggests that some teachers may not be qualified to teach folk dances. This emphasizes the importance of continuing education to stay current in one's area. This highlights the need for comprehensive tools to support dance educators in teaching effectively and inclusively. Folk dance helps children develop spiritually, morally, and creatively, according to a study. This study supports the goal of using technology-enhanced teaching materials to foster artistic and personal growth in dance instruction.

Video in Class

Video is a powerful medium that uses moving pictures and several senses to convey information (Syaripuddin et al., 2019). The growing use of the internet in schools (Engelbrecht et al., 2020) has demonstrated that videos are more effective than textbooks in the classroom, leading to improved student achievement (Pulukuri & Adams, 2021). This new understanding of how multimedia can aid in children's learning illustrates how incorporating video features could enhance their learning. In Virginia, Miner & Stefaninak (2018) found that 80% of 16 teachers and 35 students agreed that video learning in higher education was effective. Videos should augment direct training, not replace it. Digitized instructional tools work synergistically with traditional teaching methods, emphasising the balance between technological integration and traditional pedagogical practices. Trakulsri, S., & Worapun, W. studied "The Development of Folk Dance Learning Through Video Media in Thailand". The purpose of 2023 was to test the effectiveness of folk dancing video instruction. Using Davies' practical skills criterion and a complete set of research instruments, the study found that students exceeded expectations in practical abilities. This positive finding suggests that video-mediated learning may enhance practical skills in folk dancing, offering valuable insights into the development of digital instructional resources. A study in the Philippines found that Contextualized Offline Video Dance (COVID) Instruction significantly improved the folk dance mastery performance of Grade 8 students, validating its efficacy in enhancing academic performance in Physical Education (Muñoz et al., 2023). Aguelo & Aquino (2023) also examined the use of e-learning tools for dance instruction in ninth-grade Physical Education with 50 students. The study showed that e-learning technologies improve dance student learning. Digitized teaching materials may enhance the academic performance of folk dance students by providing a contextualized and engaging learning experience. Teaching via textbooks and lectures is no longer adequate to engage and educate students as technology advances. Teachers must use computers, multimedia, and other digital tools in their classes. This improvement enables teachers to create engaging and interactive resources tailored to diverse learning styles and needs.

The ADDIE model

The ADDIE paradigm is a widely used framework for developing successful and efficient educational materials (Budoya et al., 2019). Many scholars produce educational software or apps with it (Stapa & Mohammad, 2019). Indonesia used the ADDIE paradigm to study the Interactive Multimedia Development Engine Management System in 2020. Their experiment involved 38 students from Malang State University. The researcher aimed to develop an interactive system to enhance automotive knowledge and problem-solving skills. The ADDIE approach was chosen for its thoroughness and sound judgment. A sample t-test reveals that interactive

multimedia design improved learning and problem-solving (Sutadji, 2020). Astuti (2019) reviewed the use of the ADDIE model in career advice programs in Indonesian senior high schools. The study included 60 12th-grade science students and two guidance and counseling teachers. Data analysis showed most assessment needs were met. The guidance and counseling teachers' criticism revealed weaknesses in the factual model of the career advice program. The principal, homeroom teacher, and subject instructor did not design it. The ADDIE methodology is used to construct lessons in many schools. It has been successful in blended learning research, practical interactive classes, interactive multimedia systems, and career advice services. These studies suggest that ADDIE-based teaching designs are reliable, valid, and effective. However, continued enhancement and stakeholder interaction were needed to fix any issues with ADDIE-based instructional designs. The ADDIE model offers a systematic approach to enhancing educational outcomes in diverse learning environments.

