



Professional Sports Trainers' Burnout in Fully Online and Blended Classes: Innovative Approaches in Physical Education and Sports Training

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The COVID-19 pandemic has forced many educational institutions worldwide to establish emergency remote teaching systems. Although online teaching has long been applied in many other subjects, online sports training is still under-researched in developing countries like Vietnam. In Vietnam, sports trainers are innovatively making many efforts to teach sports online amidst such a once-in-many-generations event. Particularly, a gym center chain has been offering two special formats of online courses utilizing virtual reality (VR) and three-dimensional (3D) technologies, namely, fully online and blended courses. The first format comprises 50% asynchronous sessions using VR and 3D technologies to provide trainees with theoretical knowledge and 50% offline sessions for practical skills training. The second format also includes 50% asynchronous sessions using the same technologies; however, the training for practical skills is conducted *via* an e-conferencing platform (Zoom). Fortunately, the blended courses have attracted significant attention from many sports trainees. However, as sports trainers in Vietnam had minimal opportunities to teach online before this epidemic, it is likely that, while teaching these courses, they can encounter moments of burnout, which comprises three dimensions, such as exhaustion, cynicism, and low professional efficacy. Thus, we aim to investigate factors that affected each dimension of burnout among sports trainers, using the mixed-method approach with questionnaires and focus-group interviews within this study. This study suggests practical pedagogical implications for sports trainers and administrators to curb stress and burnout in online sports training courses in times of crisis.

Keywords: burnout, trainers, exhaustion, cynicism, low professional efficacy, fully online teaching, blended teaching

INTRODUCTION

In line with global internet access and information and communication technologies (ICTs) development, online teaching and learning have exponentially grown among higher education institutions (Novikov, 2020). While online instruction has been adopted in diverse subjects in education, online instruction in physical education and sports training still seems scarce due to

its distinct values. Among these values is the “special preparation and operation to communicate and practice the values of physical education” (Antonia and Pierpaolo, 2019; Jeong and So, 2020, p. 2; Laar et al., 2021; Yu and Jee, 2021). As Jeong and So (2020) clarify, students had difficulties securing sufficient space and limited access to necessary supplies for practicing physical activities when engaged in online classes.

The Covid-19 pandemic outbreak, with its profound impacts on the different aspects of society, has forced governments to instigate different measures, including quarantine, social distancing, community lockdowns, travel restrictions, and closure of offices and educational institutions, to prevent the spread of the global epidemic (Chinazzi et al., 2020; Viner et al., 2020). Accordingly, to secure the well-being of lecturers and students, sustain education activities, and ensure students' learning attainment, higher education institutions have been promptly shifted from the traditional face-to-face classroom to various online teaching and learning modes (Alsoud and Harasis, 2021; Turnbull et al., 2021). These instruction modes include both fully online and blended teaching and learning. Although many higher education institutions have widely practiced online education for years, online education is only adopted as the optimal solution when all institutions are placed in such emergency circumstances.

Investigation of current online physical education and sports training in literature has revealed distinct preparations from higher education institutions to ensure the effective practice of this new mode. Among the preparations are those related to the faculty's initiative role in delivering online classroom, which involves maintaining regular student-faculty contact, providing opportunities for student collaboration in learning, creating active learning scenarios for physical practice, giving prompt feedback on students' performance, development, and communicating high expectations to students, emphasizing time on task and respect for diverse talents and ways of learning (Beard and Konukman, 2020). In addition, the faculty needs to acquire sufficient technical knowledge for implementing an online curriculum, including operating online instruction media to meet students' needs (Centeio et al., 2021; Jumareng et al., 2021). Other preparations include an effective pedagogical instruction model, adequate infrastructure and facilities, and psychological, academic, and social support to both faculty and students (García-Calvo et al., 2014; Laar et al., 2021).

However, lack of preparation for the online instruction environment due to the sudden transformation from offline to online classes can create significant challenges in the implementation (Klapproth et al., 2020; Mishra et al., 2020; Toquero, 2020; Tria, 2020; Baker et al., 2021; Maatuk et al., 2021). Among the challenges posed by online instruction is a massive workload experienced by faculty due to changes in the teaching modes (McCann and Holt, 2009; Klapproth et al., 2020; Baker et al., 2021). Research indicate that the faculty may find online classes negative and stressful when they experience a huge workload resulting from work setting changes, and job expectations without adequate preparedness (Barrett et al., 2016; Klapproth et al., 2020; Baker et al., 2021). If it is not dealt appropriately, such severe stress and other stressful factors can

lead to faculty's professional burnout whose dimensions can be exhaustion, cynicism, and low professional efficacy (Schaufeli et al., 2009; Portoghesi et al., 2018).

Although research has significantly contributed to the literature on faculty stress, burnout insights, and effects on physical education and sports training (Kania et al., 2009; Barrett et al., 2016; Carson et al., 2019), few have investigated burnout in online and blended physical education instruction and sports training. In the current Vietnamese context of physical education and sports training, especially in online teaching and learning of this field, little evidence indicates that sufficient research exploring stress and burnout in online instruction has been conducted. Thus, we sought to investigate factors contributing to the burnout state of professional trainers who were engaged in fully online and blended instruction classrooms in physical education and sports training in Vietnam.

