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Promoting Wellness Amidst Changing Environments: An Exercise Video Tutorial in Health Optimizing Physical Education

LOUIE BALOTO
Faculty
Nick M. Joaquin Senior High School
louie.baloto@gmail.com

Abstract — The world was growing less active before the COVID-19 pandemic struck. Global and regional worries about declining physical activity particularly in the Philippines and the ASEAN countries where sedentary lifestyles and inactivity are prevalent. Studies show a rise in sedentary behaviors and a decline in physical activity. The Covid-19 pandemic exacerbated these trends and increased the risk of obesity and cardiovascular disease in young people. Student engagement in physical education is impacted by several factors including time restraints, a lack of motivation, and social and environmental factors. Enhanced student engagement in physical education through video-based learning is emphasized as a viable solution in light of the pandemic. Offering readily available and simple-to-use resources like video tutorials can be incorporated into educational practices to encourage physical activity and combat sedentary lifestyles. The present study follows both qualitative and quantitative approaches with developmental and descriptive research designs. Developing an exercise video tutorial has four phases: planning, development, evaluation, and the final phase. The study used purposive and simple random sampling, with a total of 24 participants, or 30% of the current HOPE teachers in the Schools Division Office of Quezon City. The study reveals that exercise video tutorials are useful tools for physical education. They help students adjust to their learning environment and meet significant health goals. By offering a flexible, approachable, and inspiring means of promoting physical fitness, they help achieve the larger goal of encouraging students to lead healthy lifestyles.

Keywords — Video Tutorial, Obesity, Aerobic Exercise, Anaerobic Exercise, Physical Education, Sedentary Lifestyle, Sports

I. Introduction

Physical inactivity poses a growing global challenge with significant implications for public health. This ongoing challenge poses significant obstacles to achieving the United Nations Sustainable Development Goals (SDGs), particularly SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), and SDG 10 (Reduced Inequalities).

Globally, the pandemic exacerbated physical inactivity. During the pandemic, adherence to these guidelines dropped significantly, with 78% of participants in a study by Amini et al. (2022) failing to meet physical activity standards. Similar trends were observed worldwide, as home confinement and increased reliance on technology led to reduced physical activity and unhealthy

lifestyle behaviors (Gula, 2022). Excessive use of gadgets and video games has become a major contributor to reduced physical activity and unhealthy eating habits among teenagers aged 12 to 16 (Gula, 2022). These lifestyle changes may lead to long-term health issues such as obesity, diabetes, and cardiovascular disease (Dunton et al., 2020).

Parental control, social modeling, access to facilities, and broader macro-environmental factors, such as media and advertising, also play significant roles. Carballo-Fazanes et al. (2020) identified common barriers to participation, including time constraints, lack of motivation, inadequate facilities, and difficulty balancing academics with physical activity. Jastrow et al. (2020) emphasized that regular exercise is crucial to prevent the effects of a sedentary lifestyle, such as chronic health issues and mental distress from home confinement. Ammar et al. (2020) also noted that exercise can support the development of physical activity and nutrition guidelines to maintain health during the pandemic. Additionally, physical activity benefits mental health by preventing cognitive decline and symptoms of depression and anxiety (WHO, 2020).

The relationship between physical inactivity and the Sustainable Development Goals (SDGs) is complex. SDG 3 focuses on ensuring healthy lives and promoting well-being for all ages. However, physical inactivity—one of the main risk factors for non-communicable diseases—hinders this objective by contributing to the rise of chronic illnesses. Research highlights that encouraging physical activity among students can help reduce health disparities and support SDG 4 by creating healthier, more active learning environments. Additionally, addressing barriers to physical activity—such as lack of time, inadequate facilities, and limited social support —aligns with SDG 10 by promoting greater equality within and among nations.

