Teachers of Physical Educations Survey on the Effects of Online Learning on Physical Education During the Covid-19 Pandemic

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Abstract

Numerous schools have been forced to close due to the COVID-19 epidemic, and many more are now using online application software for educational purposes. The purpose of this survey is to evaluate the usefulness of online instruction in physical education (PE) and the required instructor assistance. Methods: From March 1 to March 29, 2021, responses from 382 front-line PE instructors in Ho Chi Minh City, Vietnam (HCM-VN) were gathered online using software tools. Results: Our study identified four significant discoveries. First, the majority of instructors claimed that online PE sessions did not significantly improve pupils' development of motor skills or level of physical activity, citing "Lack of experience in the field," "There isn't much interaction amongst students," and "Online education does not pique the interest of students" as the main causes. Second, many instructors advocated for the offering of online instructional resources, which may include suggested software, internet lesson plans, or suggestions for at-home activities. Third, the majority of teachers found it challenging to teach online due to issues like "limited their engagement with each other" and "difficulty in keeping student interest/desire in studying." Fourth, the majority of teachers reported that software tools used in online PE lessons did not help students' motor skill development or level of physical activity, with "Lack of experience in the field" cited as the main cause. Conclusion: Frontline PE teachers believe that the impact of online PE teaching during the COVID-19 pandemic was lower and more challenging. Therefore, schools and governments should offer enough assistance to physical education instructors so they may create innovative and engaging software tools for online classes that aid in the development of motor skills, such as internet teaching kits and concrete teaching instructions.

Keywords: Covid-19; physical education; online learning

Introduction

Worldwide school closures have been caused by the coronavirus disease 2019 (COVID-19) epidemic of acute respiratory infection sickness. Countries are ramping up their efforts to reduce the amount of COVID-19 infection, but most schools throughout the nation are closed and over 23 million children are impacted globally. In 186 countries, more than 1.2 billion kids missed school from April to May 2020, when the covid-19 epidemic was at its worst (UNESCO, 2021) [17].

The e-learning education of parents and teachers has therefore received significant funding [5; 7; 9]. The majority of schools have quickly embraced online teaching and learning tactics (such google meet, zoom, software tools, and internet assignments) in order to decrease the impact of COVID-19 on students' academic progress and to maintain continuity of learning [3;14;16]. During school lockdowns, PE teachers should reschedule their courses and continue the PE program.

Additionally, PE instructors must come up with creative ways to keep students engaged in physical activity, particularly when there aren't any sporting facilities available (such as courts, equipment, or exercise) since students' health is crucial at a time when a complex pandemic is sweeping the globe. [8]. Different guidelines and recommendations are made for planning at-home PE activities to stimulate the development of motor skills and to increase physical activity levels in order to help PE teachers [6; 10; 15]. The effect of various teaching pedagogies and tactics in PE during the Covid 19 outbreak has lately been the subject of a sizable body of study. [1; 4; 18].

Physical education (PE) has also made the shift to an internet-based form of instruction, just like many other subject areas (such as languages, and the natural and social sciences) have [1;18]. Gymnastics, which historically consists of body motor exercises, is especially in need of this sudden adjustment [18].

Technology has also swiftly created and changed some software applications on internet platforms, including Google Meet, Microsoft Teams, Zoom, Blackboard, and Canvas, to enable software tools for online learning in a user-friendly manner for students [19].

However, PE instructors were the main focus of most studies [4; 19]. The survey revealed that no one can monitor the impact of software tools on online instruction for PE teachers during the COVID-19 shutdown.

Without such research, it would be impossible to evaluate the impact of online PE instruction and pinpoint the specific challenges that front-line instructors are facing, both of which have an impact on lesson plans and pedagogical advancement during school closure. The survey, therefore, attempts to get feedback and ideas from instructors on how to enhance the impact of online education in PE while also successfully observing how it affects skill development and physical activity.

Approach & Participants

The signed informed consent was given by every participant in the software tools online survey. They were asked to participate in an anonymous online poll on software tools from March 1 through March 29, 2021, when all schools were closed as a result of the fourth wave of sickness in HCM-VN. The participant's demographic value variables are shown in Table 1.