LRMDS Tool Usage

According to the LRMDS Assessment and Evaluation Guidelines (2009), the Department of Education's Evaluation Rating Sheet for Non-Print Materials uses a four-point Likert scale to evaluate content, instructional, and technical quality. This technology helped Ariate and Deri (2023) create an Offline Web Quest for Grade 7 Mathematics that was well-received and boosted cognitive skills. Mijares III (2023) used the ADDIE model and LRMDS standards to generate Earth Science supplemental resources that satisfied DepEd standards and improved learning. Dipon and Ricafort (2020) created a "Very Satisfactory" Physics remedial program using the ADDIE paradigm and LRMDS, improving student performance. These studies emphasize the LRMDS evaluation tool's usefulness in instructional material quality. The methodology led the development and validation of digitized folk dance resources, demonstrating the significance of digital technologies in improving education.

MATERIALS AND METHODS

Research Design

This study utilized an evaluative quasi-experimental design to examine the effect of digitized instructional material on Grade 6 learners' performance in the Philippine folk dance Cariñosa. Two groups were involved: a control group that received traditional instruction and an experimental group that used the digitized instructional material. This design enabled the researcher to compare the two groups' performance and determine the effectiveness of the intervention.

Locale and Participants

The research was conducted at Pareja Integrated School, located in Barangay Bayanihan, Butuan City, Agusan del Norte, during the school year 2022–2023. The school caters to 429 learners from Kindergarten to Grade 6. The study involved 72 Grade 6 learners from two sections—one served as the control group and the other as the experimental group.

Research Instruments

Two instruments were used in this study. The first was a performance rubric adapted from the Department of Education (DepEd) Learning Resources Management and Development System (LRMDS), designed to evaluate mastery, execution, rhythm, and overall performance in Cariñosa. The second was the Evaluation Rating Sheet for Non-Print Materials, also from DepEd LRMDS, which was used by experts to assess the quality of the digitized instructional material in terms of content quality, instructional quality, and technical quality, using a four-point scale.

Validity and Reliability

Both instruments were validated by DepEd experts before implementation. The digitized instructional material was reviewed by three folk dance specialists, while two MAPEH teachers from Pareja Integrated School rated the learners' performances. Inter-rater reliability was established through substantial agreement among evaluators, confirming consistency and accuracy in the assessment results.

Procedure

Prior to data collection, permission to conduct the study was sought from the school head. The implementation took place from September 13 to 15, 2023. The experimental group was taught using digitized instructional materials featuring videos, images, and guided demonstrations, while the control group was taught using traditional instruction without digital aids. Both groups were evaluated using the same performance rubric. To reduce bias, learners were not informed that they were part of a research study, ensuring natural behavior and authentic performance outcomes.

Data Analysis

Learners' performance was rated based on a five-point scale ranging from Did Not Meet Expectations (below 75%) to Outstanding (90–100%). Data were analyzed using frequency counts and percentages to describe

performance levels. An independent t-test was applied to determine whether there was a statistically significant difference in performance between learners taught with and without the digitized instructional material.

Ethical Considerations

The study adhered to standard ethical research practices. Permission was obtained from the school head before data collection, and participation was conducted within regular class activities to avoid disruption. Learners were not required to provide identifying information, ensuring anonymity and confidentiality. Informed consent was secured from the school administration and class advisers, while learners participated voluntarily under teacher supervision. The data collected were used solely for research purposes and treated with strict confidentiality. No harm, coercion, or discrimination occurred during the conduct of the study.

RESULTS AND DISCUSSION

Design and Development of the Digitized Instructional Material

The digitized instructional material (DIM) for teaching the Philippine folk dance Cariñosa was developed using a systematic approach that emphasized content, instructional, and technical quality. Guided by the DepEd Learning Resources Management and Development System (LRMDS) standards and the ADDIE model framework, the researcher ensured alignment with the Most Essential Learning Competencies (MELCs) for Grade 6 Physical Education. The DIM integrated historical and cultural contexts, gender inclusivity, and clear sequencing of dance figures. Each component was designed to support learners' comprehension and skill acquisition, consistent with best practices in instructional design (Serevina et al., 2018). In terms of instructional quality, the DIM provided explicit learning objectives, cultural context, and step-by-step demonstrations synchronized with music. Visual and auditory elements were carefully balanced to maintain learner engagement while promoting authenticity in performance. The inclusion of slow-motion features and guided practice allowed learners to follow dance movements accurately. This design aligns with Bebita's (2022) findings that video-based instructional materials enhance learner motivation and comprehension through visual and auditory reinforcement. Technically, the DIM demonstrated clarity in both sound and visuals, featuring synchronized narration and motion, readable text, and high video resolution. Continuous testing ensured the absence of glitches and alignment of visuals with the audio track. As in Mijares (2023) and Ghani and Daud (2018), the material followed a rigorous review process emphasizing functionality, user accessibility, and alignment with learners' technological capabilities.