In response to the pandemic's impact, the government, in collaboration with the Department of Education (DepEd) and through DepEd Order No. 060, series of 2021, launched Galaw Pilipinas, a nationwide calisthenics initiative designed to promote active lifestyles and enhance both the physical and socioemotional well-being of students and stakeholders. This program focused on improving strength, flexibility, endurance, coordination, and balance while incorporating Filipino culture to promote nationalism, unity, and discipline. It aims to counteract the decline in physical activity among learners and supports UNESCO's Sustainable Development Goal 4, which advocates for quality education and learning opportunities.

Moore et al. (2020) recommended that parents play a creative role in promoting children's health during the pandemic by engaging in home-based leisure activities. Suggestions include co-participation in activities, trying new hobbies, using online health and physical activity apps, and spending as much time outdoors as possible (while following public health guidelines).

The study by Gula (2022) found that factors such as lack of motivation, past embarrassing experiences, and expensive equipment affect teenagers' participation in sports and exercise. Teachers can also encourage participation by providing easily accessible materials for students at home (Yücekaya et al., 2021). Physical activity can benefit people of all ages, sexes, cultures, and

socioeconomic backgrounds. Teachers addressed these challenges by creating engaging and entertaining video content for children on social media platforms (Yücekaya et al., 2021). Regular exercise is crucial for counteracting the adverse effects of a sedentary lifestyle, which can lead to chronic health issues and mental distress during home confinement. Physical activity not only promotes mental health, preventing cognitive decline and symptoms of depression and anxiety but also contributes to weight management and general well-being. Parents, educators, and policymakers play pivotal roles in fostering an active lifestyle.

According to the study of Hirmawan (2022) it found that 70% of students strongly affirmed the helpfulness of physical education tutorial videos for learning at home during the pandemic. Parents echoed this sentiment, with 82% confirming the effectiveness of video tutorials for home-based physical education. These tutorials are easy to follow and execute, making them practical for home environments. For example, Priambodo et al. (2023) found that electronic modules increased students' motivation.

Statement of the Problem

The purpose of this study is to create an exercise video tutorial for Health Optimizing Physical Education subjects in senior high school and evaluate its effectiveness in the instructional process.

Specifically, this study sought to answer the following questions:

1. What are the key learning competencies in Health Optimizing Physical Education 1 that require an exercise video tutorial?

2. What is the level of acceptance of the developed exercise video tutorial to the expert teachers in terms of:

    1.1 Goals

    1.2 Content

    1.2.1 Aerobics Exercise

    1.2.2 Anaerobic Exercise

    1.3 Presentation

    1.4 Accuracy

3. How can the teachers' level of satisfaction with the exercise video tutorial be described?

4. What exercise video tutorial can be developed?

Literature Review

Video tutorials offer a practical solution, allowing students to analyze, learn, and practice from home despite changing environments. The study is grounded in Chandler and Sweller's cognitive load theory, which posits that effective instructional materials optimize learning by focusing cognitive resources on relevant learning tasks rather than preparatory activities.

This study examines teacher acceptance through the Technology Acceptance Model (TAM), proposed by Fred Davis in 1989 to predict technology usage. TAM suggests that perceived ease of use and usefulness of technology influence users' attitudes, behavioral intentions, and actual usage.

The Input-Process-Output (IPO) framework guided the development and evaluation of the exercise video tutorial. The input includes the key learning competencies in HOPE 1 and exercises. It ensures the tutorial meets curriculum requirements and addresses students' needs. The process involves analyzing teacher responses on two aspects: level of acceptability and level of satisfaction. These evaluations help refine the tutorial for better relevance and impact. The output is the final developed exercise video tutorial, incorporating insights from the evaluation process to create a high-quality educational tool.

Teacher responses were analyzed to assess the level of acceptability and level of satisfaction. Statistical methods are used to identify patterns and relationships. Results will show how teachers perceived the tutorial and whether it met its objectives. This research provides insights into the tutorial's effectiveness in the instructional process.

Overcoming barriers to physical activity requires a multi-level approach to foster a culture of movement. Promoting physical activity is not only a health priority but also essential for achieving sustainable development. Policies and programs that ensure equitable access to physical activity opportunities, especially in educational and community settings, can help reduce inactivity and advance global goals. Aligning public health strategies with the SDGs will be vital for creating healthier, more active, and equitable societies.