LITERATURE REVIEW

Online Instruction and Blended Learning

Since its first usage in 1995, when the web-course tool (WebCT) was viewed as the first Learning Management System (LMS), online learning and teaching have been interchangeably used in different terms of distance education, e-learning, blended learning, online education, or online courses (Conrad, 2006; Scagnoli, 2009; Miller et al., 2016; Singh and Thurman, 2019). According to Singh and Thurman (2019), online teaching and learning at that time were simply uploading text and pdf files using the LMS. Later, although different higher education institutions have tremendously adopted online teaching, the primary purpose of online education was to overcome the challenges of students who could not attend conventional classes or to widen the sources of income of the institutions (Barajas and Owen, 2000; Guri-Rosenblit, 2005). Online teaching and learning were initially conceptualized as distance education, with the incorporation of the components of time and geographic distance, to refer to different efforts of delivering instructions using electronic media to involve teachers and students who are in different physical locations (Moore, 1990; Moore et al., 2011). Later, to emphasize the technological aspects of learning and teaching, distance education was interchangeably used as e-learning which is believed to be a technological evolution of distance learning or distance education and portrayed as “the use of electronic media for a variety of learning purposes that range from add-on functions in conventional classrooms to full substitution for the face-to-face meetings by online encounters” (Guri-Rosenblit, 2005, p. 469). Over time, the two terms of e-learning and online education have been substituted and viewed as ways of bridging space between teachers and students through the use of web-based technologies (Ryan et al., 2016; Lee, 2017), which is similar to those conceptualized by Moore et al. (2011). Perceiving e-learning as an educational process, Jereb and Šmitek (2006) further clarify that e-learning or online instruction needs to involve information and communication technologies (ICTs) to facilitate both synchronous and asynchronous teaching and learning activities. Recently, the term, blended instruction or blended learning has been used as a learning method

that integrates traditional face-to-face learning with web-based or computer-assisted online learning classrooms to achieve educational goals (Feng, 2018). Taking advantage of both traditional face-to-face instruction and technological advances in an online classroom, blended instruction is believed to enhance teaching and learning effectiveness and bring benefits to students since it facilitates flexible learning, creates greater student learning engagement, and improves students' self-regulated learning (Schunk and Zimmerman, 2013; Li et al., 2020; Shim and Lee, 2020).

Whilst the adoption of online instruction has been strongly advocated by many researchers due to its strengths of providing flexibility in educational access, effort reduction, time, and cost-saving, it is still debated for creating significant challenges to some higher education institutions that are not well prepared with adequate infrastructures for online instruction practice (Chang et al., 2015; Alsoud and Harasis, 2021; Maatuk et al., 2021). In physical education and sports training, these challenges become critically severe for both faculty and students to deal with. In this traditionally marginalized subject (Richards et al., 2018), it is challenging for the faculty to convey the values and objectives of the sports and demonstration of physical movements in online classes. As Laar et al. (2021) clarify, these values and objectives include setting sports protocols and keeping oneself healthy, which can be done only through sports activities. Students who are engaged in online classes have had limited opportunities to participate in sports activities effectively and inadequate access to sports equipment at home, which inevitably restricts the students' learning objective attainment and their underperformance in sports competition (Laar et al., 2021). Other challenges in an online instruction environment include insufficient infrastructures for online delivery, lack of opportunities for demonstration and performing of professional physical movements, lack of real communication between faculty and students, the vast workload to faculty, learner motivation, and participation in online learning (Deming et al., 2015; Limone and Toto, 2018; Antonia and Pierpaolo, 2019; Jeong and So, 2020). All these challenges may create pressure and stress on faculty in physical education and sports training where sufficient attention has not been paid to by educational reforms in the practice of online instruction (Zheng et al., 2021). According to Maslach et al. (2001), such pressure and severe stress initiated from work may lead to burnout among faculty.

The Three Formative Dimensions of Burnout

Burnout was initially defined as “a syndrome of emotional exhaustion and cynicism” that occurs when an individual experiences inclusive exhaustion from work (Maslach and Jackson, 1981, p. 99). According to Zhu et al. (2018, p. 2), burnout is “a dysfunctional response to chronic emotional and interpersonal stressors at work” that one encounters when enduring an overload of stress. Three dimensions of construct burnout include exhaustion, cynicism, and professional efficacy (Maslach and Jackson, 1981). Exhaustion is described as feelings of chronic fatigue, lack of emotional energy, and emotional

exhaustion in work. Cynicism is characterized by the trainers' detached and distant attitudes toward their colleagues, students, and parents, as well as their lack of interest and commitment to the institution (Schaufeli and Buunk, 2003). Low professional efficacy, the final dimension, as described by Brouwers and Tomic (2000), refers to a person's feelings when he or she is not competent in completing assigned tasks or performing particular assignments.