Experts' Evaluation of the Digitized Instructional Material

Three expert evaluators assessed the DIM across three domains: content, instructional, and technical quality, using the DepEd LRMDS evaluation standards. As shown in Table 2, the DIM achieved an overall weighted mean of 3.83, interpreted as Very Satisfactory. The material was highly aligned with DepEd Learning Competencies, accurate, logically organized, bias-free, and linguistically appropriate for Grade 6 learners. The only indicators rated "Satisfactory" were those related to promoting critical thinking and real-life relevance. Experts noted that while the material effectively guided learners in performing dance steps, it could better foster analysis or reflection on the cultural and historical meaning of the dance. This aligns with Hamora et al. (2022) and Priskila et al. (2018), who emphasized that instructional materials should stimulate higher-order thinking beyond procedural mastery.

Table 2. Experts' Evaluation of the Digitized Instructional Material in terms of content

Indicators	Wtd Mean	Std. Deviation	Interpretation
1. Content is consistent with topics/skills found in the DepED Learning Competencies for the subject and grade/year level it was intended.	4.00	.000	Very Satisfactory
2. Concepts developed contribute to enrichment, reinforcement, or mastery of the identified learning objectives.	4.00	.000	Very Satisfactory
3. Content is accurate.	4.00	.000	Very Satisfactory
4. Content is up-to-date.	4.00	.000	Very Satisfactory
5. Content is logically developed and organized.	4.00	.000	Very Satisfactory
6. Content is free from cultural, gender, racial, or ethnic bias.	4.00	.0000	Very Satisfactory
7. Content stimulates and promotes critical thinking.	3.33	.577	Satisfactory
8. Content is relevant to real-life situations.	3.33	.577	Satisfactory
9. Language (including vocabulary) is appropriate to the target user level.	3.67	.577	Very Satisfactory
10. Content promotes positive values that support formative growth.	4.00	.000	Very Satisfactory
Overall Weighted Mean	3.83	.058	Very Satisfactory

Table 3 reveals that the DIM earned an overall weighted mean of 3.77 (Very Satisfactory). Evaluators found that the material had clear objectives, well-defined purpose, and appropriate use of visuals and sounds to enhance learning engagement. It successfully motivated learners and integrated previous knowledge, consistent with findings from Jeremias and Carratero (2022) regarding the effectiveness of video-based folk dance lessons.

However, the indicator assessing “level of difficulty” received the lowest rating (“Satisfactory”), suggesting that some movements may be challenging for Grade 6 learners with limited dance exposure. This supports the need for differentiated pacing or supplementary scaffolding in future versions.

Table 3. Experts’ Evaluation of the Digitized Instructional Material in terms of instructional quality

Indicators	Wtd Mean	Std. Deviation	Interpretation
1. The purpose of the material is well defined.	4.00	.000	Very Satisfactory
2. Material achieves its defined purpose.	4.00	.000	Very Satisfactory
3. Learning objectives are clearly stated and measurable.	3.67	.577	Very Satisfactory
4. Level of difficulty is appropriate for the intended target user.	3.00	1.000	Satisfactory
5. Graphics/colors/sounds are used for appropriate instructional reasons.	4.00	.000	Very Satisfactory
6. Material is enjoyable, stimulating, challenging, and engaging.	3.67	.577	Very Satisfactory
7. Material effectively stimulates the creativity of the target user.	3.67	.577	Very Satisfactory
8. Feedback on the target user’s responses is effectively employed.	4.00	.000	Very Satisfactory
9. The target user can control the rate and sequence of presentation and review.	4.00	.000	Very Satisfactory
10. Instruction is integrated with the target user’s previous experience.	3.67	.577	Very Satisfactory
Overall Weighted Mean	3.77	.058	Very Satisfactory