II. Methodology

Research Design

This study employed a mixed-method approach, integrating qualitative and quantitative methods to comprehensively examine how the exercise video tutorial (EVT) promotes wellness despite changing environmental conditions.

The quantitative approach utilized a checklist of the most essential learning competencies and assessed the acceptability and satisfaction levels of the EVT. These provide objective, measurable data on how well the tutorial met educational standards and participant expectations.

The study balanced subjective feedback with objective metrics, ensuring a comprehensive evaluation of the EVT's effectiveness in promoting wellness.

The qualitative approach involved focus group discussions (FGDs) to determine the exercises included in the EVT. It provides deeper insights into the perceptions, preferences, and needs, ensuring the content is relevant and meaningful. This approach enhanced the tutorial's effectiveness.

Developmental research systematically designs, develops, and evaluates instructional programs, processes, and products to ensure internal consistency and effectiveness (Richey, 1994; Delos Reyes, 2020). Descriptive research is a fact-finding method that analyzes and interprets the profiles, attitudes, opinions, and distinguishing characteristics of communities, individuals, processes, and events (Delos Reyes, 2020). It involves gathering and analyzing information about specific situations or conditions for interpretation and description.

The present study used a developmental research design. Developing an exercise video tutorial has four phases: planning, development, evaluation, and the final phase. During the planning phase, participants' competencies were assessed through a questionnaire, focusing on their professional experience and curriculum knowledge. Physical education and health teachers were asked to identify the most essential learning competencies that require an exercise video tutorial, ensuring alignment with educational objectives related to wellness promotion and physical health improvement. The exercises were identified through focus group discussion. Exercises are designed to be adaptable, considering dynamic learning environments such as remote or hybrid settings. Additionally, they were structured to be safe, effective, and appropriate for students' physical abilities. The framework also incorporated culturally relevant and accessible exercises that could be easily performed at home or in various settings, ensuring the practicality and inclusivity of the video tutorial.

In the developmental phase, the researcher compiled the identified Most Essential Learning Competencies (MELCs) and corresponding exercises to develop the exercise video tutorial (EVT). The evaluation phase involved subject matter experts assessing the validity and acceptability of the EVT materials using an adapted and modified questionnaire. Based on expert feedback, the researcher then integrated recommendations in the final phase, refining the existing EVT to produce the final version.

Developmental research is particularly suited for systematically designing instructional programs like the EVT, ensuring consistency and effectiveness (Delos Reyes, 2020). This approach facilitates a process of planning, development, evaluation, and refinement, resulting in a well-structured educational tool. The integration of these research methodologies ensures a comprehensive evaluation and enhancement of the exercise video tutorial.

Locale and Participants

The study involved 24 teachers, representing 30% of the current senior high school teaching population as identified by the division office. Table 1 presents the population of the study, which includes 21 participants from Teacher I–III levels. All are experts in Physical Education and Health. Additionally, three participants were Master Teachers I–VI, recognized for their exemplary performance, extensive knowledge, and experience in teaching the subject. The study focused on public school teachers within the Schools Division Office of Quezon City.

The researcher employed a combination of purposive and simple random sampling methods. Participants were intentionally selected based on their qualifications, expertise, and other defining characteristics, specifically ensuring they were Health Optimizing Physical Education (HOPE) teachers. This selection ensured that the data remained aligned with the study's focus on health and physical education. Furthermore, simple random sampling was employed to obtain a representative sample of teachers, giving each individual an equal chance of participation. By combining these methods, the study effectively gathered both qualitative and quantitative data, providing a well-rounded understanding of the research topic.

Instrument

The study adopted the questionnaire developed by Delos Reyes (2020) in Polymedia-Based Instruction in Purposive Communication. The researcher modified the questionnaire as the primary instrument. It served as a data collection tool due to its user-friendliness, quick scoring process, and ease of administration to the participants. The modified questionnaire underwent reliability and validity procedures before being distributed. The researcher utilized the EVT Identification Checklist and the EVT Level of Acceptability and Satisfaction questionnaire as assessment instruments.

