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Smart Fitness: Technology-Assisted Exercise Programs on Students' Physical Fitness

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ABSTRACT: This study underscores the importance of structured physical activity in students' educational development. Regular, scheduled exercise regimens serve not only to improve motor skills but also to foster lifelong healthy habits. These regimens act as preventive tools against sedentary behavior and its associated health risks. Technology has transformed sports and fitness sectors, not only through wearable equipment and advanced training tools but also by improving performance analysis and feedback systems. Devices such as smart wearables, motion tracking software, and video playback have become vital in assessing and enhancing athletes' and learners' performance. Furthermore, innovations like Hawk-Eye technology in sports officiating have highlighted how digital tools enhance fairness and precision. Despite these advancements, studies suggest that Information and Communication Technology (ICT) is still underutilized in pedagogical practice. According to Weir & O'Connor (2019), its full potential in enriching physical education instruction remains untapped. In the Philippines, the need for alternative learning modalities surged during the pandemic. According to UNICEF and the Department of Education (DepEd), the Basic Education-Learning Continuity Plan (BE-LCP) was introduced to address learning gaps. This plan included options such as online learning, modular approaches, TV/radio-based instruction, and blended learning. In the Atimonan I District of Quezon, face-to-face classes have resumed, allowing educators to reintroduce structured physical fitness activities, now enhanced with technology. Dance-based fitness programs represent one of the most innovative technology-assisted physical activities being implemented. This study addresses the research gap by exploring how technology-based fitness programs—particularly dance-focused interventions—affect students' physical fitness, motivation, and engagement. Furthermore, the study aligns with the Revised Physical Fitness Test Manual (No-OJ 4, s. 2019) and is grounded in Republic Act No. 5708, which mandates the promotion of physical education in Philippine schools as part of holistic development. In conclusion, while technology offers tremendous potential to transform physical education, its effectiveness depends on how well it is implemented and integrated into the curriculum. Through this study, the researcher aimed to contribute to a deeper understanding of how these programs can be optimized to benefit Filipino learners, especially in a post-pandemic educational landscape.

KEYWORDS: smart fitness, technology assisted exercise program, motivation, engagement, holistic development

INTRODUCTION

Technology-assisted exercise programs nowadays play's a big role on learners physical activities, these programs provide us a mixed used of technology and physical activity, engaging and effective learning experience. The use of gadgets, online platforms, jumbotrons with large screens, high-tech sound systems, and online monitoring physical activities has brought together engineers, scientists, administrators, and those in the communications technology field to improve the viewing experiences of sports fans (whether they are in the stands or watching on television).

According to study, for pupils to learn new patterns and advance in their education, scheduled exercise regimens are crucial. To increase their motor range and overcome any obstacle, they require novel stimuli and challenges that promote the exponential learning of abilities.

Therefore, it is essential to encourage good lifestyle habits from an early age that can also prevent detrimental health behaviors in order to offset the trends of a sedentary lifestyle. Engaging in physical activity can help students stay fit both now, which fosters harmonious and healthy growth, and in the future, which demonstrates the long-term health benefits of exercise. Regretfully, there are still differences between the views and experiences of students in traditional and online physical education

and health-related courses. This disparity was very noticeable. Unfortunately, the disparities between students' opinions and experiences in conventional and online physical education and health-related courses persist. This gap was especially pronounced during the pandemic (Garcia, 2022b), which not only lowered the physical activity among students but also made it difficult to teach physical education courses. This deficiency is likewise highlighted in physiotherapy-related studies (Tomé & Coelho, 2023).

Any movement of the body produced by the skeletal muscles that requires the use of energy is referred to as physical activity. There is ample evidence that regular physical activity has positive health effects. According to Miller et al. (2022), physical activity helps reduce premature death and chronic diseases like cancer, diabetes, obesity, hypertension, cardiovascular disease, and osteoporosis. Numerous guidelines were established as a result of the critical role that physical activity plays in human health (World Health Organization, 2020).

The belief that physical activity is essential to meeting the minimal needs to improve health outcomes and physical fitness unites these recommendations. In order to enhance a range of health outcomes for various population groups, they also suggest different kinds and quantities of physical activity. For example, cardiovascular activity should be done three to sixty minutes a day, primarily at a moderate-to-vigorous intensity, and should include vigorous-intensity activities at least three days a week (e.g., jogging, walking outside, swimming, dancing, and cycling). At least three days a week, as part of the daily 60-minute exercise routine, muscles should be strengthened. This can be done through structured programs (lifting weights, working with rubber bands and bands, etc.) or unstructured activities (climbing trees, playing on playground structures, etc.). At least three days a week should be dedicated to bone strengthening exercises, which should include running, jumping rope, playing sports, and force training. There are still a lot of people who do not get enough exercise in spite of these recommendations and the numerous health advantages of physical activity (Guthold et al., 2020).

The focus of this chapter will be on school-based interventions aimed at enhancing kids' physical health and exercise habits. Schools are the perfect place to undertake interventions that encourage adequate physical activity, claim Kljajević et al. (2022). Instead of using traditional pedagogies, we want to find out how technology-assisted instruction (CAI) might be used to teach and carry out these activities.

This study aims to explore the impact of technology-assisted exercise programs, specifically dance-based interventions, on students' physical fitness, motivation, and overall well-being. It will assess how these programs influence students' engagement with P.E. classes, their academic performance, and their mental health by combining physical exercise with digital tools.

Research Question

This study aims to examine the impact of technology-assisted exercise programs on students' physical fitness scores. It seeks to determine whether these programs support student's physical activities and motivation to engage in physical fitness activities.

Specifically, this study sought to answer the following questions:

1.What is the demographic profile of the respondents in terms of:
- 1.1 Sex;
- 1.2 Age: and
- 1.3 BMI?

2.What is the extent of physical fitness activities performed by the students with the aid of technology-assisted exercise in terms of:
- 2.1 Vigorous Physical Activity;
- 2.2 Moderate Physical Activity; and
- 2.3 Walking Physical Activity;

3.What is level of motivation of the student in doing fitness activities with the aid of technology-assisted exercise in terms of:
- 3.1 Intrinsic;
- 3.2 Identified;
- 3.3 External;
- 3.4 Motivation;

4.What are the challenges encountered by the learners when using technology-assisted physical fitness programs in terms of:
- 4.1 Technical aspect;
- 4.2 Access to technology;
- 4.3 Technical Difficulties;
- 4.4 Digital Literacy?

5.Is there a significant difference on the students' level of physical fitness test scores, extent of physical fitness activities performed by the students with the aid of technology-assisted, and level of motivation of the student in doing fitness activities with the aid of technology-assisted exercise when grouped according to profile?
6.Is there a significant relationship between students' physical fitness test scores and the extent of physical fitness activities they engage in with the help of technology exercise?
7.Is there a significant relationship between students' physical fitness test scores and their motivation level in doing fitness activities with the aid of technology-assisted exercise?
8.Do the extent of physical fitness activities students are engaged in with the help of technology, and the students' motivation level in doing fitness activities singly or in combination affect their physical fitness test scores?
9.Based on the results of the study, what technology-assisted fitness programs may be proposed?

