

RESEARCH ARTICLE

ICT-Driven instructional and assessment strategies for physical education in the new normal

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ABSTRACT

Technology shaped the educational system since it enabled teachers to build several instructional methods that are both flexible and effective. It is undeniable that the use of ICT-aided teaching strategies in physical education enable the Physical Education (PE) teachers to adapt to the shifting educational environment. It has been established that several forms of ICT-aided methods were utilized by physical education teachers based on the applicability of these strategies and the teachers' abilities to put them into practice. The purpose of this study was to determine the use of ICT-aided strategies across HEIs and secondary schools. There were total of 130 PE instructors from HEIs and secondary schools who participated in the study. Descriptive-comparative design was employed to emphasize the need to determine how nominal characteristics influenced competencies. Notably, the findings indicated that demonstration-based assessment was applicable among HEIs because of the intensive physical education curriculum. Male PE instructors were more competent in applying formative assessment and demonstration-based assessment. Competency of PE instructors within these metrics was remarkably high with an emphasis on self-efficacy. Teachers' engagement to ICT-aided strategies reflected their teaching competencies having traces of motivational, leniency, and flexible learning. Limitations of the study represent the need to assess other factors that were relevant in teaching other than being described (e.g., social, economic, organizational). Nevertheless, ICT-aided strategies transformed the competencies of PE instructors towards sustainable learning in new normal.

Keywords: ICT-aided strategies; instruction delivery; physical education; self-efficacy

1. Introduction

In the age of emerging technologies, when information, communication, and technology are all available, it is necessary to adjust to the new changes and make room for new learning opportunities that go beyond the conventional notion of learning. ICT education and how it relates to physical education instruction should be concepts that teachers can understand. To be proficient in the application of technology to the teaching of physical education. ICT can increase access to and the quality of educational resources, in addition to enhancing teaching efficiency and bridging the digital divide between different socioeconomic classes, this technology can also enhance student learning. Additionally, it raises student participation, which raises their success rate^[1].

Teachers of physical education who use ICT-aided teaching strategies for physical education should also

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adapt to the new possibilities for the shifting of instructional delivery. On how they teach physical education using ICT- aided strategies. To teach the student physical education-related activities, the teacher employs online technology. Physical education as a subject, it may not immediately seem as though technology and physical education are related^[2,3]. Moreover, there may exist a huge gap between conceptual theory and daily practice. Although there is a technology that is ideally suited for physical education and there are best-practice examples of incorporating technology into physical education, regular technology-enhanced physical education programs are not required.

To assess the effectiveness of the teaching-learning environment when it is implemented online and determine if the dissemination of knowledge and the learning of physical education are efficient and feasible, comparable to how they are implemented in the conventional mode of teaching. Even if they are knowledgeable about the technology, some physical education instructors are challenged to bring technology-enhanced teaching situations because of lack of resources, a lack of ICT literacy, or even a dislike of technology. Thus, physical education instructors may be seen as the primary planners and providers of instructional strategies as well as the driving (or impeding) force of technological innovation in the classroom^[2-4].

The purpose of the study was to further explore the ICT-aided physical education techniques' motivation, content, formative, and summative performance. Physical education has a wide range in terms of content, motivation, and formative and summative performance evaluation, and the teacher has to be aware of this. Motivation is a force that energizes a person, builds an explanation for their behavior, and increases their willingness. It establishes an individual's behavior in terms of level, direction, and pace in relation to the educational environment's desired purpose^[5-7]. The motivation in physical education instruction in the new normal is providing guarantee that learning and the acquisition of knowledge and skills are successfully imparted to students' brains is provided by motivation in physical education instruction in the new normal. When ICT-aided strategies are utilized, for instance, the teacher instructing the principles and details of sports will be comprehended. In this manner, learning has been transported from the virtual world to the learners' learning preferences.

Content delivery, on the other hand, is about the teaching strategies, the learning content, model and approaches on teaching PE in the new normal. This involved how they teach and what to teach on the virtual learning. Using a "comprehensive but physically active strategy" along with teaching social, cognitive, and physical skills to attain goals like being physically active is an essential aspect of instruction and learning PE^[8].

The assessment of the application of ICT-aided physical education teaching strategies in the new normal as well as how teachers may learn to use ICT-aided physical education teaching strategies and engage students was covered in the research.