Legend: 1.00-1.49- Not Satisfactory; 1.50-2.49-Poor; 2.50-3.49-Satisfactory; 3.50-4.00-Very Satisfactory

As presented in Table 4, the DIM obtained an overall mean of 3.90, also Very Satisfactory. The experts rated most indicators—such as audio-visual synchronization, clarity, and usability—as excellent. However, sustaining user interest and navigational design received slightly lower ratings, and independent use of the material scored “Satisfactory.” This finding implies that learners may still need teacher guidance, particularly in initial engagement or technical operation. Similar results were found in Ariate and Deri (2023), who noted that even well-designed digital materials often require facilitation for optimal learning outcomes.

Table 4. Experts’ Evaluation of the Digitized Instructional Material in terms of technical quality

Indicators	Wtd Mean	Std. Deviation	Interpretation
1. Audio enhances understanding of the concept.	4.00	.000	Very Satisfactory
2. Speech and narration (correct pacing, intonation, and pronunciation) are precise and can be easily understood.	4.00	.000	Very Satisfactory
3. There is complete synchronization of audio with the visuals, if any.	4.00	.000	Very Satisfactory
4. Music and sound effects are appropriate and effective for instructional purposes.	4.00	.000	Very Satisfactory
5. Screen displays (text) are uncluttered, easy to read, and aesthetically pleasing.	4.00	.000	Very Satisfactory
6. Visual presentations (non-text) are clear and easy to interpret.	4.00	.000	Very Satisfactory
7. Visuals sustain interest and do not distract the user’s attention.	3.67	.577	Very Satisfactory
8. Visuals provide an accurate representation of the concept discussed.	4.00	.000	Very Satisfactory
9. The user support materials (if any) are effective.	4.00	.000	Very Satisfactory
10. The design allows the target user to navigate freely through the material.	3.67	.577	Very Satisfactory
11. The material can easily and independently be used.	3.33	.577	Satisfactory
12. The material will run using the minimum system requirements.	4.00	.000	Very Satisfactory
13. The program is free from technical problems.	4.00	.000	Very Satisfactory
Overall Weighted Mean	3.90	.087	Very Satisfactory

Legend: 1.00-1.49- Not Satisfactory; 1.50-2.49-Poor; 2.50-3.49-Satisfactory; 3.50-4.00-Very Satisfactory

Learners’ Performance

The learners’ performance was evaluated based on mastery, execution, rhythm, and overall presentation. As indicated in Table 5, learners taught using the DIM outperformed those taught without it. Thirteen (13) pupils achieved Outstanding, six (6) achieved Very Satisfactory, and fifteen (15) achieved Satisfactory. In contrast, thirty-two (32) learners in the control group received Did Not Meet Expectations. The mean performance score of the experimental group was 85.69, compared to 62.64 for the control group. This significant difference suggests that the DIM effectively supported learners’ understanding and performance in Cariñosa. The use of video demonstrations, slow-motion playback, and visual cues allowed for repeated practice and immediate self-correction, promoting confidence and precision. These findings resonate with Aguelo and Aquino (2023), who reported that integrating e-materials in Physical Education enhances skill acquisition and motivation among students.

Table 5. Level of Performance of the Learners using the Digitized Material

Grading Scale	Group	Total	Descriptive Rating	Grading Scale
	With Digitized IM	Without Digitized IM		
90-100	13	0	13	90-100
85-89	6	0	6	85-89
80-84	15	1	16	80-84
75-79	0	3	3	75-79

Below 75	2	32	34	Below 75
Total	36	36	72	Total

Test of Significant Difference

An independent t-test (Table 6) revealed a t-value of 12.763 and a p-value of .000, indicating a highly significant difference between the two groups' performances. The null hypothesis was therefore rejected, confirming that the digitized instructional material significantly improved learners' performance in the folk dance Cariñosa. The experimental group not only exhibited higher mean scores but also showed lower variability (SD = 6.675) compared to the control group (SD = 8.540), suggesting more consistent learning outcomes among those exposed to the DIM.