Scope and Limitation of the Study

The study focuses on the level of impact of technology-based fitness programs in physical education on learners' academic performance.
Selected Grade 8 learners from Atimonan National Comprehensive High School Atimonan, Quezon from school year 2024-2025 were considered as respondents of the study. The respondents were characterized by their demographic profile; age, sex, height weight, the Physical Fitness Test scores of the students using the PACER test. This study administered a survey questionnaire to the respondents, distributed for about two weeks.

The study used a descriptive survey research methodology, with a modified questionnaire checklist as a tool for obtaining data. The said instrument evaluates the impact of technology-based fitness programs to the learners, such as in their academic performance and motivation in learning P.E.

This research establishes the groundwork that leads to the design of the learning environment in basic education, including forming an effective and efficient teaching force, learner collaboration, dealing with mental and emotional pressure and anxiety, learner empowerment, managing expected challenges, and continuous improvements to improve student's learning objectives and satisfaction. Furthermore, how learners must self-regulate their Learning was considered in the design of the learning environment. Furthermore, decision-makers at educational institutions may work to enhance each factor examined in this study to achieve a high level of distance learning quality. Regardless of the other reasons, developing post-pandemic pedagogy to secure a high-quality education is a critical matter that must be addressed**.**

Framework

This diagram depicts the research process that will be undertaken in order to close a knowledge gap.

Beginning with relevant data from the respondent's demographic profile, the effect of the usage of technology-based fitness program on the learners, and the challenges that teachers have encountered when teaching P.E. classes, which will serve as raw inputs to be processed on with a goal in mind to achieve the stated objectives, follows a logical process.

Once the information has been gathered, the research instrument and production will be validated and obtain permission from the concerned authorities the permission to conduct the study, and it will be processed through scientific data manufacturing through the administration of a modified questionnaire together with the application of the proper statistical tool to analyze the problems that have been encountered and arrive at the desired outcome.

After the analysis has been done, processed, and manufactured, it is expected that the desired goal of having a proposed training program to enhance the learners' developing skills will be attained.

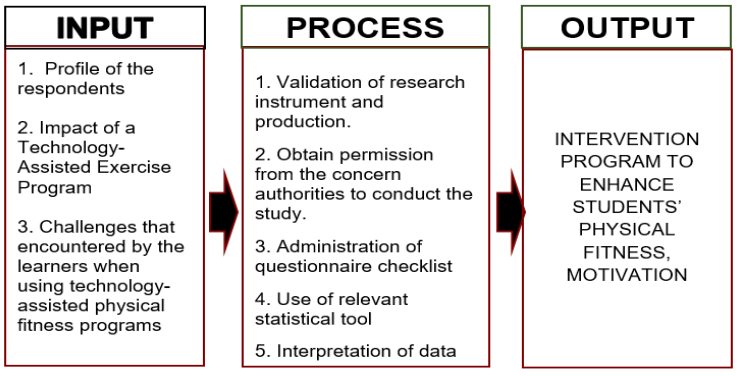

Figure 1. Conceptual Framework

Research Design

In the context of research design, the overall approach utilized by a researcher to combine the many components of the study logically and cohesively and successfully solve the research topic is known as the research design, Sage (2018).

Descriptive-quantitative research design approaches were employed to carry out the investigation. It is frequently used to collect information to compile and analyze quantitative and statistical data to support or refute certain knowledge propositions (Leedy & Ormrod 2019).

According to the National Institute of Standards and Technology, quantitative research includes several methodologies, such as experiments and surveys, and data is gathered utilizing automated systems that generate statistical data (Williams, 2018).

Using a Correlational technique, the researcher looked for a link between two closely related subjects or variables. Lastly, a modified questionnaire checklist is used to collect data on the effect of video instruction in teaching physical education on the learners' academic performance.

Respondents of the Study

The respondents of the study consist of selected Grade 8 learners who are engaged in a technology-assisted fitness program. Using purposive sampling, the researcher selected participants based on their involvement in the said program. Through the Raosoft sample size calculator, a total of two hundred (200) learners were identified as the appropriate sample size. These respondents serve as a representative group for analyzing the effectiveness and impact of technology-assisted physical activities among junior high school students.

Research Instrument

The use of a research instrument is critical for collecting and analyzing data. By research instruments, the study's results are more accurate because of some procedures or techniques employed. In collecting the necessary data, the main instrument utilized in this study is a modified questionnaire checklist.

A modified questionnaire checklist was used to collect data on the technology-assisted exercise programs on student physical fitness.

In addition, a frequency level scale was used in the questionnaire checklist (5-always; 4-often; 3-sometimes; 2-seldom; 1-never). Part I of the survey includes questions on the respondents' age, sex, height, and weight. Part II consists of the extent of physical fitness activities performed by the students with the aid of technology-assisted exercise in terms of: Vigorous Physical Activity; Moderate Physical Activity; and Walking Physical Activity.

Part III consists of level of motivation of the student in doing fitness activities with the aid of technology-assisted exercise in terms of: Intrinsic; Identified; External; and Motivation. Part IV consists of the challenges encountered by the learners when using technology-assisted physical fitness programs in terms of; Technical Aspect; Access to Technology; Technical Difficulties; and Digital Literacy.

The significant difference on the extent of physical fitness activities performed by the students with the aid of technology-assisted and level of motivation of the students doing fitness activities with the aid of technology-assisted exercise when grouped according to profile and the enhancement program that may be proposed.

Data Gathering

A modified printed questionnaire checklist and a Google Forms version were developed, validated, and tested for reliability. Prior to data collection, formal permission was sought and successfully obtained from the appropriate authorities.

The researcher distributed the questionnaire checklist to the selected learners. Upon retrieval of the completed responses, the data were tallied, tabulated, computed, and analyzed. A statistician, along with a research consultant and academic advisers, was consulted to ensure the accuracy and quality of the manuscript in preparation for the final defense.

The research findings were summarized, and corresponding conclusions and recommendations were formulated. Following the oral defense, necessary revisions were made based on the feedback and suggestions provided by the oral examination committee. Final hardbound copies of the manuscript were prepared for official submission.

Statistical Treatment

To determine the outcomes derived from the collected data, appropriate data analysis procedures were conducted. Data analysis refers to the systematic organization, examination, and interpretation of information to enhance understanding and effectively communicate the results. Several statistical tools were employed to analyze the gathered data. These included the weighted arithmetic mean, standard deviation, and two-sample t-test to assess general trends and variability in responses. To describe the profile of the respondents, the study utilized frequency counts, percentage distributions, and rank distribution across selected demographic variables.

Frequency count refers to the number of times a particular response or value appears in the dataset. It helps identify how common or uncommon specific characteristics are among respondents.

Percentage distribution expresses the frequency of each response as a percentage of the total number of responses. This provides a clearer understanding of the proportion of respondents that fall into each category.

Rank distribution involves ordering the data from highest to lowest (or vice versa) based on specific criteria. This helps identify the relative position or importance of each category or response.

In evaluating the impact of Smart Fitness: Technology-Assisted Exercise Programs on Student Physical Fitness, the following statistical methods were applied: weighted mean, standard deviation, rank distribution, and correlation analysis. To determine whether there were significant differences in the effects of technology-assisted exercise programs when respondents were grouped according to their profile, Pearson r, t-test, and one-way analysis of variance (ANOVA) were utilized.