In this study, the researcher explored how using ICT to support learning experiences, apply and implement physical education teaching strategies in Western Mindanao State University's College of Physical Education may significantly alter how aspiring teachers perceive and approach the teaching profession as a physical education teacher and their understanding of education and physical education. In this vein, the paper outlined three objectives based on experiences with teaching ICT-aided physical education strategies in the New Normal: a) to learn new ICT-aided physical education teaching strategies in the New Normal; b) to develop curriculum on ICT-aided physical education strategies; and c) to learn alternatives to teaching physical education instruction in the New Normal.

2. Literature review

In the New Normal, information and communication technology (ICT) is already pervasive. Technology has made its way into a variety of educational contexts since the start of the so-called “digital era”, including higher education, career training, and schools. For example, it allows learner to explore more learning options in acquire advance and essential information of learning. In this way the learning and development of learners becomes progressive, and the interaction of learners and teachers become interactive. Teachers and students in the new normal are “digital natives”^[9], surrounded and naturally socialized by pervasive technology^[10]. As a result, they seek a broader integration and application of technology in schools.

When taking into consideration efforts made in learning and teaching development, ICT integration may be seen as a continuous process that never ends^[11]. On the one hand, teachers may improve upon their current ICT abilities in terms of using technology in the New Normal. On the other hand, the advancement of ICT may also result in the requirement for a certain type of educational development, which might have a significant impact on teachers’ teaching strategies and approached competence with technology.

The teacher should be able to give an educational delivery that is well-presented and mastered and can be employed with ICT-aided tactics in the new normal. As an illustration, teachers instruct students on the fundamentals of sports and what activities are permitted given the new standard setup and health constraints. The constraints of time and place can be overcome through instruction delivery in the new normal. In online learning, students may access learning resources instantaneously and hear teachers by using computers or electronic devices (such as mobile phones and tablets)^[12]. They are able to take part in conversations and ask questions. The approach for delivering PE lessons online is much the same as delivering them in a traditional classroom. Asynchronous distance learning, synchronous distance learning, and hybrid distance learning are the three categories into which the delivery of PE education may be separated.

The teaching physical education with used if ICT-aided instructional strategies might be difficult and complicated hence it need to be motivated on the instructional delivery on teaching Physical Education in the new normal. In the context of remote education, several obstacles and limitations could be experienced throughout this time. For instance, the lack of internet and technological devices in the area where they are located, their knowledge of computer use, their feelings and thoughts about PE instructional delivery, whether they have a computer or not, and their feelings and thoughts about the pandemic^[13] are all factors that delimit instructional processes. These also affect the motivation of PE instructional delivery.

Students who participate in PE get the skills and self-assurance to engage in a variety of physical activities that become an integral part of their life, both inside and outside of school. All children may enjoy and be successful in a variety of physical activities with the help of a high-quality PE program. They gain a variety of abilities, including the capacity to successfully employ tactics, strategies, and compositional ideas. While they are acting, they consider what they are doing, consider the circumstances, and come to conclusions. Additionally, they evaluate their own and others’ performances and look for methods to make them better. As a consequence, students have the self-assurance to engage in a variety of physical activities and comprehend the significance of leading healthy, active lifestyles.

Because of a few factors, including the circumstances of the students and instructors, health limits, and school rules, evaluating instructional delivery of physical education teachers utilizing ICT-instructional methodologies in the new normal is different. Information regarding student learning is gathered through the process of educational assessment, which has many different forms, procedures, and strategies. Assessment drives student learning because it can provide a boost in learning, like awarding of high grades, but it also enables learning to occur through the giving of feedback^[14]. One type of assessment is formative assessment

that inform teachers about the quality of their instructions, approaches, and provide feedback^[15,16].

Formative assessment can enhance students' learning. But the idea of formative assessment still doesn't represent a well-defined set of procedures, and this problem can prevent its successful application in many circumstances^[17]. Summative evaluation "is a high stakes assessment with a final mark of accomplishment issued summarizing the learning completed against public criteria"^[18]. In other words, it is an effective strategy in the educator's repertoire that deserves careful research analysis. Why, what, how, when, where, and who are the six main issues that need to be addressed while discussing evaluation. Three topics was covered in this literature review: 1) online assessment; 2) possibilities, techniques, and motivations for online cheating; and 3) instructors' opinions on online assessment.

