





Students' dance performances and the utilization of e-materials in physical education

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ABSTRACT

As a result of the Covid-19 virus, which has affected everyone, the educational community is in a tough situation right now. Technology's advancement in the teaching-learning instruction process is both a benefit and a drawback of globalization's educational approach. The study was primarily concerned with how the use of e-materials in the classroom might increase students' learning performance in physical education dancing. This study was a correlational investigation of 50 grade 9 students' dance performances and the utilization of e-materials in physical education in Sta. Catalina National High School, Candelaria, Quezon. The research was conducted using a descriptive-quantitative technique and a self-administered questionnaire through Google Form. The findings demonstrated that the use of e-materials in physical education dancing is always noted, and students' performance improves significantly when e-materials are used. Furthermore, there is no relationship between e-materials used to teach dance in physical education and student dance performance. It encouraged students to keep using and employing the effectiveness of e-materials in their dancing performances. This research will help to understand how effective the use of e-materials is in teaching dance in physical education and how it affects student performance and will provide valuable insights on the best practices for teaching dance in physical education and how to maximize the use of e-materials to enhance student performance.

Keywords: E-materials; physical education; students' dance performance; descriptive-quantitative method

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INTRODUCTION

The educational community is currently facing a difficult situation as a result of the epidemic, which has affected everyone. The growth of knowledge in employing technology in the progression of learning by teaching has an advantage and may also be a negative of globalization in approaching education (Zhao et al., 2015). School systems are really doing its best to keep up with the world's changes and adapt to their students' requirements these days (Sweeney et al., 2020). Many aspects of life have gotten more technologically advanced, particularly in the field of education which has no purpose of being left alone. In truth, IT as well as the skills in communication were now a necessary component of our daily lives, and schools must teach these skills (Anam, 2019). This statement highlights the challenges that the educational community is facing in adapting to the effects of the pandemic. It also acknowledges the advantages of utilizing technology in educational settings, as well as the potential downsides of globalizing education. It

emphasizes the need for incorporating IT skills and communication skills into the curriculum, as they are necessary components of life in the digital age. However, it also points to the need for further research into how to effectively implement and utilize technology in order to maximize its potential benefits while minimizing potential drawbacks. Using electronic tools in the classroom to present and teach these skills to pupils is an appealing option (Aquino, 2022). The new curriculum also promotes lifelong learning by encouraging pupils to learn across academic boundaries and by cooperating as a nation (Vahtivuori-Hanninen et al., 2014).

The modern education in today's era requires the use of e-learning (Vitoria et al., 2018). Whereas the execution of e-learning programs has advanced in rich countries, it is already in its early phases in many developing countries, particularly in the Middle East (Al-Azawei et al., 2016). The rapid development of numerous activities in our everyday lives is being influenced by advances in digital technology. In addition, the E-Learning system has earned a competitive advantage over the current traditional methods (Naveed et al., 2017). The current pedagogy is being phased out in favor of the E-Learning teaching system and as the process of learning approach allows for greater flexibility and independence from timing, location, presence, chaotic, and demanding teaching-learning, among other things, and so plays an important part in the educational system. The goal of this work is to explore the educational concepts that underpin effective e-Learning teaching and learning process. The need for thorough examination of the underpinning pedagogy, and how learning happens online, is one of the most important criteria for increasingly favored adoption. E-learning does have problems that need address before it can be implemented successfully. The advantages and potential offered by e-learning, on the other hand, considerably outweigh the drawbacks (Tarus et al., 2015).

In teaching physical education dance, technology has provided access beyond traditional instruction. Dance was a vital part of existence throughout the prehistoric age for ultimate expression and ceremonies, but as time passed, other genres and materials became associated with dance (El-Raheb et al., 2019). Dance is a form of art instruction that contributes to aesthetic education (Shi & Shih, 2015). As a result, the art of dance is molding students to provide certain tools to assist them in discovering the world of dance to improve their aesthetic performance. For the better outcome of dance performance, people are exploring and engaging themselves in different styles of the process of learning and teaching by the teachers in the new shift of education. It was stated that one of the current educational goals appears to build and consider the studying as ongoing activities which part of daily life rather than something that should just occur in school (Rekola & Savo, 2018). The appropriateness of instruction has an impact on student learning because it is one of the aspects that influences the facilitator-learner interaction as well as understanding.