Research Ethics

The study was conducted in full compliance with ethical research standards to protect the rights, privacy, and well-being of all participants. Prior to data collection, the researcher secured the necessary approvals from the appropriate authorities, including written permission from the Local Government Unit in the Laguna Provincial Capitol at Santa Cruz, Laguna and consent from dean/director of the school. These steps ensured that the study proceeded with institutional support and transparency.

Confidentiality. Encrypt data and ensure that specific answers cannot be linked to particular people to preserve respondents' privacy and reputation. Refrain from sharing any personal information that can jeopardize participants' privacy or reputation.

Privacy. Be mindful of the respondents' right to privacy by conducting research in environments that guarantee data collection and storage confidentiality. Make sure that sensitive information is only accessible by authorized persons. Take steps to reduce the possibility of injury to participants, such as offering counseling services if they feel uncomfortable talking about anxiety or performance problems.

Beneficence. Make an effort to minimize participation risks and enhance benefits. Ensure the study advances knowledge that will eventually improve the health and effectiveness of student-athletes. Show participants' autonomy by enabling them to leave the study at any moment and without consequence. Give them precise information about their rights as study participants.

Researchers should possess the required training and credentials to conduct research on delicate subjects like anxiety and social anxiety.

Contact the appropriate institutional review boards (IRBs) or ethics committees before beginning any research project to obtain ethical approval. This guarantees that the research complies with ethical norms and regulations.

It is crucial to consider these ethical issues while undertaking ethical research that advances knowledge of and assistance for tertiary student athletes' mental health and performance during in-season competitions.

RESULTS

This chapter discusses the presentation of the result, interpretation and analysis of data on the study of technology-assisted exercise programs on students' physical fitness.

Demographic Profile of the Student-Athletes

This chapter discusses the presentation of the result, interpretation and analysis of data on the study of technology-assisted exercise programs on students' physical fitness.

Table 1.1 Demographic Profile of the Respondents in terms of age.

Age	Frequency	Percentage
12 years old	12	6.0
13 years old	87	43.5
14 years old	84	42.0
More than 14 years old	17	8.5
Total	**200**	**100**

Table 1.1 presents that the majority of respondents are 13 years old, comprising 87 individuals or 43.5% of the total participants. This indicates that the age of 13 is the most represented group in the study. In contrast, only 12 respondents, or

6.0%, are under the age of 12, making it the least represented age group. This suggests that the data gathered predominantly reflects the perspectives and experiences of 13-year-old participants.

The age distribution may also reflect the target population's demographic structure, potentially indicating that the majority of the participants are in the early adolescent stage, which could influence their responses depending on the study's focus.

Steinberg (2021) emphasized that early adolescence, typically between ages 11 to 14, is a critical period marked by cognitive, emotional, and social changes. His research underscores how 13-year-olds begin to form stronger peer identities, become more self-aware, and exhibit greater independence, which can influence survey responses in studies targeting this age group.

According to a WHO regional report, 13-year-olds are more susceptible to peer influence than those aged 11–12. This stage is crucial for forming attitudes toward behavior, education, and authority. The report stressed the importance of understanding age-based behavior for policy and program development targeting school-aged youth.

Table 1.2 Demographic Profile of the Respondents in terms of sex

Sex	Frequency	Percentage
Male	104	52.0
Female	96	48.0
Total	**200**	**100**

Table 1.2 shows that the majority of the respondents were male, accounting for 104 individuals or 52.0% of the total participants. In comparison, 96 respondents were female, representing 48.0% of the sample. This shows a relatively balanced gender distribution, with a slight predominance of male participants. While the difference is minimal, the findings suggest that male perspectives are slightly more represented in this study. Depending on the focus of the research, this distribution may influence the results, especially if gender plays a role in attitudes, behaviors, or experiences being studied.

Garcia et al. (2022) conducted a national study on Filipino junior high school students and found that male learners were more likely to engage in active classroom participation, whereas female students exhibited higher levels of academic discipline. The researchers also noted that slight gender imbalances in sample representation were often due to differences in school attendance rates and the willingness of students to disclose personal information.

Supporting this, the UNESCO Global Education Monitoring Report 2023 highlighted global improvements in gender parity within basic education. However, the report emphasized that localized studies, particularly in developing regions, continue to reveal subtle variations in male and female participation rates. These discrepancies are frequently influenced by cultural norms and socioeconomic conditions, which shape educational access and engagement differently for boys and girls.

Table 1.3 Demographic Profile of the Respondents in terms of BMI

BMI	Frequency	Percentage
Underweight	75	37.5
Normal	46	23.0
Overweight	33	16.5
Obese	46	23.0
Total	**200**	**100**

As shown in Table 1.3, 75 respondents, representing 37.5% of the total participants, were classified as underweight. In contrast, 33 respondents, or 16.5%, were identified as overweight. This indicates that underweight is the most common weight classification among the participants. The higher percentage of underweight individuals may be influenced by factors such as nutritional intake, physical activity levels, or socioeconomic status. These findings highlight the need to further explore the health and dietary habits of the respondents to understand the root causes of this trend.

According to the Food and Nutrition Research Institute (FNRI), 2021, 31.2% of Filipino adolescents aged 10–19 were found to be underweight or stunted, while only 13.4% were overweight or obese. The survey emphasized poor dietary habits, food insecurity, and lack of access to balanced meals as leading causes of undernutrition.

(UNICEF, 2022) reported that undernutrition remains a pressing concern in Southeast Asia, especially in low-income communities. Adolescents aged 12–15 are particularly vulnerable due to growth spurts and increased nutritional needs during puberty. In many countries, including the Philippines, underweight rates remain higher than overweight rates.

Integrating technology-assisted exercise programs into school curriculum can be highly beneficial, grade 8 students at young age, regardless of being male or female, and their BMI classification find it engaging and entertaining to include technology on a daily basis of learning especially in PE classes. However effective integration requires teacher training and support, curriculum alignment and careful consideration of pedagogical approaches.

II. The extent of physical fitness activities performed by the students with the aid of technology-assisted exercise in terms of:

2.1 Vigorous Physical Activity;

Indicators	Mean	Verbal Interpretation
1. I am involve in vigorous physical activity like running, heavy lifting, aerobics, fast biking, etc..	2.30	O
2. I spent a lot of time doing vigorous physical activities.	3.04	O
3. My knowledge about technology makes it easier to engage on vigorous activity like running.	2.27	S
4. My usage of technology provides encouragement to perform physical activity.	2.03	S
5. I use technology to search and participate on environmental activity like biking, hiking, or playing sports.	2.29	S
General Assessment	**2.38**	**Sometimes**

Legend: 3.25– 4.00 Always (A) 2.50 – 3.24 Often (O)
1.75 – 2.49 Sometimes (S) 1.00 – 1.74 Never (N)

Table 2.1 presents the extent to which students engage in vigorous physical activities through technology-assisted exercise. The overall composite mean is 2.38, which corresponds to the interpretation of "Sometimes." This indicates that students generally do not frequently participate in high-intensity physical activities, even when supported by technological tools.