Table 6. Independent t-test on the Level of Learners' Performance between those Not Taught with the Digitized Instructional Material and those Taught with the Digitized Instructional Material

Group	Mean	SD	t-value	p-value	Decision on H_0	Interpretation
With digitized IM	85.69	6.675	12.763	.000	Reject H_0	Significant
Without digitized IM	62.64	8.540				

These findings are consistent with prior studies (Sezer & Albay, 2018; Lucero, 2021) highlighting the effectiveness of multimedia-assisted instruction in improving students' psychomotor and affective skills. However, the results differ from Devi, Khandelwal, and Das (2019), who observed that traditional demonstrations occasionally outperform video-assisted learning, underscoring the contextual dependence of teaching strategies.

Proposed Enhancements of the Digitized Instructional Material

Based on evaluators' feedback, several areas for improvement were identified. First, the material could be enhanced to stimulate critical thinking by including analytical questions or reflective prompts on the cultural relevance of Cariñosa. Second, to increase real-life applicability, supplementary clips could showcase actual community performances or festival settings. Third, the difficulty level could be adjusted by incorporating multiple skill tiers—beginner, intermediate, and advanced. Lastly, to improve independent usability, navigation guides, camera angle adjustments, and interactive prompts could be added. These refinements would help make the material more inclusive, adaptive, and learner-centered. The results confirmed that the digitized instructional material developed for teaching Cariñosa met DepEd quality standards and effectively enhanced learners' performance. Expert evaluations rated the DIM Very Satisfactory in all dimensions, and statistical analyses verified significant improvement in learner outcomes. The integration of multimedia elements, guided demonstrations, and structured learning design proved instrumental in achieving effective and engaging dance instruction for Grade 6 learners. Folk Dance proved valid, entertaining, and useful in teaching kids Filipino culture. Cariaga (2024) stressed creativity, critical thinking, and teamwork, which the DIM promoted through interactive and visual learning. Its effectiveness supports results on technology-supported education in rural areas, which emphasize the importance of incorporating ICT tools into culturally relevant training. The DIM promotes inclusive and modern arts education by blending tradition and innovation, supporting Philippine education's holistic and culturally grounded goals (Cariaga, 2023; Cariaga et al., 2024).

Conclusion and Recommendations

The study's results showed that the developed digitized instructional material (DIM) for teaching the Philippine folk dance Cariñosa helped Grade 6 students at Pareja Integrated School learn a lot more. Experts assigned the DIM a "Very Satisfactory" rating for its general quality, content, and instruction, based on the Department of Education's Learning Resources Management and Development System (DepEd LRMS) standards. Learners who were introduced to the DIM did better in mastery, rhythm, and execution than learners who were taught traditionally. An independent t-test revealed a significant difference in performance between the two groups. This demonstrates that digital teaching tools can help students improve their folk dance skills by increasing their interest and enhancing their abilities. Although the material was effective, it could have been improved by incorporating activities that encourage critical thinking, real-life applications, and adjusting the level of difficulty to meet the needs of all students.

Since these results demonstrate that digitalized teaching materials can enhance student learning, it is recommended that school officials continue collaborating with teachers to develop and utilize these materials. Teachers, especially those who teach MAPEH, are encouraged to use and adapt the developed DIM to enhance their current teaching methods and engage their students more actively in folk dance, and improve their proficiency in folk dance. Learners should be encouraged to interact with digital learning materials and explore other digital tools to enhance their Filipino dance skills and deepen their understanding of the culture. Finally,

researchers in the future are invited to repeat and expand on this study by creating similar digital teaching materials for other subjects or folk dances. This will help demonstrate that technology-enhanced learning is effective and can be implemented in Philippine schools.

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Conflict of Interest

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