3. Methods

The researcher used a descriptive quantitative research methodology to objectively examine Physical Education Teachers' ICT-aided Strategies on Instructional Delivery and Assessment in the New Normal. This study employed the quantitative research technique since it extracted numerical data to aid in subsequent analysis and interpretation using proper statistical tools. The goal of this quantitative data was to give meaningful replies from Physical Education instructors about ICT-assisted Strategies of Physical Education Teachers on Instructional Delivery and Assessment in the New Normal, which served as the foundation for acceptable recommendations. The following stages were followed in this study: a) conceptualization of the problem and formulation of hypotheses and variables; b) building of research instruments; c) data collection; d) data analysis and interpretation; e) research report preparation for the panel, and f) research report presentation to the panel.

3.1. Participants

The participants were drawn from Zamboanga City's three state institutions and colleges and selected DepEd Basic Education Schools: Western Mindanao State University (WMSU), Zamboanga Polytechnic State University (ZPPSU), and Zamboanga State College of Marine Sciences and Technology (ZSCMST), Maria Clara Lobregat National High School, Zamboanga City High School, and Zamboanga City High School-West.

For the quantitative aspect of the study, this research used a total enumeration as the sampling technique to answer the survey questionnaire since the PE teachers from these institutions were limited. Total enumeration is the most appropriate sampling technique because it allows the complete representation of the scope of the stud. Such sampling technique allowed the researchers to collect data from every PE teacher employed among these institutions considering the small population of PE teachers employed among these institutions.

3.2. Instrument

The research instruments were designed in response to research concerns about faculty strategies in physical education in instructional delivery and assessments in the new normal. Experts in research, assessment, and education validated the instruments.

This study developed a questionnaire that for ICT-aided strategies, as presented in the **Table 1** below. The questionnaire focused on two teaching strategies i.e., motivational instruction and content delivery.

The study also analyzed the assessment strategies used by the PE teachers. **Table 2** presents the ICT-aided assessment implemented by the PE teachers. This study covered two assessment strategies *i.e.*, the formative assessment and demonstration/summative assessments.

This was an originally constructed instrument based on the objectives of the study with four categories of

the study developed based on the descriptive aspects of teaching strategies of PE as aided by the ICT in the new normal. The survey used the frequency scale on the first three categories as 4—Strongly Agree, 3—Agree, 2—Disagree, and 1—Strongly Disagree.

Table 1. Questionnaire for ICT-aided strategies.

ICT-aided strategies
Motivational instruction:
I use interactive video PE instructional materials.
I use preliminary discussion through real life videos to get the attention of the learners in relation to the lessons.
We have ice breakers such as online game applications in between loaded lectures.
I chop or compartmentalize lectures into parts using self-editing applications to keep their motivation high.
I apply humorous digital videos during discussion to keep them attentive.
Content delivery of instruction:
I employ lesson delivery at their own pace and time using their available gadgets.
I have instructional delivery through learning management system, google class, or simple messenger or through chatting.
I allow lectures and other instructions are available online and can be printed for archiving.
I make sure that the lessons are recorded and available online anytime for their references in the future.
They can choose to join classes synchronously or asynchronously based on their learning profile.

Table 2. Questionnaire for ICT-aided assessment.

ICT-aided assessments
Flexible formative assessments:
I use online quiz applications to assess my students on the previous lessons in PE.
I allow my students voicemails to answer my short quizzes.
I accommodate video clips submitted by my students in the Messenger as answers to formative tests.
I allow short demonstration tests taken by photos if that is the easier way in submitting the evidence for assessment.
I accept submissions of responses or answers on shorts tests through electronic means like mobile phone means through texts.
Demonstration-based and summative assessments:
I ask my students to gather important documents as their online portfolio to be assessed as part of their summative requirements.
I give my students options where to submit their requirements online and offline in flashdrives for both demonstration and summative tests.
I utilize recorded performances as my specimen for assessment for demonstration-oriented output.
I use synchronous and asynchronous type of assessments for practical and summative tests.
For live and real-time summative assessments, I use online applications or programs that are user-friendly for students

3.3. Research procedures

The researcher obtained authorization from the three SUCs and two high schools to conduct the study and administer the survey to the respondents. All participants were provided a copy of the permitted letter to conduct research, which includes the purpose, ethical guidelines, and a voluntary clause to engage in this study.

After submitting a written request to the SUCs to conduct the study, the researcher set up a timetable to administer and collect data from respondents or participants using an online survey using Google Forms.

For all the descriptive quantitative data, the collected data was examined using mean and *t*-test.