The implementation of instruction is significant in the progress of learning by teaching the students. The uses of e-materials in teaching dance engage students in active learning opportunities that promote development in terms of learning. The quality of education attained by the students is related to the quality of teaching done by the teachers and how he reaches students' interests and capabilities. Mastery of appropriate information and approach for their teaching specialty, as well as the applicable applications of education, leads to improved teacher-student engagement and comprehension (Cortez, 2020).

By emphasizing the teaching and learning process in physical education and student-centered instruction, including the use of innovation students benefit in a variety of ways by integrating cognition in relevant, diverse contexts (Culajara, 2022). It promotes and aims quality education for the Physical Education component of the MAPEH subject area.

There are different distance learning delivery modalities at this point for the curriculum since pandemic challenges educators and students in the teaching-learning process, where suggested learning resourced materials are already stated and expounded. The materials and instruction will be employed and utilized guides the map of learning resources required for each sub-category of distance learning delivery modalities. The online distance learning and blended delivery modality need the use of technology, synchronous and asynchronous setting of distance education promotes the exploration in terms of using e-materials and quality education (Nesterchuk et al., 2020). Teaching and learning process wherein students need to adapt and embrace the e-materials instruction through the use of different media to comply in their studies and school performance (Sööt & Viskus, 2014). Physical activity and performance in different grade levels included and required in the curriculum may vary depending on the target learners but physical activities always promote a variety of dances depending on the grade level hence the educators support the use of e-materials in teaching. Furthermore, Harandi (2015) stated that e-materials are a factor that influences the motivation of the students.

In incorporating e-learning systems into education institutions, lecturers or teachers are the key players (Goh et al., 2020), and it emphasizes interaction as a fundamental characteristic of e-learning and comes close to recognizing the importance of pedagogy in meaningful learning (Tîrziu & Vrabie, 2015). In addition, education institutions clarify the significance and capabilities of teaching staff who work in virtual environments in order to develop a common framework for teaching and training initiatives. Teachers or lecturers shown the willingness to improve their training, as they are aware of the changes and requirements imposed by e-learning (Muñoz Carril et al., 2013). Moreover, it was proposed that providing teacher training and restoring the institution's facilities could help in addressing the barriers of integrating e-materials in teaching (Windiarti et al., 2019). Teachers from day to day are confronted with the problem of choosing the appropriate teaching instruction that will integrate into the subject matter. Teaching dancing should match the learning abilities and capabilities of the students. Implementing the e-materials instruction is used to aid the goals of the teachers in reaching and engaging learners in giving a quality education despite the pandemic facing nowadays. In learning instruction, the development of teaching and learning modalities is still in the process. Day by day people look for instruction improvement and performance, this dance is a challenge. This could be possibly done through the e-materials integration in teaching dances and finding ways to improve more.

Many scholars have recently become interested in a study that looked at the usefulness of using technology in the training of motor skills. An increasing number of research journals are dedicating entire units, if not entire issues, to this topic (Ranieri et al., 2018). Hence, e-materials instruction in learning such specific areas and lessons make advantageous opportunities for creativity in their output and performance. The utilization of electronic materials in learning environment is an excellent approach to introduce and teach these abilities to students. The new curriculum also promotes lifelong learning by encouraging students to learn across academic boundaries and by collegially working as one society (Johnson, 2021).

The results of this research would benefit the PE students by helping them in terms of embracing e-materials in their learning and performance tasks. For the PE teachers, it will serve as a motivation in engaging the teaching-learning process through the use of e-materials. Utilizing this e-materials implementation, teachers can utilize this to make teaching and learning experiences acceptable and effective for the students. Administrators will give a good basis of what instruction is to be formulated for the

students to make teaching more effective. It will help them to upgrade their education with dance instruction while in curriculum developers, the study will serve as a guide for them to improve the use of e-materials in the performance of physical education in teaching and learning of different dances. Lastly, future researchers may use it as a basis for conducting further studies on novel innovations of e-materials implementation on teaching physical education dances to improve students' performance. They can also recommend the results of the study to improve the use of instruction using e-materials.

Theoretical Framework

This research was primarily attached on the theoretical works of Discovery Learning Theory as reiterated by [Suryawan et al. \(2022\)](#), and Constructivist Theory ([Amineh & Asl, 2015](#)). Jerome Bruner developed the Inquiry-Based Instruction approach to Discovery Learning. This significant idea encourages learners to use their intuition, imagination, and creativity to discover facts, connections, and achieved a new by expanding on previous experiences and knowledge, applying intuition, imagination, and creativity, and investigating new information. Learning necessitates actively seeking answers to problems rather than simply absorbing what has been stated or read. E-materials integration in teaching dances in physical education in connection with this theory reflects on how students are encouraged to use their prior knowledge and discover the use of technology for better dance performance.