Burnout Among Sports and Professional Trainers of Physical Education

Numerous studies have been undertaken to explore attributes of burnout among physical education and sports trainers. It is reported from these studies when compared with other academic-related professions, physical education, and sports training seem to create more stress and burnout in professional trainers due to their highly demanding context of training (Hendrix et al., 2000; Kania et al., 2009; Lundkvist et al., 2014; Mazerolle et al., 2018; Sas-Nowosielski et al., 2018). For example, in a study investigating stressors causing perceived stress and burnout among 118 professional trainers at a university, Hendrix et al. (2000) discovered that hardiness, social support, and training issues are significant predictors of perceived stress resulting in emotional exhaustion and a sense of personal incompetent performance accomplishment which are two critical dimensions of burnout among trainers. Similarly, Kania et al. (2009) underline that imbalance between training resources and increasing demands leads to severe emotional exhaustion and a sense of incompetent performance accomplishment among trainers. Specifically, when an imbalance between demands and resources occurs, the trainers may negatively affect their trainees or tend to self-evaluate themselves due to the perception of failure. While supporting that emotional exhaustion and personal performance accomplishment are two critical factors leading to burnout among trainers, Lundkvist et al. (2014) clarify that these factors are caused by different elements related to the distinct context of physical education and sports training, including training settings, trainers' interrelationship with trainees, their performance competence and experience in sports training, and their performance results.

While many studies investigate stress and burnout of professional trainers in physical education and sports training, little evidence shows that sufficient research has been undertaken to explore this issue, especially causes of burnout among trainers involved in fully online and blended instruction. Additionally, previous research about professional trainers' burnout in physical education and sports training indicate several inherent limitations related to research perspectives and methodology. First, most of the studies usually investigated professional trainers as general participants as those studies were conducted in other academic areas, disconnecting the professional trainers from the social-cultural and historical background from which the burnout was grounded. The authors believe that human psychological issues, such as stress and burnout need to be treated and investigated with “a multi-dimensional and systemic approach” in which all essential

psychological drives and undercurrents of power, culture, and history that shape and evolve the participants' practices should be critically analyzed (Foot, 2014, p. 329); otherwise, the issues will be only examined at face values. When investigating causes of distress or burnout experienced by professional trainers, some studies viewed professional trainers as passive participants rather than as unique individuals who are strongly impacted by a broad framework of systemic changes in which all related forces, such as society, communities, or families, need to be considered (Hanley et al., 2020), with which the authors disagree from ecological and humanistic perspectives in education.

Considering the above limitations of previous studies, we proposed that burnout of professional trainers involved a fully online and blended physical education, so sports instruction classrooms needs to be looked at in ecology, which closely connects the professional trainers to all related motives and forces of training and non-training communities, resources, demands, and families. We believe that each trainer's social-cultural and historical context needs to be examined carefully and that trainers should be viewed as proactive recipients who are actively decide in their own training process and burnout prevention. What antecedents and why professional trainers develop the syndromes of burnout need to be investigated in a broad framework of the social, cultural, historical, and pedagogical systems rather than in discrete dimensions.

Theoretical and Analytical Frameworks

Online Learning and Burnout

Although the advantages of online lessons have been confirmed by extended literature (Dumford and Miller, 2018; Davis et al., 2019), further investigation on physical education, online instruction, and instructors' burnout during COVID-19 are still to be conducted. It is generally believed that extensive exposure to technology can cause unwanted effects on the mental well-being of the users. In terms of working, it has been discovered that the use of communication technology can encourage work distractions which may explain how it can also contribute to a rise in work-related burnout as well as a decline in work engagement of employees (Ter Hoeven et al., 2016). During the pandemic, when telecommunication has become the main channel of instruction, teachers, and academic staff further suffered from existing problems, such as prolonged use of smart devices after working hours, an excessive amount of screen time, or e-mail overuse (Estévez-Mujica and Quintane, 2018; Mheidly et al., 2020), all of which possibly led to a higher level of burnout in an online classroom. Additionally, some studies have suggested the major risks of COVID-19 on teachers' burnout. For example, Sánchez-Pujalte et al. (2021) have investigated the levels of burnout among teachers amidst COVID-19 and discovered that most of the participants were severely affected by burnout. Similarly, in their longitudinal national study, Sokal et al. (2020) indicated that Canadian teachers generally experienced high rates of exhaustion and cynicism over the first three months of the pandemic when they had to resort to online teaching. However, the connection between burnout and online teaching has not been fully established in former studies (Sokal et al., 2020; Sánchez-Pujalte et al., 2021). Previously, Hogan and McKnight

(2007) have suggested that some reasons for teachers' burnout, such as online teaching experience and overall teaching load, should be further explored in future studies. There has also been limited research on the influences of online learning during the pandemic on physical education and sports training. To conclude, despite the confirmed effectiveness of online practical classes in physical education (Yu and Jee, 2021), it remains questionable how online instruction in physical education and sports training can affect trainers' burnout during COVID-19.