Among the indicators, the statement "I spend a lot of time doing vigorous physical activities" recorded the highest mean score of 3.04, interpreted as "Often." This suggests that while some students do engage in such activities, it is not a consistent or habitual behavior. Conversely, the indicator "My usage of technology provides encouragement to perform physical activity" received the lowest mean of 2.03 ("Sometimes"), indicating a limited motivational influence of technology on students' physical engagement.

2.2 Moderate Physical Activity

Indicators	Mean	Verbal Interpretation
1. I am involve in moderate physical activity like jogging, slow pace biking, carrying light loads etc. do not include walking.	3.05	O
2. I spend a lot of time doing moderate physical activities	2.27	S
3. I use technology based moderate fitness activities like fitness apps or online workout videos.	2.03	S
4. I use online tracking apps to help me monitor my physical activities level.	2.80	O
5. I use technology to find information about the benefits of doing light to moderate physical activity.	2.31	O
General Assessment	**2.49**	**Sometimes**

Legend: 3.25– 4.00 Always (A) 2.50 – 3.24 Often (O)
1.75 – 2.49 Sometimes (S) 1.00 – 1.74 Never (N)

Table 2.2 illustrates the extent to which students engage in moderate physical activities through technology-assisted exercise. The overall composite mean score is 2.49, interpreted as "Sometimes." This indicates that while students occasionally participate in moderate-intensity physical activities, such engagement is not consistent or habitual.

The indicator "I am involved in moderate physical activity like jogging, slow-paced biking, carrying light loads, etc. (excluding walking)" received the highest mean score of 3.05, corresponding to "Often." This suggests that students do take part in such activities from time to time, though not necessarily with the support of technological tools. In contrast, the indicator "I use

technology-based moderate fitness activities like fitness apps or online workout videos" recorded the lowest mean of 2.03 ("Sometimes"), indicating limited reliance on technology for engaging in moderate physical activity.

2.3 Walking Physical Activity;

Indicators	Mean	Verbal Interpretation
1. I walk for at-least 10 minutes a day.	2.78	O
2. I use online application and devices to plan my walks	2.29	S
3. I play video games that involves physical movement.	2.79	O
4. My online apps help increased the amount I walk daily.	3.29	O
5. I use apps to monitor my steps.	2.79	O
General Assessment	**2.79**	**Often**

Legend: 3.25– 4.00 Always (A) 2.50 – 3.24 Often (O)
1.75 – 2.49 Sometimes (S) 1.00 – 1.74 Never (N)

Table 2.3 presents the extent to which students engage in walking as a physical fitness activity with the support of technology-assisted exercise. The general composite mean is 2.79, which is interpreted as "Often." This indicates that walking is a relatively frequent form of physical activity among students, particularly when aided by technological tools.

Among the indicators, the statement "My online apps help increase the amount I walk daily" received the highest mean score of 3.29, interpreted as "Often." This suggests that technology plays a positive role in encouraging students to walk more frequently. In contrast, the indicator "I use online applications and devices to plan my walks" received the lowest mean score of 2.29, interpreted as "Sometimes." This reflects a less consistent use of technology for structured or pre-planned walking activities.

Overall, the findings suggest that while students benefit from the motivational influence of technology in increasing their walking activity, they are less likely to use it for structured planning. This highlights a potential area for improving app features to better support goal-setting and walk planning functionalities.

3. Level of motivation of the student in doing fitness activities with the aid of technology-assisted exercise in terms of:

3.1 Intrinsic;

Indicators	Mean	Verbal Interpretation
1. My technology-assisted exercise are more enjoyable than traditional exercise.	2.50	A
2. I use technology to make me look forward to my school fitness activities.	3.19	A
3. I enjoy performing when I am using technology-assisted program.	3.47	SA
4. My knowledge about technology helps me to achieve realistic goals.	2.80	A
5. My usage of technology makes my physical fitness activities feel more challenging and engaging.	2.24	D
General Assessment	**2.84**	**Agree**

Legend: 3.25– 4.00 Strongly Agree (SA) 2.50 – 3.24 Agree (A)
1.75 – 2.49 Disagree (D) 1.00 – 1.74 Strongly Disagree (SD)

Table 3.1 presents the level of intrinsic motivation among students when engaging in fitness activities using technology-assisted tools. The overall composite mean is 2.84, which falls under the interpretation of "Agree." This suggests that students are generally motivated internally to participate in fitness activities when technology is involved.

Among the indicators, the statement "I enjoy performing when I am using a technology-assisted program" garnered the highest mean of 3.47, interpreted as "Strongly Agree." This indicates that enjoyment plays a significant role in driving students' motivation when using tech-based fitness solutions.

On the other hand, the indicator "My usage of technology makes my physical fitness activities feel more challenging and engaging" received the lowest mean of 2.24, interpreted as "Disagree." This suggests that although students enjoy using technology in general, they may not necessarily perceive it as making their activities more challenging or stimulating.

3.2 Identified;

Indicators	Mean	Verbal Interpretation
1. I use technology to help me track my progress.	3.22	A
2. I use technology to make it easier for me to integrate physical activities on my daily routine.	3.21	A
3. My technology usage help me improve physical fitness performance.	2.53	A
4. My online application help me stay motivated to perform physical activity.	2.26	D
5. My usage of technology helps me find physical activity genuinely entertaining.	3.20	A
General Assessment	**2.88**	**Agree**

Legend: 3.25– 4.00 Strongly Agree (SA) 2.50 – 3.24 Agree (A)
1.75 – 2.49 Disagree (D) 1.00 – 1.74 Strongly Disagree (SD)

Table 3.2 illustrates the level of student motivation in engaging in fitness activities through technology-assisted exercise, specifically in terms of Identified Regulation. The general composite mean is 2.88, which is interpreted as "Agree", suggesting that students generally recognize and value the personal importance of using technology in their fitness routines.

Among the indicators, "I use technology to help me track my progress" recorded the highest mean score of 3.22, indicating that students appreciate the functional utility of technology in monitoring their physical performance. This reflects an awareness of how self-tracking contributes to achieving fitness goals, aligning with the concept of identified motivation where behavior is driven by conscious values.

Conversely, the statement "My online application helps me stay motivated to perform physical activity" received the lowest mean of 2.26, interpreted as "Disagree." This indicates that while students may use technology for tracking purposes, they may not necessarily find it personally motivating or inspiring in sustaining regular physical activity.

3.3 External;

Indicators	Mean	Verbal Interpretation
1. My social media platforms are effective in motivating me to engage in technology-assisted physical activity.	2.23	D
2. My friend's feedback from online communities improve my adherence to activity plan.	2.30	D
3. I use gamified fitness applications to enhance external motivation for consistent high energy performance.	3.25	SA
4. My usage of technology help me overcome feelings of isolation and loneliness when I'm doing physical fitness activity.	3.20	A
5. My home workouts facilitated with technology increase adherence to activity programs.	2.23	D
General Assessment	**2.64**	**Agree**

Legend: 3.25– 4.00 Strongly Agree (SA) 2.50 – 3.24 Agree (A)
1.75 – 2.49 Disagree (D) 1.00 – 1.74 Strongly Disagree (SD)

Table 3.3 presents the level of motivation of students in performing fitness activities through the use of technology-assisted exercise, specifically in terms of external motivation. The overall composite mean is 2.64, which falls under the interpretation of "Agree", indicating that students generally perceive external factors as motivating influences when engaging in fitness activities with technological support.