382 PE teachers from primary and secondary schools were conveniently sampled using emails, google meet, and a mobile phone, Zalo. Before completing the survey form, participants were instructed to read the instructions carefully.

Table 1. Characteristics of the research population (N = 382)

Variables	N	%	Variables	n	%
Gender			**Kind of teaching institution**		
Males	197	51.57	Primary School	221	57.85
Females	185	48.43	Secondary School	161	42.15
Total	382	100.00	Total	382	100.00
Age			**Years of experience teaching**		
22-30	120	31.41	< 5 years	119	31.15
31-40	168	43.98	5-10 years	92	24.08
41-50	75	19.63	11-15 years	63	16.49
51-60	19	4.97	> 15 years	108	28.27
Total	382	100.00	Total	382	100.00

Measures and Data analysis

With their feedback and recommendations, the appropriate modifications were made. The first author completed the survey. The frequency of frequent participant replies and percentages were used to examine the data collected from the software tools online survey. Twenty-four items total, divided into two categories, included the overall experience of software tools internet teaching in PE, and ideas for development. A total of 38 PE instructors (22 from elementary schools and 16 from secondary schools) were asked to complete a pilot survey and offer recommendations for making the survey's items more comprehensible.

Results

General internet teaching in PE experience

Participants indicated that they were required to offer online PE education software tools during school closures, with a mean frequency and length M= 1.61±SD =.81 per week and 27.16±SD = 12.01 minutes per session. Before the pandemic, face-to-face PE classes were M=1.83 ± SD =.92 per week and M=33.81±SD =18.07 minutes long on average. Only 1.71% of those surveyed believed that online learning improved pupils' motor skills in physical education. A neutral 31.14% of participants (i.e., neither effective nor ineffective). According to participants, 62% of online courses were unsuccessful. 6.86% of them cited total ineffectiveness as the reason for their opinion [see Table (2A)]. The three main reasons for ineffectiveness were "There isn't much interaction amongst students" (82.57%), "Online education does not pique the interest of students" (76.29%), and "Lack of experience in the field" (66.86%) [see Table (2A)].

The impact of online PE instruction on increasing physical activity level

Only 11.71% of participants reported that online education had a positive impact on their level of physical activity. 11.71% of participants had no opinion on the matter (i.e., neither effective nor ineffective). Participants in 71.71% of the studies said that online education was unsuccessful. 4.86 percent of them claimed that online education was wholly useless [see Table (2B)]. "Lack of experience in the field" (72.29%), "Online education does not pique the interest of students" (66.00%), and "Very little room for moving" (53.14%) were cited as the three primary causes of ineffectiveness [see Table (2B)].

Table 2. The inadequacies of the software tools used in online physical education lessons and instructors' assessments of their efficacy in promoting motor skill development and raising physical activity levels.

A. The contribution of software tools in online physical education lessons to the development of motor skills.	n	%
Effective	6	1.71
Ineffective	211	60.29
Neutral	109	31.14
Very effective	0	0.00
Very ineffective	24	6.86
Total	350	100.00
Causes of inefficiency.	n	%
There is not enough time for instruction.	26	7.43
Lack of experience in the field.	234	66.86
There isn't much interaction amongst students.	289	82.57
Very little room for moving.	67	19.14
A scarcity of instructional resources (e.g., equipment, suggested teaching activities).	61	17.43
Online education does not pique the interest of students.	267	76.29
Others	5	1.43
B. The impact of online PE lessons using software tools on increasing physical activity.	n	%
Effective	41	11.71
Ineffective	251	71.71
Neutral	41	11.71
Very effective	0	0.00
Very ineffective	17	4.86
Total	350	100.00
Causes of inefficiency.	n	%
There is not enough time for instruction.	57	16.29
Lack of experience in the field.	253	72.29
There isn't much interaction amongst students.	61	17.43
Very little room for moving.	186	53.14
A scarcity of instructional resources (e.g., equipment, suggested teaching activities).	8	2.29
Online education does not pique the interest of students.	231	66.00
Others	17	4.86

Note: Because participants might select more than one choice due to ineffectiveness, the aggregate percentages are higher than 100%.