Blended Learning and Burnout

Blended learning has been well established and might be considered as an ideal approach for the future education of various disciplines like nursing, dentistry, and math (Magtibay et al., 2017; Ndlovu and Mostert, 2018; Nijakowski et al., 2021). For instance, Ndlovu and Mostert (2018) concluded in their study that through synchronous and asynchronous dialogues with peers and facilitators, Moodle, a blended teaching tool, may allow in-service teachers to experience social, cognitive, and instructional presences. Likewise, Magtibay et al. (2017) and Nijakowski et al. (2021) have referred to blended learning as a favorable model to decrease burnout and increase efficiency in learning, respectively. However, with the outbreak of COVID-19, there should be some reconsideration on the influences of blended learning on physical education and sports training. The reason is that physical education and sports training may be characterized by distinct features like the inclusion of every student, including those with disabilities, in high-quality courses or the chances for students to exercise self-monitoring physical activities in regular courses (Centers for Disease Control and Prevention, 2015). Blended learning during COVID-19 can, at the same time, pose more challenges to the trainers, who are possibly experiencing a high level of burnout and technostress due to the pandemic (Panisoara et al., 2020). As trainers can be exposed to more workload as well as are more likely to get infected with the coronavirus, it may be possible that blended learning, which involves both face-to-face and online instructions, can lead to negative effects on the trainers' overall wellbeing. The current study proposes that blended learning in the context of COVID-19 can significantly influence trainers' burnout.

- As mentioned above, in sports training, the relationship between the mode of teaching and burnout has not been fully investigated. In the particular Vietnamese context of physical education and sports training, whether blended and fully online modes of teaching create different levels of professional burnout over an extended period is still open to question. Also, it is still inconclusive about what specific factors may contribute to burnout in each mode. Therefore, in addition to investigating factors that caused burnout among sports trainers who were involved in fully and blended instruction classrooms, this study aimed to examine the different levels of burnout among the target participants. Specifically, the study focused on exploring the following two main research questions: In which mode of teaching did professional sports trainers feel more burned out, fully online or blended classes?

Which factors caused the differences in professional trainers' burnout levels between fully online and blended classrooms in physical education and sports training?

To answer the first question, we compared the levels of professional burnout of trainers who were in charge of the fully online classes and those who taught blended classes at the beginning, in the middle, and at the end of the course. Regarding the second question, we examined the factors that caused the differences in the three dimensions of academic burnout, including exhaustion, cynicism, and low-performance efficacy, using the cultural-historical activity theory framework as an analytical framework. Overall, we proposed the following conceptual framework (see **Figure 1**), which were tested in this study.

The Cultural-Historical Activity Theory

From the humanistic education perspective, educational institutions play a critical role in supporting the development of an educational environment, which in turn facilitates the complete growth of an individual (Winter, 2018). Advocates of humanistic psychology also believe that all humans are unique and that all individuals have equal potentials to grow constructively, play their roles, and make interventions within the world (Hanley et al., 2020). The role of institutions is to provide all individuals with conveniences to support the development of their emotional well-being so that they can perform their roles well. Aligning to the humanistic education perspectives, especially the psychological movements, the ecological advocates of individuals' emotional well-being in educational settings emphasize that individuals need to be viewed within the social, cultural, and political contexts that they inhabit and make interventions in (Perrett, 2006 cited in Hanley et al., 2020).

The multi-dimensions of culture, history, and power are further underscored in the cultural-historical activity theory (CHAT) which proposes that all organisms should be considered and explored in relation to the constant changes and the increasingly complicated interactions that constitute the organisms (Stetsenko and Arievidtch, 2004; Foot, 2014). To clarify, since humans inhabit in a community that is strongly impacted by its culture, everything individuals do will be shaped by the cultural values of their community. Further, since cultures are embedded in histories and evolved over time, analysis of the actions and practices of humans needs to be done with reference to the historical context in which their actions are taken place. The core value of the CHAT model is that as an activity constantly grows through collective actions over time, an analysis of complicated practices of professional work needs to be done in such a way of grasping the entire nature of the work, both at the particular time of investigation and over time, and not just considering it as discrete or separate components (Foot, 2014). In view of the humanistic and ecological perspectives in education, this study adopted the CHAT framework by Engeström (1987), which includes six components contributing to human activity, including subject, object, mediating artifacts, community, rules, divisions of labor, and outcome, to give

insights into how social and cultural components contributed to teaching and learning. In the qualitative part, the authors applied this framework as a guideline for inquiry and discussion among trainers about their burnout.

Figure 2 describes the six components of CHAT model adapted from Engeström (1987). Specifically, a subject is an individual or a group of professional trainers whose burnout syndrome is in the focal analysis. In online instruction classrooms, objects refer to online lessons delivered both synchronously and asynchronously. Mediating artifacts include external and internal tools and guides which are used to enable and facilitate the training and learning of students. They also refer to devices used in online instruction, including computers, digital applications and technologies, and training platforms. Likewise, the rules are described as policies, protocols, or norms stemming from the institution or community and the cultural, economic, and political context in which the interactions between the trainers and students are taken place. Rules regulate how the instructional process is undertaken and how the trainers interact with colleagues and students in the academic communities and in other non-academic communities. The division of labor in the activity system describes what types of actions each stakeholder engaged in the instructional process will do, what role they need to perform, and what relevant tools they may use in relation to the object. Understanding the division of labor requires the investigation of "socio-historical power structures and patterns of relations both within the community and between a community and the larger culture/society of which it is part" (Foot, 2014, p. 333). Noticeably, as Engeström (1987) clarifies, pivotal impacts among the constituents constructing the everyday activity of one person needs to be considered as collectives, rather than individuals, in relation to other people and institutions as well as with other non-academic contexts. Thus, an analysis of the activity should be done with reference to a process as a whole, rather than a sequence of distinct actions (Foot, 2014). From a humanistic and ecological viewpoint, we hoped to investigate each professional trainer as a unique individual who is subject to different contexts and adversities, listening to their stories of how they struggle with distress and burnout every day and understanding how they constantly make an effort to sustain instruction despite their limited resources for this innovative teaching and learning mode used in physical education and sports in Vietnam. Thus, this CHAT framework is to be used in the focus group interview as an orientation for the participant to discuss.