Among the indicators, the statement "I use gamified fitness applications to enhance external motivation for consistent high energy performance" recorded the highest mean of 3.25, interpreted as "Strongly Agree". This suggests that gamification elements—such as points, badges, and challenges—serve as strong external motivators, encouraging students to maintain a high level of engagement and performance during physical activities.

On the other hand, two indicators—"My social media platforms are effective in motivating me to engage in technology-assisted physical activity" and "My home workouts facilitated with technology increase adherence to activity programs"—received the lowest mean of 2.23, interpreted as "Disagree". This reflects a relatively weaker influence of social media and home-based tech workouts on students' external motivation. It may indicate that while these platforms offer accessibility and visibility, they may not provide the same consistent reinforcement or engagement as gamified applications do.

3.4 Motivation;

Indicators	Mean	Verbal Interpretation
1. My wearable fitness trackers increase adherence to activity programs.	2.29	A
2. I use technology to help me engage in physical activity.	3.24	A
3. My use of smart devices like speakers or monitor to enhance my motivation.	3.22	A
4. I use technology to address the issue of boredom or lack of variety in my physical activity routines.	2.25	D
5. I use technology to influence my classmate's perception of their own fitness capabilities.	2.28	D
General Assessment	**2.65**	**Agree**

Legend: 3.25– 4.00 Strongly Agree (SA) 2.50 – 3.24 Agree (A)
1.75 – 2.49 Disagree (D) 1.00 – 1.74 Strongly Disagree (SD)

Table 3.4 presents the level of motivation of students in performing fitness activities with the aid of technology-assisted exercise, specifically in terms of overall Motivation. The computed general composite mean is 2.65, which falls under the "Agree" interpretation. This suggests that, in general, students perceive technology as a moderately effective tool in enhancing their motivation to engage in physical activity.

The indicator with the highest mean, "I use technology to help me engage in physical activity," obtained a mean of 3.24, indicating that students actively rely on technology to support their physical engagement. This highlights the important role of digital tools—such as fitness trackers, workout apps, or online classes—in prompting students to initiate or sustain their exercise routines.

In contrast, the indicator "I use technology to address the issue of boredom or lack of variety in my physical activity routines" received the lowest mean of 2.25, which is interpreted as Disagree. This implies that while technology may assist in general motivation, it is not significantly used by students to tackle issues related to monotony or lack of exercise diversity. This may reflect a gap in how students utilize available technological features such as gamification, varied workout modes, or interactive content, suggesting a potential area for improvement or awareness.

4. Challenges encountered by the learners when using technology-assisted physical fitness programs in terms of:

4.1 Technical aspect;

Indicators	Mean	Verbal Interpretation
1. I find it hard to search online video resources.	3.22	O
2. I am not comfortable with my skills in using gadgets.	3.21	O
3. I find it confusing to share and download videos online.	2.23	S
4. I am using different platforms in school but it is too complicated.	2.71	O
5. My device and gadgets adds to my struggle when I am watching video instruction.	3.23	O
General Assessment	**2.92**	**Often**

Legend: 3.25– 4.00 Always (A) 2.50 – 3.24 Often (O)
1.75 – 2.49 Sometimes (S) 1.00 – 1.74 Never (N)

Table 4.1 presents the challenges encountered by the learners when engaging in technology-assisted physical fitness programs, specifically in terms of the technical aspect. The computed general composite mean of 2.92 falls under the interpretation of "Often", indicating that learners frequently experience technical difficulties when using digital platforms or devices for fitness-related activities.

Among the listed indicators, the statement "My device and gadgets add to my struggle when I am watching video instruction" obtained the highest mean of 3.23, also interpreted as "Often". This suggests that many learners face consistent issues with their devices—such as low performance, outdated software, or poor compatibility—which hinders their ability to follow instructional fitness content effectively.

4.2 Access to technology;

Indicators	Mean	Verbal Interpretation
1. I find it hard to connect to internet at some area at school.	2.97	O
2. I cannot afford to use mobile data because it is too expensive.	2.23	S
3. I am not comfortable to use video instructions because they are too complicated for me.	2.47	S
4. I find it easier if my teacher use written resources and books in PE classes.	3.22	O
5. I don't have personal gadgets with internet like cell phone.	3.00	O
General Assessment	**2.78**	**Often**

Legend: 3.25– 4.00 Always (A) 2.50 – 3.24 Often (O)
1.75 – 2.49 Sometimes (S) 1.00 – 1.74 Never (N)

Table 4.2 presents the challenges encountered by learners when using technology-assisted physical fitness programs, specifically in terms of Access to Technology. The computed general composite mean of 2.78 falls under the interpretation of "Often", indicating that students frequently experience difficulties related to access to technology when engaging in digital fitness programs.

Among the indicators, the statement "I find it easier if my teacher uses written resources and books in PE classes" received the highest mean of 3.22, interpreted as "Often". This suggests that students may feel more comfortable with traditional learning methods, such as books and printed materials, due to their greater accessibility and familiarity. This reflects a preference for offline resources, which may be easier to access in certain contexts, such as during periods of low internet connectivity or when students lack personal devices.

In contrast, the indicator "I cannot afford to use mobile data because it is too expensive" received the lowest mean of 2.23, which is interpreted as "Sometimes". This implies that while a portion of students occasionally struggles with the affordability of mobile data, it is not a consistent issue for all. The occasional nature of this challenge suggests that, while access to mobile data can pose a barrier for some students, it is not necessarily a widespread issue among the majority.

4.3 Technical Difficulties;

Indicators	Mean	Verbal Interpretation
1. I find it difficult to study because the learning place don't have proper lighting and ventilation.	2.06	S
2. I am lacked on necessary technical skills to fix a computer problem.	2.23	S
3. My gadgets like tablets and laptop are not safe on my P.E. workspace.	2.93	O
4. I had difficulty accessing necessary files or data.	2.23	S
5. I felt frustrated and stressed when my gadgets won't work properly.	2.06	S
General Assessment	**2.30**	**Sometimes**

Legend: 3.25– 4.00 Always (A) 2.50 – 3.24 Often (O)
1.75 – 2.49 Sometimes (S) 1.00 – 1.74 Never (N)

Table 4.3 presents the challenges encountered by learners when using technology-assisted physical fitness programs, specifically in terms of Technical Difficulties. The general composite mean of 2.30, interpreted as "Sometimes," suggests that technical difficulties are not experienced by all learners frequently, but they occur intermittently for some.

The indicator "My gadgets like tablets and laptops are not safe on my P.E. workspace" received the highest mean of 2.93, which is interpreted as "Often." This indicates that many learners face safety concerns related to their devices in their physical education workspace, which may refer to issues like inadequate storage or unsuitable setups where devices are at risk of being damaged during physical activities. This could point to the need for more structured environments or better guidelines for device usage during fitness sessions.