EVT Identification Checklist. It was used to help determine the most essential learning competencies that require exercise video tutorials.

A focus group discussion is needed to identify the exercises to create an Exercise Video Tutorial.

EVT Acceptability Assessment. This study utilized a questionnaire checklist with a Likert scale to evaluate the acceptability of the developed EVT materials. The assessment included an 18-item questionnaire designed to measure key aspects of acceptability, divided into four categories: perceived goals, content, presentation, and accuracy.

EVT Satisfaction Assessment. This study employed a questionnaire checklist with a Likert scale to evaluate the level of satisfaction with the developed EVT materials. The assessment included a seven-item questionnaire measuring aspects of teacher satisfaction, including

effectiveness, overall satisfaction, enjoyment, relevance, and the likelihood of recommending the materials to colleagues.

Data Collection

In the collection of the data needed for the study, permission was sought from the Schools Division Superintendent of the Division Office of Quezon City to allow the conduct of the study. The researcher also requested the Division Office of Quezon City to provide data for identifying participants who met the criteria for inclusion in the study. The EVT checklist questionnaire was administered virtually. After which, virtual discussion about the selection of different exercises on the inclusion of the video tutorial. Then, the researcher will send the developed video tutorial to the participants along with the EVT Level of Acceptability and Level of Satisfaction questionnaire via email. The researcher administered the modified questionnaire for pilot testing to check the validity and reliability of the questionnaire to five (5) respondents.

After the administration of pilot testing of the modified questionnaire, the researcher found that the modified questionnaire is valid and reliable. Since the modified questionnaire was valid and reliable, the researcher will administer the questionnaire to the respondents. The researcher interpreted the data gathered.

Ethical Compliance

Ethical protocols were strictly followed throughout the research process. Informed consent was obtained from all participants, ensuring they were fully aware of the study's purpose, procedures, and potential risks before agreeing to participate. Participants were assured that their involvement was entirely voluntary, and they had the right to withdraw at any time without consequence. Confidentiality was maintained by anonymizing the data, and all personal information was securely stored and only accessible to the researcher for the purposes of the study. These ethical measures were implemented to protect the rights and well-being of all participants involved.

Data Analysis

The researcher used frequency to identify the MELCs in HOPE 1 that requires exercise video tutorial. To describe the level of acceptability and level of satisfaction of Exercise Video Tutorial, the weighted mean was used in this study. It is calculated by multiplying the weight associated with a particular event or outcome with its associated quantitative outcome and then summing up all the product together. The researcher used the Likert Scaling technique to infer the level of acceptability and level of satisfaction of teachers to the exercise video tutorial.

III. Results and Discussion

The study yielded several salient findings regarding the developed exercise video tutorial.

1. The top five key learning competencies for HOPE 1 that benefit from exercise video tutorials, as ranked by public-school teachers. The highest priority, ranked 1st, is for students to engage in moderate to vigorous physical activities (MVPAs) for at least 60 minutes most days of the week in a variety of settings in- and out-of-school. Teachers believe exercise video tutorials can help address the current lack of such activities among students, who face barriers like excessive gadget use, lack of motivation, and too much schoolwork. Ranked 2nd is Sets Frequency, Intensity, Time, Type (FITT) goals based on training principles to achieve and/or maintain health-related fitness (HRF). Teachers noted that students are often absorbed in technology and online entertainment, so exercise videos that emphasize training principles could motivate them to achieve their fitness goals. The 3rd ranked MELC involves recognizing the benefits of physical activity for overall health, encouraging students to reflect on how staying active reduces disease risk and boosts immunity. To address space constraints in Metro Manila homes and motivate students who are engaged with gadgets, the researcher suggests incorporating interactive and engaging elements like lively music and graphics in exercise videos.