The educational sessions for discovery learning should be well-designed, engaging, and participatory. To spark students' interest and motivate them to think in new ways, be more creative, and perform better, teachers should use engaging digital exercises and other attention-getting tactics. The facilitator of learning will be the one who meticulously prepares the study materials. Although the methods employed in Discovery Learning vary, the goal remains the same: for learners to arrive at the result on their own. Since performance is the basis on how to evaluate dances, the factor of exploring the lesson by the learners is what is needed. By exploring and manipulating different genres of dance, steps, and choreography or by a dance performance, learners are more likely to remember concepts and newly acquired knowledge. Also, discovery learning for millennials learners' suits for their performance, attention, and capability using technology are already used in their daily living.

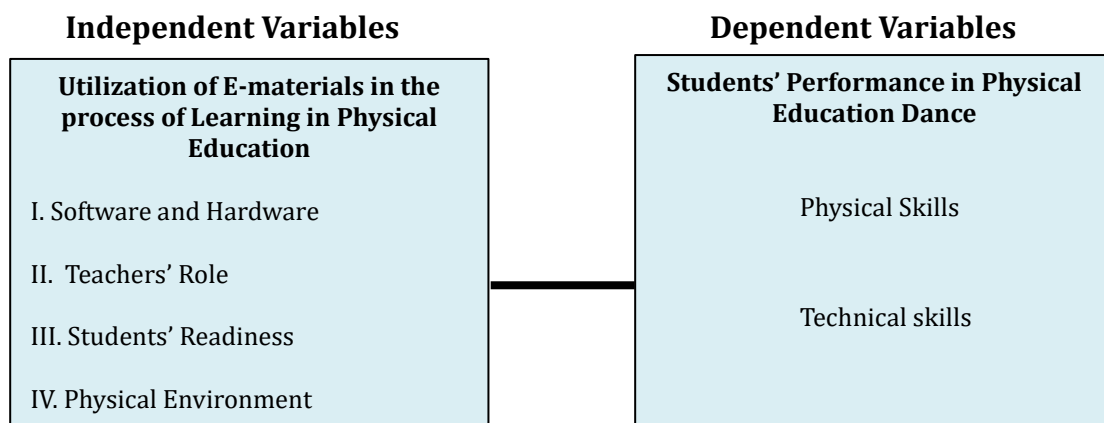


Figure 1. Research Paradigm

Shows the possible relationship of the e-materials in teaching dances in learning physical education which focuses on the software and hardware, the teachers' role in the teaching and learning process, and the physical environment where the learning happens.

How it affects the students' performance in dance under physical education concentrates on both physical and technical skills.

Statement of the Problems

This study aims to explore the relationship between the implementation of e-materials in teaching physical education and the dance performance level of students. Specifically, the assessment of the implementation of the e-materials will be assessed in terms of software and hardware, the role of the teacher, the students' readiness, and the physical environment. Moreover, the students' dance performance level will be evaluated in terms of physical skills and technical skills. Finally, the study seeks to determine if there is a significant relationship between the e-materials in teaching physical education and the students' dance performance.

METHOD

This study utilized a quantitative correlational approach of research in collecting and gathering the important data through a google form. The descriptive research design was also employed in this research. The participants of the study were composed of 50 grade nine students in Sta. Catalina National High School Candelaria, Quezon A.Y. 2020-2021. Since the study is clearly focused on incorporating e-materials in educating dances in physical education, and not all students have access to the internet, and some learners do not have access to e-materials, the participants were purposefully chosen. The researcher used a survey-type questionnaire validated by the five teachers with different specializations in the study and undergo in reliability test which was rated as good with 0.84 Cronbach alpha. It was utilized through a google form to collect information on the e-materials implementation in teaching physical education dance. After administering the questionnaire, all data were obtained, processed, and interpreted after the respondents were given the questionnaire. The use of e-materials in teaching physical education dance to increase student performance was evaluated using the mean and standard deviation. The Pearson Product Moment Correlation Coefficient was also employed to determine the significance of the link between the usage of e-materials in physical education dance instruction and student performance.

RESULTS AND DISCUSSION

This provides a thorough examination and explanation of the data collected, which is presented in tabular form and statistically evaluated to address the study's problem.