METHODOLOGY

Rationale for the Method Choice

This study was grounded on pragmatic epistemology and postpositive ontology. In particular, we adopted the triangulation design validating the quantitative model suggested by Creswell (2012). In this study, we hoped that qualitative data collected from the focus-group interview would first triangulate the results of the quantitative data. Besides, the qualitative data collected from the focus group interview would validate the

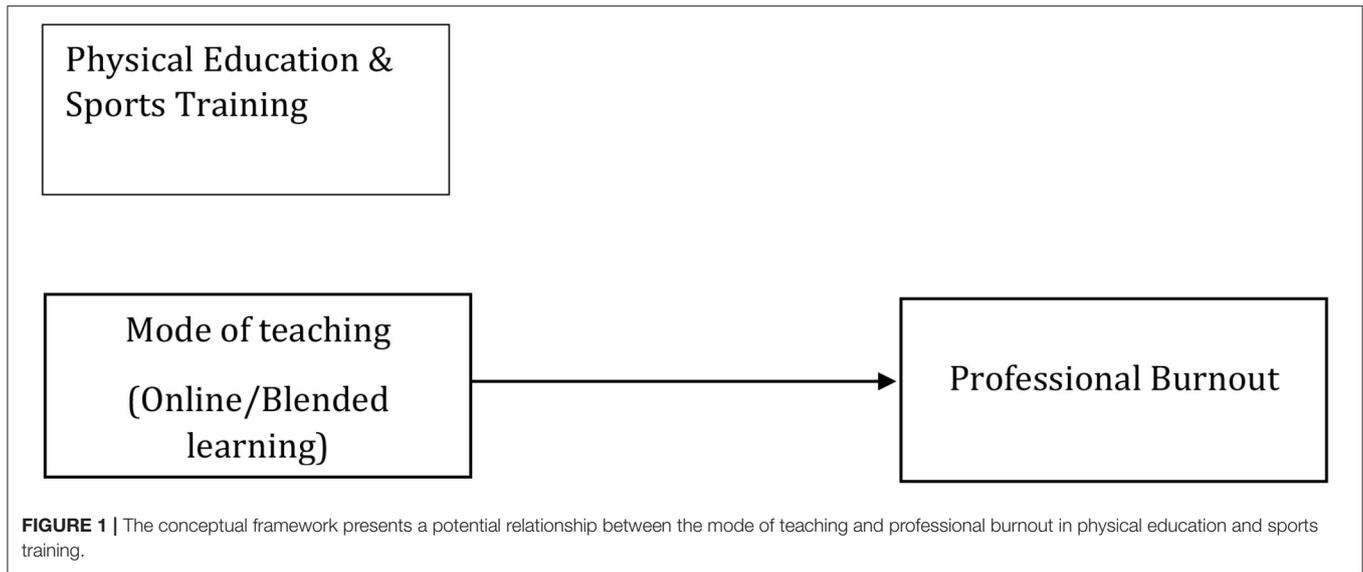


FIGURE 1 | The conceptual framework presents a potential relationship between the mode of teaching and professional burnout in physical education and sports training.