- a. Mean (\bar{x}) is the average value relative to number of participants given a set of values from a data.

$$\bar{x} = \frac{\sum f(x)}{n}$$

where, f : frequency of each class; x : mid-interval value of each class; n : total frequency.

- b. Student's t -test is a statistical hypothesis test used to compare the means of two compared groups (herein, comparing the demographics of the participants).

$$t = \frac{\bar{x} - \mu}{s_{\bar{x}}}$$

where, μ : proposed constant for the population mean; \bar{x} : sample mean; $s_{\bar{x}}$: estimated standard error of the mean ($s_{\bar{x}} = \frac{s}{\sqrt{n}}$); s : sample standard deviation; n : sample size.

4. Results

4.1. ICT-aided teaching strategies of PE teachers

Instructional delivery using ICT resources might involve the use of interactive videos for learning, having online games for students, use of online accessible platforms (e.g., Messenger, YouTube). Motivational strategy seeks to attract students to learn more about the subject while content delivery focused more on teaching students what they need to learn.

Table 3. ICT-aided strategies on instructional delivery.

ICT-aided strategies	\bar{x}
Motivational instruction using ICT	3.43
Content delivery of instruction using ICT	3.43

Descriptively, motivated instruction and content delivery using ICT were widely used ICT-aided strategy to support learning experiences during pandemic (see **Table 3**).

Motivational instruction using ICT involved utilization of interactive videos ($\bar{x} = 3.72$), real life videos ($\bar{x} = 3.57$), introducing humorous videos ($\bar{x} = 3.42$), dividing lessons into segments ($\bar{x} = 3.28$), and application of ice breakers ($\bar{x} = 3.16$). In contrast, content delivery using ICT included use of learning management system ($\bar{x} = 3.62$), use of online resources ($\bar{x} = 3.52$), uploading of recorded lessons online ($\bar{x} = 3.42$), time- and pace-flexible learning ($\bar{x} = 3.40$), and mode-flexible learning ($\bar{x} = 3.18$).

4.2. ICT-aided assessment strategies of PE teachers

This study analyzed the different assessment strategies employed by PE teachers. Formative assessment involved having short quizzes after discussion, making electronic essays, digital drawings, use of online learning assessment platforms. Demonstration/summative assessments are more heavy tasks like making video presentations of dances, having online summative exams, making portfolios, compiling works. Remarkably, PE teachers were more inclined in using demonstration/summative assessments for their students.

Assessment was segmented into two categories, the formative assessment and demonstration-based assessment (see **Table 4**). It has been determined that the latter was widely applied by the PE teachers during pandemic.

Table 4. ICT-aided strategies on assessment.

ICT-aided strategies	\bar{x}
Formative assessment	3.06
Demonstration-Based assessments	3.33

Demonstration-based assessments involved use of both synchronous and asynchronous assessments whichever applicable ($\bar{x} = 3.44$), mode of assessment through recorded performances ($\bar{x} = 3.39$), online or offline submissions ($\bar{x} = 3.39$), use of online applications or programs ($\bar{x} = 3.25$), and introduction of online portfolio ($\bar{x} = 3.19$).

Formative assessment was also a form of ICT-aided strategy which involved short demonstrations tests using photos ($\bar{x} = 3.25$), submission of answers through electronic means ($\bar{x} = 3.21$), accommodating video submissions in Messenger ($\bar{x} = 3.15$), use of online quiz applications ($\bar{x} = 3.08$), and voicemails ($\bar{x} = 2.64$).

4.3. Statistical analysis on ICT-aided strategies

Table 5 presents the summary of the statistical tests done comparing the ICT-aided strategies based on the demographics of the participants. Findings indicated that the institution level significantly influence their application of ICT-aided strategies in PE instruction. Years in service and ICT level were also an important aspect of PE instruction.

Table 5. Differences on ICT-aided strategies based on demographics.