Challenges of teaching physical education online.

The participants were questioned about any issues they had with the online instruction of physical education. Only 3.43% of individuals had no problems learning using the internet. The remaining individuals revealed that they had struggled in varying degrees (see Table 3A). "Lack of experience in the field" (79.43%) and "Online education does not pique the interest of students" (68.29%) were the two most often cited challenges among participants who reported having difficulty with online teaching in PE (see Table 3A).

Stress experienced by teachers who teach physical education online.

87.14 percent of participants said they were "stressful in teaching PE software applications internet." The three most often cited reasons of stress among them were "Safety concerns" (40.86%), "More preparational work" (33.43%), and " Expectations and issues that administrators, parents, and students may have" (26.29%). (see Table 3B).

Table 3. Shows how instructors feel about the stress they are under and where it is coming from, as well as how tough it is to teach physical education online.

A. Software tool difficulty level for online PE instruction.	n	%
Nothing	12	3.43
Low	32	9.14
Medium	109	31.14
High	197	56.29
Total	350	100.00
Challenges experienced while teaching physical education using digital tools online.		
There is not enough time for instruction.	13	3.71
Lack of experience in the field.	278	79.43
There isn't much interaction amongst students.	11	3.14
Very little room for moving.	6	1.71
A scarcity of instructional resources (e.g., equipment, suggested teaching activities).	22	6.29
Online education does not pique the interest of students.	239	68.29
Others	5	1.43
B. Internet-based software solutions for PE education are stressful.	**n**	**%**
Yes	305	87.14
No	45	12.86
Total	350	100.00
Sources of stress.	n	%
Expectations and issues that administrators, parents, and students may have.	92	26.29
More preparational work.	117	33.43
Lacking in technological expertise.	39	11.14
Limitations on classroom activities.	63	18.00
Safety concerns.	143	40.86
School rules.	12	3.43
Self-expectation.	59	16.86
Students' lack of interest in or drive for learning.	42	12.00
Others	11	3.14

Note: Because participants might select more than one choice for a stress source, the overall percentages are higher than 100%.

Peers' recommendations for boosting students' software tool interest and motivation for learning physical education:

"Provision of online lesson plans (e.g., suggested software tools internet, lesson plans, home activities recommendation) (83.14%) and "Providing technological assistance" (64.29%) were the two most popular recommendations to schools or governments to help PE teachers with software tools internet learning (see Table 4A). Participants were requested to offer ideas on how to increase students' enthusiasm for learning and interest in software tools used in online physical education sessions. Design interactive software tools online PE classes was the second most popular suggestion (56.86%), followed by "Include more examples from real life that are linked to the lesson's theme" (52.29%), with 77.43 percent sof participants "Internet tutorial about design and creative software tools". (see Table 4B).

Table 4. Lists teachers' recommendations to other educators for boosting pupils' learning motivation and interest. suggestions for helping PE instructors using software tools and online lessons from the school/government.

A. Suggestions – Teachers' advice to peers on how to improve students' learning motivation and interest in online PE lessons.	N	%
Providing a uniform and detailed guidance from the school or government.	87	24.86
Provision of online lesson plans (e.g., suggested software tools internet, lesson plans, home activities recommendation).	291	83.14
Providing technological assistance.	225	64.29
Offering instructors workshops or training sessions on teaching through the internet.	31	8.86
Others	18	5.14
None	14	4.00
B. Recommendations - Recommendations to the government or school to help PE teachers with online instruction in PE.	**N**	**%**
Internet tutorial about design and creative software tools.	271	77.43
Internet course about creating interactive software tools.	199	56.86
Use instructive video clips that students may watch and reference.	86	24.57
Include more examples from real life that are linked to the lesson's theme.	183	52.29
Establish a doable objective for pupils to achieve.	32	9.14
Others	46	13.14
None	18	5.14

Note: The total percentages exceeded 100% since participants may select more than one option.