2. The focus group discussion provided key recommendations for the development of the exercise video tutorial. Participants emphasized the need for practical, space-efficient exercises that require no special equipment. A balanced mix of aerobic and anaerobic workouts was suggested to support overall fitness. Each routine should include a warm-up, main workout, and cooldown to ensure safety and structure. The group also recommended using household items as improvised tools to increase intensity and engagement. Gradual progression in difficulty and the inclusion of clear instructions, demonstrations, and motivating music was also highlighted to keep learners interested and active.

This qualitative data provided valuable insights into designing an effective and engaging exercise video tutorial that aligns with the needs, limitations, and realities of senior high school learners. The recommendations drawn from the focus group formed the foundation for the video content and instructional design.

3. The results show that the overall acceptability based on perceived goals of the exercise video tutorial is highly acceptable based on the findings presented. all aspects of the tutorial were considered ‘Highly Acceptable’, with a weighted mean of 3.84. Specifically, the highest rated items, with a mean score of 4.00 are those tutorial's role as an alternative performance task in Physical Education for senior high school students, its ability to encourage a positive attitude towards an active lifestyle, and its promotion of personal well-being and health. These findings are significant because they reflect how video-based learning, especially in physical education, can bridge classroom goals with real-world application. Based on the collective review of Jastrow et al (2022) where video tutorials can be highly effective as a tool not only aid in achieving

educational goals but also promote physical activity and health among students. Physical education tutorial videos can help carry out learning at home during pandemic and foster motivation in studying while having positive view in having active lifestyle (Hirmawan 2022). While in the study of Torion and Pabcio Jr. (2024) reveals that curriculum experts should validate the video lessons to assess the acceptability of the video lessons ensuring it meets the objectives. This implies that potential areas for further refinement, such as ensuring that the content is even more closely aligned with curriculum goals or more tailored to the specific needs of the target audience. Addressing these will not only reinforce the content's educational value but also maximize its impact in the long run.

4. The study reveals that the aerobic exercise tutorial is highly regarded by teachers, with an overall acceptability score of 3.89. Key aspects, such as the alignment of content with health goals, its engaging nature, and its relevance to broader physical education objectives, were rated very highly at 4.00. This suggests that teachers find the tutorial both pedagogically sound and adaptable to real classroom settings, reinforcing its practicality and impact. Students are more encouraged and motivated to do the activities. This indicates that the tutorial effectively delivers its intended benefits in a way that keeps learners interested (Priambodo et al, 2023). Students' motivation increased when teachers used video tutorials and electronic modules in facilitating learning (Hirmawan 2022, Priambodo et al 2023).

5. The study shows that the anaerobic exercise tutorial, focused on muscle and bone strengthening, is highly effective, earning an overall acceptability score of 3.93. Key elements such as alignment of the exercise content with the broader goals of physical education, its ability to maintain overall health, and its capacity to engage and retain the attention of learners with top ratings of 4.00. These findings indicate that when students are presented with structured, purposeful, and relatable content, their engagement and understanding improve significantly. Students find themselves more engaged and work collaboratively with peers. This reflects the tutorial's effectiveness in delivering content that is both educational and engaging for learners (Hirmawan 2022, Priambodo et al 2023, I Ketut Semarayasa, et al 2023). It is clear that participants find the anaerobic exercise content within the tutorial very acceptable and well suited to educational and health objectives. This positive response emphasizes the effectiveness of the tutorial and specifically, its ability to provide well-structured, safe, and fun content for strengthening muscles and bones.

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7. The study illustrates that the exercise video tutorial is highly effective and well-received, with an overall score of 3.93. The tutorial's suitability for small spaces or home use is rated highest at 4.00, highlighting its practicality and adaptability. The accuracy of the content is also highly valued, scoring 3.96, which reassures teachers that the exercises are safe and correctly presented. The alignment of the tutorial with learners' fitness goals received a strong score of 3.92, showing it resonates well with the audience's interests. Although the requirement for minimal equipment scored slightly lower at 3.83, it still falls within the "highly acceptable" range, suggesting the tutorial is cost-effective but could potentially be even more accessible with fewer equipment needs.