ICT-aided Strategies (* $p < 0.05$)		sig.
Motivational instruction	Institution Level	0.004*
	ICT Level	0.008*
Content delivery	Years in Service	0.001*
	Institution Level	0.000*
Formative assessment	Gender	0.011*
	Institution Level	0.000*
	ICT Level	0.022*
Demonstration-based assessments	Gender	0.009*
	Years in Service	0.022*
	Institution Level	0.000*

Comparison between the demographics of the PE teachers yielded differences. Type of institution (HEI or High School) influenced the application of ICT-aided strategies amidst the pandemic. Similarly, years in service (1–5 years or 6 and above) of PE teachers mediated the use of ICT-aided strategies specifically for content delivery ($p = 0.001$) and demonstration-based assessment ($p = 0.022$). ICT level (beginner or advanced) also influenced the application of ICT-aided strategies significantly in motivational instruction ($p = 0.004$) and formative assessment ($p = 0.022$). Gender (male or female) mediated the use of ICT-aided strategies significantly in formative assessment ($p = 0.011$) and demonstration-based assessments ($p = 0.009$).

5. Discussion

PE teachers struggled in adapting with the fast-changing education system during the pandemic. However, it was evident that adaptability took time which enable them to implement innovative and applicable strategies.

In line with the results, PE teachers can also benefit greatly from a knowledge of students' experiences

and motivation in terms of facilitating active participation and successful learning within physical education sessions^[19]. Consequently, autonomous types of student motivation are associated with better adaptive outcomes, including increased physical activity, enjoyment, focus, and vitality^[20,21]. Following the Self-Determination Theory, the various types of motivation are the outcome of social determinants that can frustrate or fulfill students' basic psychological needs of independence i.e., sense of freewill and eagerness, competence i.e., awareness of performance and mastery, and relatedness i.e., perceive connection to and feel important^[19].

A learning environment in which students' fundamental psychological needs are not met results in controlled motivation and amotivation^[22]. In contrast, a classroom environment where these psychological needs are met results in the facilitation of students' self-efficacy^[19,23]. A physical education teacher can facilitate students' autonomous motivation by creating a learning environment in which students' fundamental psychological needs are met^[24].

Typically, the tools used for sport-focused e-learning are comparable to those used in other professions, and include chatting platforms like Teams, learning management tools and interactive content like forums or quizzes^[25].

Besides social networks, most important digital sources of knowledge for these teachers. In contrast, online newspapers, periodicals, and forum websites are utilized more regularly^[26].

As with other disciplines, e-learning requires simple organizational and technological resources, reliable Internet connectivity, user-friendly e-learning tools, and a favorable learning environment for all students and instructors^[25]. These include constructing inclusive learning environments, stimulating peer interaction, establishing a community, devising novel assessment designs, offering a clear structure, and ensuring that teachers have the necessary non-technical abilities^[19,25].

Assessment in physical education was also challenging because of the limited modalities that the instructors can implement. However, the emergence of alternative modes enabled the instructors to adapt to their situation^[20].

Online evaluations, as opposed to the more traditional paper-based examinations, have been adopted by educational institutions because they provide a technique of evaluating students that is both more accurate, fast, and flexible^[25,27]. It is necessary for the success of online examinations to have a user interface that is both visually tidy and easy to use. In the study conducted by, students with the user interface and tool that their university employs for doing online evaluations^[20,27].

In the study of Krishnan et al.^[28] shown that the engagement of instructors with formative assessment for online collaborative writing was impacted by a variety of individual and contextual factors. These elements included teacher beliefs and instructional guides^[27]. The current study also manifested similar results with emphasis on flexibility and applicability of formative assessment and demonstration using ICT especially in assessing physical education learning.

Recent studies^[29,30] showed that the capacity of the PE teachers can be influenced by their demographics. This context was evident even among teachers in different field like science. Abdzadeh and Baker^[30] demonstrate significant difference between the classroom management strategies of female and male teachers. Studies on the distinctions between classroom instruction and gender reveal a large disparity between teaching and classroom management in support of male teachers^[31]. Similarly, this study was able to determine that male instructors were more engaged in formative assessment ($\bar{x} = 3.24$) and demonstration-based assessment ($\bar{x} = 3.51$) as compared to female instructors.

Based on the literatures, teachers from preschool to high school who have more years of experience in

the classroom report having a greater sense of self-efficacy when it comes to overcoming challenging classroom situations^[32]. A teacher's sense of efficacy tends to rise with the number of years they have spent working in the profession^[33]. Certainly, in this study, the opposite mechanism was observed where PE teachers with shorter years in teaching service (1–5 years) outperform those in longer teaching years (6 and above) specifically in terms of content delivery ($\bar{x} = 3.19$) and demonstration-based assessments ($\bar{x} = 3.52$).