On the other hand, the indicators "I find it difficult to study because the learning place doesn't have proper lighting and ventilation" and "I feel frustrated and stressed when my gadgets won't work properly" received the lowest mean values of 2.06, interpreted as "Sometimes." These results suggest that while some learners encounter challenges related to their physical environment (lighting and ventilation) or technical frustrations (gadgets malfunctioning), these issues are not consistently present. This indicates that for many, these challenges are occasional rather than pervasive.

4.4 Digital Literacy?

Indicators	Mean	Verbal Interpretation
1. I don't know how to use laptops and tablets.	1.78	S
2. I find online websites are hard to access.	2.19	S
3. I think most of the online resources need payment.	2.16	S
4. I find it hard to find an online video instruction that has no advertisement.	2.10	S
5. I find it difficult to find online downloading application.	2.32	S
General Assessment	**2.11**	**Sometimes**

Legend: 3.25– 4.00 Always (A) 2.50 – 3.24 Often (O)
1.75 – 2.49 Sometimes (S) 1.00 – 1.74 Never (N)

Table 4.4 presents the challenges encountered by learners when using technology-assisted physical fitness programs, specifically in terms of Digital Literacy. The general composite mean of 2.11, interpreted as "Sometimes," indicates that learners occasionally experience difficulties related to digital literacy, but these challenges are not a constant barrier to their engagement with technology.

The indicator "I find it difficult to find online downloading applications" has the highest mean of 2.32, which is interpreted as "Sometimes." This suggests that some learners experience occasional difficulty when searching for or using online downloading applications. This may reflect gaps in digital skills or familiarity with specific platforms that are essential for accessing fitness-related content.

In contrast, the indicator "I don't know how to use laptops and tablets" received the lowest mean of 1.78, also interpreted as "Sometimes." While the mean is low, it still reflects that a small number of learners might struggle with the basic use of devices like laptops and tablets. However, this appears to be a less widespread issue, suggesting that the majority of learners have a basic understanding of how to use their devices for accessing technology-assisted fitness programs.

5. Is there a significant difference on the students' level of physical fitness test scores, extent of physical fitness activities performed by the students with the aid of technology-assisted, and level of motivation of the student in doing fitness activities with the aid of technology-assisted exercise when grouped according to profile?

Table 5.1 The test of significant difference on the extent of physical fitness activities performed by the students with the aid of technology-assisted when grouped according to profile

Demographic	Extent of physical fitness activities performed by the students with the aid of technology-assisted	t-test	df	p-value	Remarks	Decision
age	Vigorous Physical Activity	0.142	197	0.888	Not Significant	Accept the Ho
	Moderate Physical Activity	0.098	197	0.622	Not Significant	Accept the Ho
	Walking Physical Activity	0.274	197	0.784	Not Significant	Accept the Ho

The computed probability values above, which were all greater than the level of significance of 0.05, the null hypothesis was observed to be accepted. As a result, there is no significant difference that was found to exist between Age and Extent of physical fitness activities performed by the students with the aid of technology-assisted. This means that no significant difference was found in the extent to which students of different age groups perform technology-assisted fitness activities.

This result implies that regardless of age, students exhibit similar engagement levels in using technology for physical fitness. It suggests that the availability and use of digital platforms (such as fitness apps, YouTube workouts, and wearable fitness trackers) are equally accessible and appealing across various age brackets in the student population. The findings also indicate that motivation and usage may be driven more by personal preference, digital exposure, or school requirements rather than age itself.

Demographic	Extent of physical fitness activities performed by the students with the aid of technology-assisted	t-test	df	p-value	Remarks	Decision
sex	Vigorous Physical Activity	-1.707	197	0.089	Not Significant	Accept the Ho
	Moderate Physical Activity	-1.639	197	0.103	Not Significant	Accept the Ho
	Walking Physical Activity	-0.015	197	0.285	Not Significant	Accept the Ho

The computed probability values for the relationship between Sex and the Extent of Physical Fitness Activities Performed with the Aid of Technology-Assisted Programs were all greater than the 0.05 level of significance. Therefore, the null hypothesis was accepted, indicating that no significant difference exists between male and female students in terms of their participation in technology-assisted fitness activities.

This finding suggests that both male and female students engage similarly in physical fitness routines supported by digital tools such as fitness applications, online workout videos, and activity trackers. It indicates that gender is not a significant determinant in the extent to which students utilize technology for fitness-related purposes. Instead, factors such as accessibility, personal motivation, digital literacy, and institutional support may play a more influential role in shaping student engagement with technology-assisted fitness programs.

Demographic	Extent of physical fitness activities performed by the students with the aid of technology-assisted	t-test	df	p-value	Remarks	Decision
BMI	Vigorous Physical Activity	-0.450	197	0.653	Not Significant	Accept the Ho
	Moderate Physical Activity	-0.810	197	0.419	Not Significant	Accept the Ho
	Walking Physical Activity	-0.835	197	0.405	Not Significant	Accept the Ho

The computed probability values for the relationship between Body Mass Index (BMI) and the Extent of Physical Fitness Activities Performed with the Aid of Technology-Assisted Programs were found to be greater than the 0.05 level of significance. As such, the null hypothesis is accepted, indicating that no significant difference exists among students with different BMI classifications in terms of their engagement in technology-assisted fitness activities.

This result suggests that students' participation in technology-assisted physical activities is not significantly influenced by their BMI. Regardless of whether a student is underweight, of normal weight, overweight, or obese, their extent of involvement in fitness routines using digital platforms appears to be relatively consistent. This implies that the accessibility and adaptability of technology-assisted fitness programs may be catering equally to students of various body types, or that individual physical condition does not necessarily impact the willingness to use digital tools for fitness.

Table 6.2 shows the test of significant difference on the level of motivation of the student in doing fitness activities with the aid of technology-assisted exercise when grouped according to profile.

Demographic	Level of motivation of the student in doing fitness activities with the aid of technology-assisted exercise	t-test	df	p-value	Remarks	Decision
Age	Intrinsic	-0.068	197	0.946	Not Significant	Accept the Ho
	Identified	0.057	197	0.955	Not Significant	Accept the Ho
	External	-0.074	197	0.941	Not Significant	Accept the Ho
	Motivation	0.052	197	0.959	Not Significant	Accept the Ho

The computed probability values between Age and the Level of Motivation of the Student in Doing Fitness Activities with the Aid of Technology-Assisted Exercise were all greater than the 0.05 level of significance, leading to the acceptance of the null hypothesis. This indicates that there is no significant difference in the motivation levels of students across different age groups when it comes to engaging in fitness activities using technology.

This result suggests that students, regardless of age, generally share a similar level of motivation in using technology to support their physical fitness routines. The widespread accessibility and familiarity with digital platforms such as fitness apps, online workout videos, and gamified exercise tools might explain why age does not significantly influence motivational levels.

Demographic	Level of motivation of the student in doing fitness activities with the aid of technology-assisted exercise	t-test	df	p-value	Remarks	Decision
Sex	Intrinsic	1.847	197	0.066	Not Significant	Accept the Ho
	Identified	-0.950	197	0.343	Not Significant	Accept the Ho
	External	-0.989	197	0.324	Not Significant	Accept the Ho
	Motivation	-1.476	197	0.142	Not Significant	Accept the Ho

The computed probability values between Sex and the Level of Motivation of the Student in Doing Fitness Activities with the Aid of Technology-Assisted Exercise were found to be greater than the 0.05 level of significance. As such, the null hypothesis was accepted, indicating that there is no significant difference in the motivation levels between male and female students in engaging in fitness activities supported by technology.