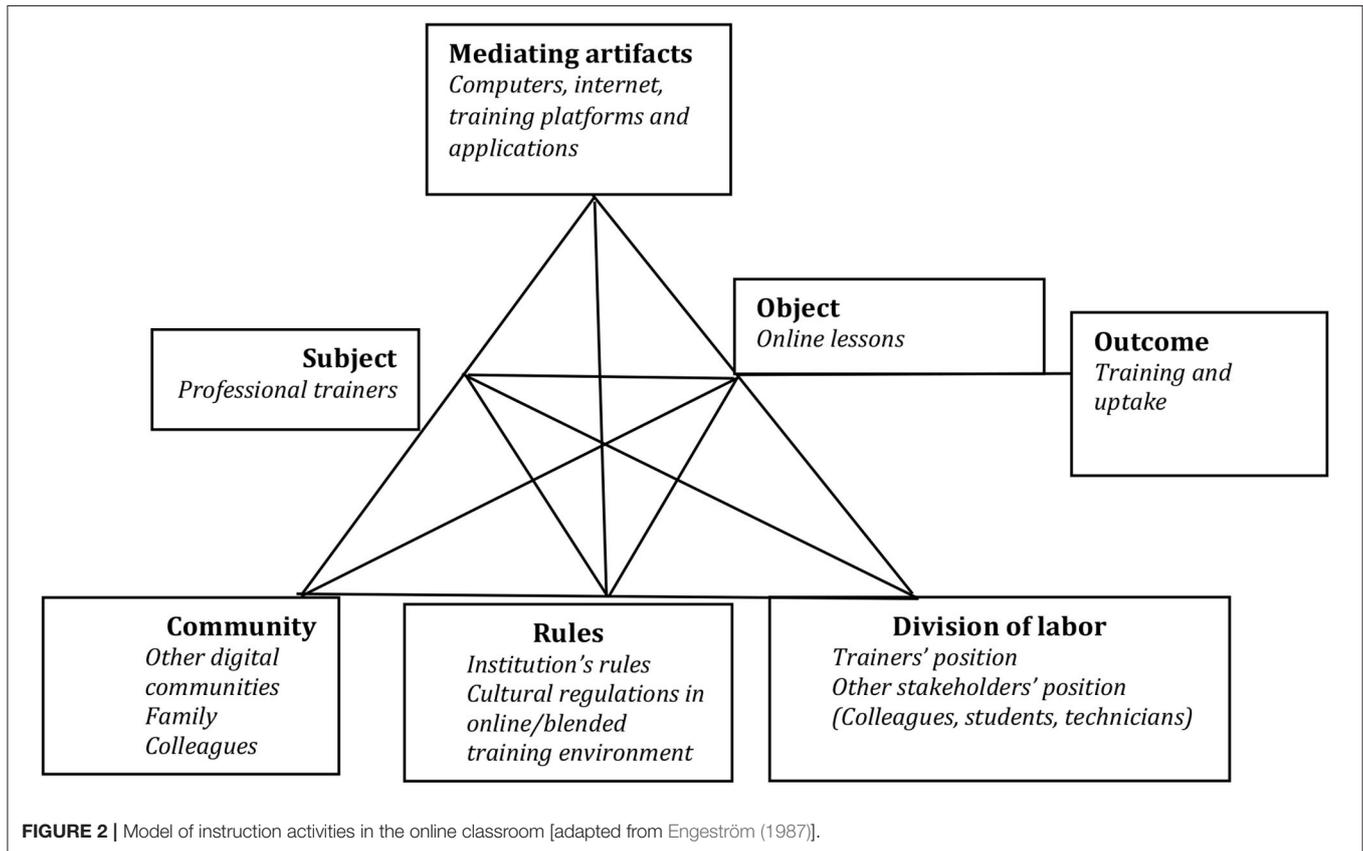


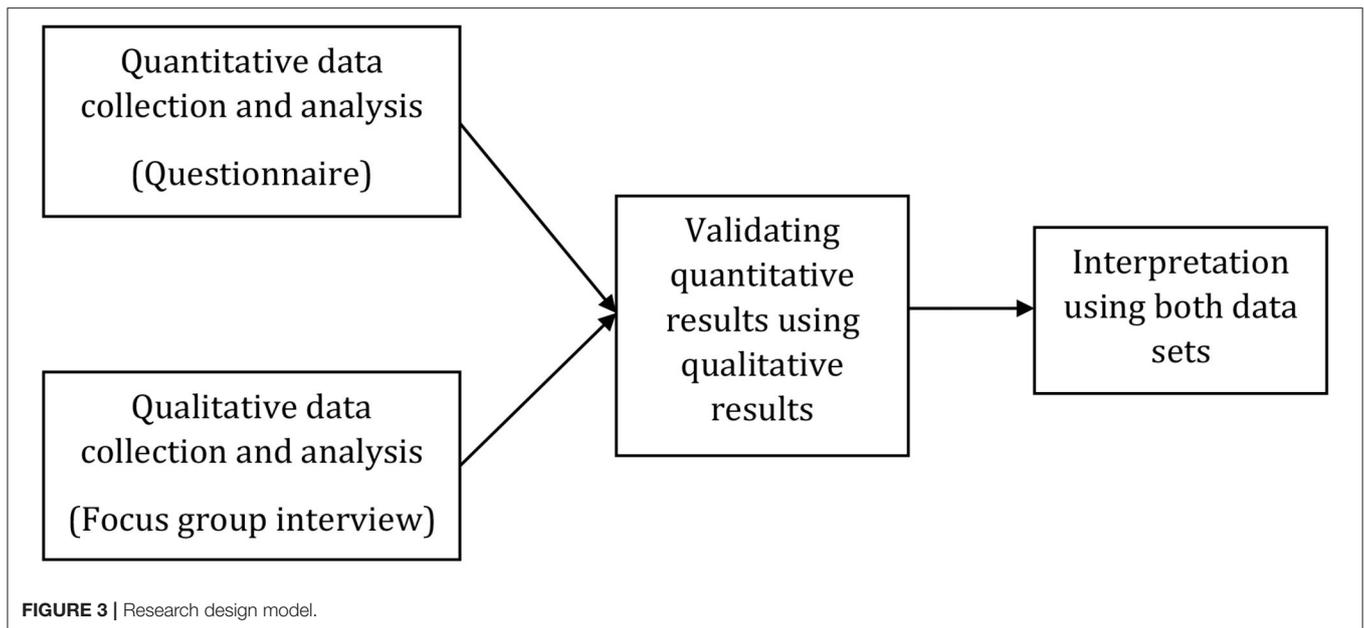
FIGURE 2 | Model of instruction activities in the online classroom [adapted from Engeström (1987)].

quantitative data, thus allowing us to provide with more in-depth interpretation and justification (Figure 3).