Research indicates that an individual's computer experience influences their computer self-efficacy positively. In the study of Isil^[34], individuals' computer self-efficacy develops as their familiarity with computers increases. There was a correlation between performance related outcomes and improved job or teaching performance. This current study also observed this result indicated that PE teachers with above average to advanced ICT competency were competent in terms of motivational instruction ($\bar{x} = 3.49$) and formative assessment ($\bar{x} = 3.12$).

Conventionally, PE instructors in higher education were competitive and adaptive to their situation^[35]. In the same vein, high school PE teacher candidates perceived they have high profession competence^[36]. However, there was no direct comparison between their competence based on certain metrics. This study was able to fill in this gap indicating that college PE instructors were more competitive most specifically in motivational instruction ($\bar{x} = 3.55$), content delivery ($\bar{x} = 3.59$), and demonstration-based assessment ($\bar{x} = 3.65$). This represented the condition that college PE instructors were more capable of adapting ICT-aided strategies amidst the pandemic.

Notable in these assessment frameworks is how teachers might or should conduct assessment to quantify or enhance student learning^[26,37]. Moreover, even frameworks urge teachers to involve students in the evaluation process, it is frequently challenging to understand what this participation involves in practice^[27,37].

For the onset of motor learning processes, feedback is defined as information on the successful and unsuccessful features of previously completed movements^[38]. The focus of modeling is on spatial kinematic movement features and the comparative duration of partial motions. Primarily, information concerning the movement objective (criterion value information) and how this can be attained based on the current execution (correcting information) is utilized when teaching a movement topology^[38]. Although audio, kinesthetic, and visual feedback all give different ways to provide input, digitization has recently increased the emphasis on visual feedback approaches that combine digital devices with video analysis apps^[38,39].

Nevertheless, this study was able to determine the use of motivational instruction and content delivery as forms for ICT-aided strategies in teaching PE amidst the pandemic. This reflected how application of these teaching systems showed the competence of PE teachers. Such findings are useful in improving the PE instruction among the academic institutions in Zamboanga City. This study called for the implementation of ICT-aided strategies e.g., development of school-initiated platforms that connect students and teachers, implementation of online classes for some courses.

As the education opens for new opportunity, the academic institutions in Zamboanga City need to introduce PE teachers on several ICT-aided strategies that can help them maximize the potential in delivering effective teaching strategies. As reflected from the findings, the academic institutions should focus on improving the ICT skills of PE teachers to make them competitive in content delivery and motivational instruction.

Although this study yielded notable results, there was a need to expand the concepts and scope of the study. Some conceptual limitations involved were the motivation of teachers in using ICT, accessibility to ICT resources, and level or trainings acquired for ICT. These concepts are also important and relevant to the analysis. Qualitative analysis about the experiences of some PE teachers about how they implement the ICT-

aided strategies are also necessary to effectively breakdown these conceptual limitations observed in the study.

6. Conclusion

Technology shaped the education system as it allowed the instructors to develop series of systems that allows adaptability and efficiency. Certainly, teaching physical education through ICT-aided strategies enabled the PE teachers to be adaptive to the current landscape of teaching atmosphere. It has been determined that PE teachers employed different forms of ICT-aided strategies depending on their applicability and capacity to implement these strategies.

Years after the sudden shift of education system to flexible learning, teachers were now accustomed teaching PE through demonstration, motivational instruction, standard content delivery, and formative assessment. However, limitations in this study emerged as it failed to determine how these ICT-strategies influence the productivity, performance, and skills of PE teachers. Nevertheless, this study was able to present data that are essential in drafting measures that were integral in representing self-efficacy and teaching capacity amidst the new normal.

7. Recommendations

After the analysis on the ICT-aided strategies of PE teachers, this study was able to establish recommendations that are essential in integrating the systems of physical education.

- 1) PE instructors and teachers should be engaged in improving their competency in teaching, computer, and communication as these aspects were emerging as remarkable determinant of adaptability.
- 2) HEIs and secondary school administration should be more active in their teaching process with an emphasis on employing ICT-aided strategies based on the given demographics of the teachers while assessing these demographics to establish which teaching strategy suits the PE teacher the most.
- 3) School stakeholders should be engaging in organizations that aims to improve the delivery of physical education concepts in new normal through coalition and social connection.
- 4) Future studies should focus on assessing the variables which were not described in this study. These variables include culture, socioeconomic status, psychosocial aspect, or social environment.

Conflict of interest

The author declares no conflict of interest.

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