8. The study shows that teachers are very satisfied with the exercise video tutorial (EVT), giving it an overall score of 3.89. This suggests that the tutorial not only meets instructional standards but also supports teaching in a way that feels manageable and effective for educators. Teachers may appreciate how the video is structured to simplify instruction while engaging learners with clear visuals and purposeful content. The step-by-step instructions from the video somehow break learning disparities. Through video-based presentations, students acquire more knowledge, understanding, and skills in the videos, which was strengthened by Nadeak & Naibaho (2020). Learning nowadays needs video-based learning to grasp in-depth knowledge of the content. In conclusion, the high level of satisfaction means that the EVT can be regarded as a relevant, effective, and recommended resource in the subject of physical education. The positive feedback includes the life processes encouraging healthier lifestyles and the achievement of education demands with some aspects as opportunities for enhancements.

IV. Conclusion

The study confirmed that exercise video tutorials (EVTs) effectively address several key learning competencies in HOPE 1, especially those related to promoting moderate to vigorous physical activities (MVPAs), applying the FITT principle, and understanding the health benefits of regular exercise. These competencies are vital for helping students overcome common challenges such as inactivity, lack of motivation, and limited space or resources.

Expert teachers showed a high level of acceptance of the EVT based on the following aspects: Goals: The tutorials were found to strongly support physical education goals by encouraging an active lifestyle and offering an alternative performance task. (Mean score: 3.84). Content: Aerobic Exercises: The aerobic segments were engaging, well-structured, and aligned

with curricular needs. (Mean score: 3.89). Anaerobic Exercises: The anaerobic segments were equally well-received for their structure, challenge, and educational value. (Mean score: 3.93). Presentation: The video's audio-visual quality and design were effective in maintaining students' attention and interest. (Mean score: 3.82). Accuracy: The tutorials were accurate in demonstrating exercises and adaptable for home-based learning, even with limited space or equipment. (Mean score: 3.93).

On teacher satisfaction: Teachers expressed strong satisfaction with the tutorial. They found it to be a useful tool that supported meaningful learning, improved student engagement, and made health and fitness education more accessible. (Overall satisfaction score: 3.89). On the development of the exercise video tutorial:

The exercise video tutorial developed in this study was found to be well-designed, effective, and practical for both remote and face-to-face instruction. However, the study also acknowledged challenges, such as the need for proper guidance during exercises, student access to technology, and the importance of tailoring content to different learner needs.

V. Recommendations

For enhancing curriculum alignment: Continue reviewing and updating EVT content to ensure it directly supports the HOPE 1 MELCs. Collaboration among teachers, physical education experts, and curriculum developers is essential to keep the content relevant and effective. To improve acceptance and effectiveness: Goals: Ensure each video emphasizes its purpose in promoting lifelong health and fitness. Content: Maintain a balanced mix of aerobic and anaerobic exercises while ensuring they are safe, age-appropriate, and motivating. Presentation: Improve instructional clarity and use engaging visuals to sustain student interest. Accuracy: Ensure that exercises are properly demonstrated and accompanied by clear instructions to minimize errors, especially when students practice independently. To support teacher and student satisfaction: Enhance the tutorials by integrating interactive features such as feedback systems, gamified elements, or tracking tools to make learning more dynamic and personalized. Consider print guides or occasional in-person sessions to support students who may need additional help. For broader implementation and further research: Expand the reach of the tutorial by partnering with the Department of Education and local government units.

- Address internet access issues by advocating for wider coverage and providing devices for students in need.
- Conduct future studies focusing on student perceptions and learning outcomes to complement teacher feedback.

- Offer teacher training on how to integrate EVTs effectively in both in-person and blended learning settings.

These recommendations aim to make exercise video tutorials not just supplemental resources, but essential tools for delivering quality physical education and encouraging healthier lifestyles among students.

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