Participants

The study recruited 60 personal gym trainers from different professional training centers in Vietnam who agreed to join the experimental period of 3 months. There were 62% male trainers

and 38% female trainers who took part in the course. Thirty trainers had already had more than 10 -years of experience while 20 of them had had about 5–9 years working in the training sector, and 10 of them had had <4 years of experience. All the trainers recruited for the research had been already trained in cycling, yoga, general health improvement, body fits, aerobics, and boxing. Unfortunately, none of them had



had experience in training and teaching online before as there is a very limited number of sports courses conducted online in Vietnam.

Sampling Techniques

In this study, two sampling procedures, including simple random sampling and stratified sampling, were subsequently implemented to select the participants for the experiment and the focus-group interview, respectively. Before the experiment, the study participants, who were also the survey respondents, were employed using simple random sampling. Sixty sports trainers ($N = 60$) out of 123 trainers of a gym center chain were randomly selected and divided into two classes ($n_1 = n_2 = 30$). The simple random sampling method allowed us to select individuals from the sample pool so that each sample registered an equal likelihood of being drawn (Creswell, 2012). Regarding the qualitative data collection, we applied the stratified sampling to recruit participants for the focus-group interview. Through personal exchanges and sharing, as well as in-class observation, we could classify familiarity and digital literacy into tentative levels. This was also accompanied by the self-reported digital-efficacy assessment form that the centers had already conducted at the beginning of the implementation of online and blended teaching. Consequently, three groups of trainers with different levels of digital self-efficacy, including high, middle, and low, were formed. In each mode of teaching, one trainer in each efficacy level was randomly chosen for the interview. This process can reduce the effects of the gaps in digital efficacy on the interpretation of burnout results (Betoret, 2006; Pellerone, 2021).

A Brief Description of the Two Modes of Teaching

Both blended learning and fully online courses offer the same syllabus for fitness courses which involves basic cardio exercises,

yoga exercises, boxing, and aerobics exercises (refer to **Table A1**). The fully online courses offered 100% of the lessons during the entire course; that is, the synchronous sessions were conducted *via* Zoom, and the asynchronous VR and 3D videos of how to work out at home were uploaded to the training management system (TMS) of the gym center chain. The trainees were quite familiar with Zoom and TMS, as Vietnam had experienced two lockdowns and shut-downs due to the surge of the COVID-19 cases. In comparison, the blended program allocated half of the course for the trainers to meet their trainees in practical face-to-face sessions while also uploading the virtual reality (VR) and online three-dimensional (3D) videos for asynchronous lessons. While all the courses followed a training syllabus, all the trainers were required to plan and modify all their instructional content of the synchronous sessions in accordance with the strengths and weaknesses of the trainees in their own classes. In total, the course comprised 60 h and lasted for 2 months. On the other hand, all the VR and 3D lessons were pre-made so that the trainers did not need to prepare these sessions by themselves. However, they had to monitor and assess the trainees' participation, time-on-task, and performance when the trainees self-studied these VR and 3D lessons in the asynchronous sessions as well.

Research Instruments

Questionnaire

The scale was adapted from the teacher's burnout inventory (Maslach et al., 1986); however, sports trainers may have different characteristics in comparison to teachers, in general. The questionnaire employed in this study contained 20 reflective items and was divided into three parts. The first eight questions assess the dimension of burnout, which is trainers' exhaustion. The second dimension was assessed using the eight questions. The final part contained the last four questions. The trainers were asked to choose one of

the six options on a Likert scale, from (0) “never” to (6) “always.” Since most sports trainers were not fluent in English, the researchers translated the English version of the questionnaire into Vietnamese. The translation of the questionnaire into the mother tongue of the participants was expected to increase data reliability and return rate (Thomas, 2013).

Regarding the pilot test of this questionnaire, the researchers applied the Delphi methods to collect the expert panel's consent. A group of 10 experts was asked to assess quality and the translated version of the pilot questionnaire. The experts' panel reviewed and commented on the questionnaire in three rounds anonymously and independently. After each round of questionnaire revision, the authors asked the panel to provide their consent score for each item using the Delphi consensus method, using the following formula:

$$\begin{aligned} \text{Formula: } QD &= \frac{\text{Inter-quartile range}}{2} \\ &= \frac{(Q_3 - Q_1)}{2} \end{aligned}$$

The quartile deviation (QD) was 0.3, which was lower than 0.5. This result means that it has received a high level of consensus. Also, the median was 4.3, which is higher than 4.0 and thus signifies high importance (Ab Latif et al., 2017). After that, 20 other voluntary trainers were recruited to answer the pilot questionnaire online. The responses were collected, and Cronbach's alpha was used to examine these responses. It yielded high values for the three dimensions of the burnout scale (from $\alpha = 0.839$ to $\alpha = 0.945$). The results confirmed that this survey was reliable enough to administer to the experimental groups. The taxonomy of the finalized questionnaire is presented in **Table A2**.

Focus-Group Interview

Focus groups could supplement more traditional types of individual interviews or observation when we wanted to collect qualitative data and triangulate the results of the quantitative data (Cohen et al., 2007). Different from the individual interviews, when individuals answered a set of predetermined questions, in this focus group interview, we provided the participants with the following two questions:

- What factors caused burnout in each mode of teaching?
- What were the major reasons for the differences in the burnout levels between the two classes, if any?