Table1. Assessment of the Utilization Oof E-Materials in Teaching Physical Education

Indicators	Mean	SD	Verbal Interpretation
Software and Hardware	4.57	0.50	Very High Implemented
Role of the Teacher	4.59	0.49	Very High Implemented
Student's Readiness	4.42	0.53	Highly Implemented
Physical Environment	4.03	0.06	Highly Implemented

Legend: 1.0-1.50-Not Implemented, 1.51-2.50-Rarely Implemented, 2.51-3.50-Moderately Implemented, 3.51-4.50- Highly Implemented, 4.51-5.00- Very High Implemented

Table 1 revealed that the respondents' assessment in the implementation of e-materials in physical education of the grade 9 learners was very high implementation in software and hardware (m=4.57; SD=0.50) so as in the role of the teacher (m=4.59; SD=0.49). Meanwhile, the student's readiness pegged at the composite mean of 4.42 and 0.53 as standard deviation, and physical environment received a composite mean of 4.03

and standard deviation of 0.06 which showed as highly implemented.

Software and hardware indicators revealed a very high implementation on teachers teach and guide in making the activity with the use of technology and can make an assessment of the lesson through online platforms. Results imply that the e-materials in teaching physical education in terms of software and hardware are implemented and can be observed in the teaching and learning process. Teachers should understand the most effective and efficient manner for them to use technology in their teaching process, and technology should be used to make the learning process more alive, concrete, exciting, and entertaining (Gilakjani et al., 2013). The statement is also applicable in the part of the students on how he manipulates technology for learning. Scheg (2014) stated that the variety in the use of messages, graphics, animation, color, and sound help to generate interest and keep attention.

In addition, the role of the teachers in giving proper instruction, preparedness using e-materials, giving enough time to consider time for students' submission of their output, giving immediate feedback, engaging collaborative teaching-learning process, and evaluating the attainment of learning goals perceived very high implementation to students. Encouraging learners to answer and submit through online platforms as the role of the teacher is perceived as highly implemented as well as how she regularly monitors student's data and evidence, gives feedback regularly, and also, displays a high level of performance in teaching dance skills. Teachers have an important role in the learning of the students and how they utilize the medium of instruction for students' learning. Instructional format refers to how information is imparted to students and how they will interact with that content. Instructional strategies represent a broad range of techniques for engaging students. These include questioning, checking for understanding, and the use of visual scaffolds such as lecture guides and graphic organizers (Fisher & Frey, 2014). In addition, the function of technology begins at the beginning of the curriculum implementation, specifically at the stage of instructional preparation.

An indicator of students' readiness in implementation of e-materials in teaching and learning physical education dance students perceived a high implementation on how they show excitement and confidence to explore different e-materials application in dance performance. The student has the capability to used technology, have their device, and can easily acquire dance skills through watching videos these are high implemented in their learning process. Other indicators perceived as highly implemented are students becoming more productive, engaging themselves in dance, being willing to buy and install software applications, having self-discipline, and knowing how to submit their dance performance in utilizing e-materials in their learning and activity in physical education dance. According to Schmid et al. (2014) the achievement and attitude were significant to the cognitive support tools performed admirably in a variety of studies for students' academic achievement.

Furthermore, the physical environment of the students is perceived as very high implemented as space well-lighted, and utilization of e-materials are applicable. High implementation revealed in the student's observation and experience through stable access on the internet at home, well-ventilated space, free from distractions, engages in with various technology and their parents assist the learners and give them a favorable environment for their studies. The learning environment is a multi-dimensional, time-sensitive space packed with a diverse collection of students and tasks. El-Ariss et al. (2021) emphasized that technological progress is influenced by evolving teaching approaches and practices.

Table2. Level of Student's Dance Performance

Indicators	Mean	SD	Verbal Interpretation
Physical Skills	4.03	0.06	Very Good
Technical Skills	4.13	0.48	Very Good

Legend: 1.0-1.50-Poor, 1.51-2.50-Fair, 2.51-3.50-Good, 3.51-4.50- Very Good, 4.51-5.00- Excellent

It illustrated in table 2 that the performance in dancing in physical and technical aspects. Physical skills mainly focus on the bodily-kinesthetic ability of the student while technical skills concern the content of the abilities executed with the art of dance which is pegged at the composite mean of 4.03 and 0.06 as standard deviation. The second indicator which was the technical skills rated as a composite mean of 4.13 and standard deviation of 0.48 which was marked as very good mostly in the results of the student's dance performance. This shows the performance of the students in dancing as for the aim of expressing a concept or emotion, releasing energy, or simply enjoying the movement itself executed.