Discussion

All nations have changed their teaching methods in various ways to curb the Covid-19 outbreak. Gymnastics instruction in physical education (PE), a topic that often favors experience learning more, was compelled to embrace an online teaching strategy. The study offers descriptions of common online learning environments for PE lessons held while schools are not in session, as well as insights into the challenges teachers experience and recommendations for enhancing online learning. Due to the effects of Covid-19, many academic courses had to compete for attention throughout shorter school days and more condensed class schedules. Therefore, it is undeniable that parents and students did not always see physical education as a fundamental subject. It was unexpected to learn that during school closure, practically all instructors were still compelled to teach physical education. However, both the frequency and length of PE classes have declined since the outbreak. In fact, it's probable that many schools added extra time and courses for academic topics (including Japanese, English, Math, and Geography) to make up for the Covid-19-related teaching time loss. When PE courses were converted into instructional models using software tools on the

internet during the pandemic, a prior study found that the interaction of students in activity groups and sportswear were essential aspects lacking [18]. Students find it challenging to participate in physical education sessions without equipment, despite the teacher's dedication to training. Our research, which showed that most teachers found it difficult to retain their students' interest in and motivation for learning, supports this concept. Most PE teachers stated that internet education has little to no impact on increasing levels of physical activity or fostering the development of motor skills. The teachers most commonly mentioned the pupils' lack of learning motivation and interest, as well as their restricted interpersonal contacts, which is consistent with [3]. Prior to that, a sizable survey research looked at how parents felt about their young children using the internet to learn during COVID-19. Similar studies from classrooms indicate that parents frequently view a child's lack of focus and attention as a challenge in the learning process at home. According to the authors' findings, teachers might not have the necessary abilities to pique students' interest in learning [3]. Even while online education has long been promoted in the field of physical education [2], this is the first time in history that it has been used for such a lengthy period of time and on such a wide scale. The workload for instructors to prepare lessons and restructure the curriculum has naturally grown as a result of this change in the teaching style. Teachers understandably felt more stress due to the increasing workload, expectations from parents and principals, and other factors that the poll found. PE professors should include students in synchronous software tools online meetings, time management techniques, real-world examples, and relevant feedback in order to effectively educate students about these technologies [2, 20]. Our survey found that more than 50% of the teachers felt that developing engaging and innovative software solutions for online classes will increase students' motivation and interest in learning. For now, it's interesting to note that more than 80% of instructors requested that schools or governments give teaching kits (such as suggested lecture outlines) for their use while educating physical education by utilizing software tools online. When it comes to home exercises for various reasons (such as fundamental motions and physical fitness), the Ministry of Education and Training produced online teaching resources (such as PowerPoint presentations and video clips), but they were not sufficiently comprehensive for teachers to follow (Ministry of Education and Training, 2020). Contrast the abundance of learning materials available for in-person training, which include comprehensive teaching kits (such as suggested lesson plans, home activities, etc.) with in-depth analyses of various athletic prowess and exercise routines [11,13]. The instructional tools available online were notably lacking. Although the study had numerous benefits, two drawbacks should be pointed out. The data were initially solely gathered in HCM-VN. It would be more thorough to explore any cultural variations and their impact if comparable surveys could be carried out in other locations. Second, additional viewpoints, such as those of parents and students, were not included in the current study, which solely focused on software tools and online classes in PE from the standpoint of the teachers. Therefore, it would be fascinating to look into how software tools affect online PE classes from both the parents' and students' points of view.

Conclusion

This project is a pioneering investigation of software technologies for online physical education instruction in HCM-VN during the COVID-19 school closures. These results revealed that interaction and creativity were crucial components of successful online instruction. It provides important insight into the impact of modern software tools on online PE instruction from the teachers' point of view. Even while software programs and online learning are essential for ensuring that students continue to study during extended school

closures, instructors may have serious concerns about their impact. Teachers of physical education should have supplies of specific instructions and thorough instructional materials. It need sufficient assistance. To clarify the impact of software tools on online PE learning from the viewpoints of parents and students, more research will be done. Additionally, the effects of online PE instruction and software tools may have an impact on students' physical health.

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