This finding suggests that both male and female learners equally recognize the value and utility of technology-assisted tools—such as mobile fitness applications, virtual workouts, or online fitness challenges—in promoting physical activity. It may reflect the growing digital exposure and tech-savviness of students regardless of gender, where access to digital fitness content is no longer gender-biased or limited to specific groups.

Demographic	Level of motivation of the student in doing fitness activities with the aid of technology-assisted exercise	t-test	df	p-value	Remarks	Decision
BMI	Intrinsic	1.310	197	0.192	Not Significant	Accept the Ho
	Identified	-0.070	197	0.944	Not Significant	Accept the Ho
	External	-0.038	197	0.970	Not Significant	Accept the Ho
	Motivation	-0.198	197	0.843	Not Significant	Accept the Ho

The computed probability values for the relationship between Body Mass Index (BMI) and the Level of Motivation of Students in Doing Fitness Activities with the Aid of Technology-Assisted Exercise were greater than the 0.05 level of significance. Consequently, the null hypothesis was accepted, indicating that there is no significant difference in motivation levels among students with different BMI categories.

This suggests that regardless of whether students fall into underweight, normal, overweight, or obese BMI classifications, their motivation to engage in fitness activities supported by technology remains consistent. It may reflect how technology-assisted fitness tools—such as mobile apps, gamified platforms, and virtual coaching—are effective across diverse body types, making physical activity more accessible and appealing to all. The finding also implies that BMI is not a major determinant of how students perceive or use technology to stay active, and that personal motivation, rather than physical status, may play a more central role in tech-supported fitness participation. Rivera & Tan (2020), in "Influence of BMI on Motivation for Online PE Participation", also noted that BMI did not significantly affect motivational levels in using technology-assisted PE, underscoring the universal design of most platforms to suit a wide range of users.

10. Summary of the Composite Mean

Indicators	Mean	Verbal Interpretation
1. Vigorous Physical Activity	2.38	S
2. Moderate Physical Activity	2.49	S
3. Walking Physical Activity	2.79	Often
General Assessment	**2.55**	**Often**

Legend: 3.25– 4.00 Always (A) 2.50 – 3.24 Often (O)
1.75 – 2.49 Sometimes (S) 1.00 – 1.74 Never (N)

Table 10 presents the extent of physical fitness activities performed by students with the aid of technology-assisted exercise. The general composite mean of 2.55, interpreted as "Often," indicates that students engage in technology-assisted fitness activities on a fairly regular basis.

The indicator "Walking Physical Activity" received the highest mean of 2.79, also interpreted as "Often." This suggests that students most frequently use technology (such as step counters, walking apps, or fitness trackers) to support walking as a physical activity. Walking is likely preferred due to its low intensity, accessibility, and compatibility with mobile fitness tools. On the other hand, the indicator "Vigorous Physical Activity" garnered the lowest mean of 2.38, interpreted as "Sometimes." This reveals that students are less likely to perform high-intensity workouts—even with the help of technology—possibly due to factors such as lack of confidence, physical limitations, or inadequate knowledge of proper techniques for such workouts. Overall, these results imply that while technology is moderately effective in promoting physical activity, it appears more effective for light to moderate activities like walking than for intense exercises. This insight may guide educators or fitness program developers to incorporate more accessible vigorous activity options in tech-assisted platforms to encourage balanced fitness participation.

11. Summary of the Composite Mean

Indicators	Mean	Verbal Interpretation
1. Intrinsic	2.84	O
2. Identified	2.88	O
3. External	2.64	O
4. Motivation	2.65	O
General Assessment	**2.75**	**Often**

Legend: 3.25– 4.00 Always (A) 2.50 – 3.24 Often (O)
1.75 – 2.49 Sometimes (S) 1.00 – 1.74 Never (N)

Table 11 presents the level of motivation of students in performing fitness activities using technology-assisted exercise tools. The general composite mean of 2.75, interpreted as "Often," indicates that students are frequently motivated to engage in physical activity when supported by technological aids, although the intensity or consistency of that motivation may vary.

Among the motivational factors assessed, the indicator "Intrinsic" achieved the highest mean score of 2.88, interpreted as "Sometimes." This suggests that students are occasionally driven by internal motivators such as enjoyment, personal satisfaction, or self-improvement when using technology to assist their fitness activities. While intrinsic motivation is present, the interpretation of "Sometimes" indicates that it is not deeply embedded or consistently experienced across the student group.

12. Summary of the Composite Mean

Indicators	Mean	Verbal Interpretation
1. Technical aspect	2.92	O
2. Access to technology	2.78	O
3. Technical Difficulties	2.30	S
4. Digital Literacy	2.11	S
General Assessment	**2.53**	**Often**

Legend: 3.25– 4.00 Always (A) 2.50 – 3.24 Often (O)
1.75 – 2.49 Sometimes (S) 1.00 – 1.74 Never (N)

Table 12 highlights the challenges encountered by learners in using technology-assisted physical fitness programs, with a general composite mean of 2.53, interpreted as "Often." This implies that students frequently face obstacles that hinder their full engagement or effectiveness when utilizing technological tools in fitness routines.

Among the four dimensions evaluated, the "Technical aspect" emerged with the highest mean of 2.92, also interpreted as "Often." This suggests that many students regularly struggle with issues related to devices, such as malfunctioning gadgets, internet connectivity problems, or difficulty accessing video content. These challenges can disrupt learning flow and reduce the motivation to follow through with fitness activities.

"Move to Thrive: A Holistic Dance Intervention for Improving Student Well-Being"

Program Overview:

The intervention program is designed to enhance students' physical fitness, motivation, and academic performance through a holistic dance-based approach. It combines physical exercise with elements of creativity, self-expression, and technology to foster engagement, increase participation, and improve students' overall well-being. The program aims to incorporate technology-assisted learning tools such as fitness apps, online dance classes, and virtual fitness tracking.

Program Objectives:

The program aims to:

* Increase the frequency and intensity of students' physical activities, focusing on moderate to vigorous exercise levels.
* Enhance physical endurance, strength, and flexibility through dance movements.
* Foster both intrinsic and extrinsic motivation by integrating technology-assisted tools (e.g., dance tutorials, fitness tracking apps, and virtual competitions).
* Create an engaging and fun environment where students are motivated to

Dance-Based Physical Activities:

Activity Type: A combination of aerobic, strength, flexibility, and coordination exercises incorporated into creative dance routines.

Technology Integration: Use of fitness apps (e.g., MyFitnessPal, Nike Training Club) for tracking progress, virtual dance workshops, and online tutorials to guide students in learning new moves and improving their techniques. Customization: Tailoring dance routines for different age groups and fitness levels, ensuring that all students can participate and benefit from the program.

Motivation and Tracking Tools:

Fitness Tracking: Students will use apps or devices (e.g., Fitbit or mobile apps) to track their steps, calories burned, and time spent on dance activities. Gamification: Incorporating a points or reward system where students can earn rewards for meeting their fitness goals, completing dance challenges, or improving their dance routines.