Showing balance ability in the dance, the stationary equilibrium without the propensity to fall means that the skill makes the ability to control and adjust body movement important to have a good performance in dancing. Moreover, proper body alignment and posture visualization in the dance performance was also perceived as very good by the respondents. In terms of body balance, the students of grade 9 already have a body that shows strength and stability since they are already grown in their mature adolescent age and feature. The body of the students is also shown in their performance with proper body alignment and seen as one of the concerns and needs in the physical skills of a dancer. The students performed physical skills in a very good way in their movement coordination. The different body parts are synchronized with the rhythmic stimulus of the students regards with the music. The ability of the students to control their body movements in stopping points, allows the students to perform movements without restrictions, execute muscle exercises, maintain physical and mental energy and execute isolation. These are shown in most of the students' dance performances and all the indicators revealed a very good verbal interpretation. These all indicators in the physical skills are important in dancing aesthetically.

Thus, teachers can demonstrate purposeful teaching and learning in school PE classes by using effective strategies (Lu et al., 2020). The respondents correspond to engaging cooperation in the performance and submitted on time as part of the relationship content which implies the very good performance of the students. Dynamic content is observed through energy, effort, and weight applied in every movement. Since the data for technical skills in the students' dance performance shows a very good rating this reveals that students have created in the execution of their dance. Dance is defined as fluid and regular movement made up of attractive attitudes and contrasted graceful postures of the body and its parts (Sekaran et al., 2018).

Table3. Relationship of Utilizing Physical Education E-Materials in Dance and Dancing Performance Of Students

Factor of E-materials in process of Learning in Physical Education Dance	Physical Skills	Technical Skills
Software and Hardware	-0.007	0.117
Role of the Teacher	-0.024	0.018
Students' Readiness	-0.015	0.036
Physical Environment	0.030	-0.057

Based on the results revealed, the utilization of e-materials and dance performance of the students shows that it has no significant relationship based on the physical skills and technical skills, the data display no significant relationship based on the software and hardware, the roles of teachers, readiness of the students and the physical setting.

The hypothesis stating that there is no significant relationship between the e-materials in teaching dance in physical education and students' dance performance is supported. [Joseph et al. \(2013\)](#) discussed that the educators should know navigating technology most efficiently and effectively possible in their classrooms, and technology should be used to make the learning experience more thriving, tangible, exciting, and performing. In this scenario, it is advised that students evaluate the value of education through a technology-based teaching and learning module. This attests that e-materials could be a great tool to aid the teaching and learning process. However, the data revealed a negative weak relationship which proves that teachers and learners are the ones who make the learnings meaningful with or without e-materials.

CONCLUSIONS

The researcher assessed the utilization of physical education e-materials as perceived by the students. The teacher also implemented a virtual class for the students for them to experience how technology can affect their learnings and performance. assess the e-materials utilized in the subject of physical education and the performance of students in dancing which served as the contents of survey-questionnaire and also students submitted a dance performance through the use of internet platforms.

Based on the findings from the research, it can be concluded that the use of e-materials in teaching physical education has been beneficial for both the students and the teachers. The results show that the students' performance in terms of physical skills and developing the skills through dance have been rated as very good and excellent, respectively. This indicates that the use of e-materials in physical education has provided the students with an enhanced learning experience. Additionally, the teachers have been able to provide a better physical environment and impart knowledge more efficiently. Therefore, it can be concluded that the use of e-materials in teaching physical education is a beneficial strategy that should be encouraged in educational settings.

The following recommendations are made based on the findings: teachers may be encouraged to use e-materials in teaching physical education in dancing; teachers may continue to use and employ the efficacy of e-materials in the performance of students in dancing; future researchers may use the findings of this study as a guide in exploring other ways of increasing learners' dance performance in physical education and may replicate this study using other locals; future researchers may use the findings of this study as a guide in exploring other ways of increasing learners' dance performance.

The study was limited to one school and a small sample size. Therefore, the results may not be generalizable to other educational settings. Furthermore, the study was focused on the utilization of physical education e-materials for dance performance and did not include other areas of education, thus the results may not be applicable to other physical education activities.

Likewise, this research contributes to the literature by exploring the use of e-materials in physical education and their effects on student performance. Specifically, this study found that the use of e-materials in physical education was associated with improved student performance in dance performances. This finding has important implications for physical education instructors and students. It suggests that the use of e-materials may be beneficial in improving student performance in physical education. Additionally, this

research provides evidence of the potential for e-materials to be used in physical education to enhance learning and performance.

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