Virtual Dance Competitions: Organize friendly competitions where students can showcase their progress and receive positive reinforcement.

Social and Emotional Support: Peer Collaboration: Create group dance teams to encourage teamwork, build community, and improve social skills. Teams can collaborate online and in person.

Mindfulness and Relaxation: Integrate mindfulness practices such as yoga or meditation at the end of each session to reduce stress, improve emotional regulation, and enhance mental well-being.

Mentorship: Provide mentoring and peer support within the group to encourage mutual support, especially during virtual learning periods.

Teacher Training and Support: Train P.E. teachers and facilitators to effectively use technology tools and dance techniques to engage students and promote physical fitness. Provide ongoing support and resources for teachers to adapt the program for various learning environments (e.g., hybrid, modular, or in-person).

Phase	Objective	Activity	Duration
Phase 1: Preparation	Adapt routines to accommodate different fitness levels and abilities within the class.	- Select dance routines that match students' age and fitness level.- Train teachers and facilitators on technology tools and dance instruction.- Develop a communication plan to involve students and parents.	2 weeks
Phase 2: Introduction	Foster communication and shared responsibility between families and students regarding physical activity goals.	- Launch the program with an orientation for students and parents.- Introduce the dance routines through online tutorials.- Begin tracking progress using fitness apps.	3 weeks
Phase 3: Regular Sessions	Reduce barriers to participation by providing a flexible learning environment that accommodates diverse needs and circumstances.	- Implement bi-weekly dance classes, alternating between virtual and in-person sessions.- Encourage students to track their activities and engage in online discussions or competitions.- Introduce mindfulness and relaxation sessions.	6 weeks

Phase 4: Evaluation	Measure the level of students participation and involvement in fitness programs.	- Collect data on student engagement, motivation, and fitness progress.- Conduct surveys to assess the program's impact on academic performance.- Evaluate students' physical and emotional well-being.	2 weeks
Phase 5: Reflection and Adjustment	Conduct a post modification feedback collection to assess the effectiveness of changes.	- Review feedback from students, parents, and teachers.- Modify routines or tools based on the feedback.- Plan for continued integration of dance and fitness in the P.E. curriculum.	2 weeks
Total Program Duration			**15 weeks**

Item	Estimated Cost	Purpose
Dance Equipment	₱15,000	For purchasing music systems, resistance bands, and other fitness materials (yoga mats, dumbbells).
Technology Tools	₱20,000	For fitness apps, virtual platform licenses (e.g., Zoom, YouTube, or specialized P.E. software).
Teacher Training	₱10,000	For professional development programs and training on using dance and fitness apps effectively.
Incentives & Rewards	₱5,000	For gamification rewards such as certificates, medals, or small prizes for students who excel in the program.
Administrative Costs	₱5,000	For documentation, surveys, evaluation, and program coordination.
Total Budget	₱55,000	

The majority of respondents in the study were 13 years old, making them the most represented age group, while the least represented were those under 12 years old, with only 12 participants, suggesting that younger respondents were less common. In terms of gender, there was a relatively balanced distribution, with 104 male and 96 female students, showing only a slight predominance of male participants. Regarding BMI classification, 75 respondents were identified as underweight, making it the most common category, while 33 were classified as overweight, indicating that underweight status was more prevalent among participants, possibly due to factors such as diet, physical activity, and socioeconomic conditions.

In terms of the extent of physical fitness activities, the results showed that the mean score for vigorous physical activity was 2.38, interpreted as "Sometimes," indicating that students do not frequently engage in high-intensity exercises even with the aid of technology. Similarly, the mean score for moderate physical activity was 2.49, also interpreted as "Sometimes," suggesting that students only occasionally perform moderate-intensity exercises, and these are not a consistent part of their routines. On the other hand, walking as a form of fitness activity yielded a mean score of 2.79, interpreted as "Often," making it the most frequently performed activity among students.

As for motivation in physical fitness activities, intrinsic motivation received a mean of 2.84, interpreted as "Agree," showing that students are generally driven by internal motivation when engaging in technology-assisted fitness activities. Identified regulation obtained a mean of 2.88, also interpreted as "Agree," which suggests that students value and recognize the personal importance of using technology in their routines. Meanwhile, external motivation recorded a mean of 2.64, likewise interpreted as "Agree," meaning that external factors such as rewards and social influences moderately encourage students' participation in fitness activities.

On the challenges encountered by learners, technical aspects posed the most frequent difficulty, with a mean score of 2.92, interpreted as "Often," indicating that issues with devices or software were common among participants. Access to technology was also a frequent challenge, with a mean of 2.78, while technical difficulties, with a mean of 2.30, were only "Sometimes" encountered by students. Digital literacy challenges had the lowest mean of 2.11, interpreted as "Sometimes," suggesting that while students occasionally struggle with digital literacy, it does not consistently hinder their participation in technology-assisted fitness activities.

Overall, the statistical findings revealed that no significant differences were observed in the extent of technology-assisted physical fitness activities when grouped according to age, sex, or BMI ($p > 0.05$). Likewise, there were no significant differences in motivation levels in performing fitness activities with the aid of technology when grouped by age, sex, or BMI ($p > 0.05$). These results indicate that students' engagement and motivation in technology-assisted fitness activities are not significantly influenced by their age, sex, or BMI classification.

The study explored the engagement of students in technology-assisted physical fitness activities, focusing on factors such as their demographic profile, motivation, challenges, and participation levels. The findings reveal that 13-year-olds made up the largest group of participants, with a relatively balanced distribution between male and female students. A significant number of

students were classified as underweight, while a smaller portion was overweight, suggesting potential factors such as diet and physical activity influencing students' BMI.

When it comes to the extent of physical activity, the results indicate that students engage in walking most frequently, supported by technology such as fitness trackers or apps. However, students tend to engage in vigorous and moderate physical activities less regularly, with participation occurring only occasionally. This suggests that while students are somewhat motivated to stay active, their routines lack consistency, particularly for high-intensity exercises.

The study also highlighted that technology plays a motivating role in students' participation in physical activities, with many students expressing intrinsic motivation and recognizing the personal value of using technology in their routines. External factors, such as rewards or social influences, also played a moderate role in encouraging students. However, despite this motivation, students encountered various challenges. Technical issues, such as problems with devices and software, were the most frequent obstacles, alongside challenges related to access to technology, which limited some students' ability to fully participate in the fitness programs. While digital literacy issues were present, they were not as significant as technical difficulties or access issues.

Learners may gain deeper insights into how technology-based fitness programs affect their academic performance by reflecting on their engagement and tracking progress. Parents can support this by ensuring access to devices, encouraging participation, and fostering balance between fitness and academics.

Teachers are encouraged to create diverse and interactive learning materials, while PE teachers in modular settings may adapt programs through online resources and challenges. School principals can use the findings to promote initiatives, provide resources, and assess program effectiveness.

Curriculum planners may design interventions that blend fitness with academic goals, and DepEd could issue guidelines, address access issues, and train teachers in digital tools.

The researcher, as a PE teacher, may apply the study's insights to implement innovative programs and monitor their impact, while future researchers may further explore long-term effects, including social, cognitive, and mental health factors, as well as the effectiveness of various technologies.

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