First of all, we provided the participants with the CHAT framework and helped them specify stakeholders and artifacts of the society that potentially affected their teaching and training process. Having been provided with the CHAT model, the participants were asked to discuss among themselves to figure out the similarity and differences in their opinions toward the two questions. We acted as facilitators who supported the participants in their whole-group sharing process. The facilitators also actively helped the group dig deeper into several aspects of the CHAT framework when most participants believed that their burnout state might come from the same underlying causes.

Procedures

After getting consent from the board of research ethics, we sent out the participant recruitment document to the trainers who were about to be the potential participants for the study. After identifying the participants, we informed them about the research aims, purposes, procedures, benefits, and risks and asked for their written consent to participate anonymously in the research. The participants then received official initial training to familiarize themselves with the syllabus and the teaching platforms in 2 weeks. Then, there was a one-week washout period when the participants prepared their own lesson plans. This washout period was also necessary to avoid the sequencing effects of the training on the participants' burnout state. The participants then started to teach their own courses. Each course accommodated ~10–15 trainees. The participants underwent three tests to measure their burnout. The first test occurred right before they began their online teaching and blended classes, while the second and the third test took place in the middle and at the end of their teaching.

In the qualitative stage, when the participants agreed to join, a one-hour focus group interview was set up. Before the interview, the interviewers had discussed the meaning of *burnout* with participants to reach a mutual understanding of the term used in the interview. The entire focus-group interview was recorded, transcribed, and closely examined with the accompaniment of the interviewer's note. This note described in detail the reaction of the group when talking about different stakeholders and artifacts, as well as the percentage of the participants agreeing on each idea discussed. After that, all the data were critically analyzed and sent back to the participants for reconfirmation and feedback.

Data Collection and Analysis

The quantitative data were analyzed using SPSS 20, while the qualitative data were analyzed with Nvivo 20. For the quantitative data, the burnout levels of trainers were compared thrice before they began teaching, in the middle of, and at the end of their course using independent sample *t*-tests. Regarding the qualitative data, based on the frequency analysis and auto-coding function of NVivo 20, we discussed and finalized the main themes in several meetings to ensure no important theme was left out and sent them to the participants for their reconfirmation. This stage was repeated until all the participants agreed that no critical idea was missing from the research.

RESULTS AND FINDINGS

Quantitative Results

The trainers of the two modes of teaching were required to take burnout tests thrice, in the beginning, in the middle, and at the end of their course. In general, the level of burnout among fully online trainers witnessed an upward trend throughout the whole period. In sharp contrast, the burnout levels of trainers decreased gradually in the blended teaching course.

Table 1 shows that the fully online group was not significantly different from blended courses in terms of trainers' burnout ($p = 0.594$) in Stage 1. The two group means in this stage indicate that the average burnout scores for the fully online group

($M = 3.40$) is not lower than the score of the blended training ($M = 3.30$). The difference between the means pointed on a 6-point scale is 0.10. The effect size, d , is ~ 0.14 , which is a small effect size. However, in Stage 2, fully online group ($M = 4.06$) differed significantly from blended group ($M = 2.77$) in the level of trainer's burnout ($p = 0.000$) with a large effect size ($d = 2.54$). Similarly, fully online was also significantly different from the blended course in Stage 3 ($p = 0.000$). Inspection of the means of the two groups illustrates that the difference between the means is 2.93 in Stage 3, and the mean for fully online ($M = 5.05$) is higher than for the blended group ($M = 2.12$). The effect size, d , is ~ 4.15 .

Qualitative Findings

An in-depth analysis of the discussion of the focus group was revealed; while the trainers in the fully online classes felt burnout due to four main aspects of the CHAT framework, the burnout syndromes of their counterparts who taught the blended classrooms comes from only three aspects (see **Table 2**).

The Beginning of the Course

Trainers of both teaching modes experienced initial exhaustion due to unfamiliarity with the new teaching methods. All the six trainers confirmed that they felt “scared, overwhelmed, and overly anxious” (T1) as they had not experienced any online sports training course before. Two of the trainers even reported that they “doubted [their] professional efficacy” as teaching sports online was “impossible” (T4, T5). Another trainer also reported that, as most trainers were “not familiar with computer-based and internet-based teaching,” they were afraid that “everything can get out of control” (T4).

Trainers from the fully online classes also reported other issues that led to their burnout, including technical facility and internet connection. As the fully online trainers had to teach the trainees *via* Zoom, they “spent more time checking the connection than real training.” Thus, at the very beginning of the course, “most of our source of stressors that led to our burnout is due to technical issues” (T2). Digital lesson planning is also a part of the problem of the fully online trainers. Most of them had to “burn the midnight oil” because the lesson plan to teach an online course “is fundamentally different and requires much more incorporation of pedagogical techniques and digital tools” (T1, T2).

On the other hand, the burnout state of the trainers of blended classes stemmed mainly from the pressure of the community. Although the Vietnamese government has declared the “new normal” state, which allows everyone to get back to their daily offline work after being fully vaccinated, there are still concerns from the families of the trainers. Trainers, T4 and T5 reported that their families usually showed overt concerns. More noticeably, one trainer also frequently experienced insomnia which was a reflective sign of burnout. In particular, she explained, “fear of the trainees’ safety is haunting my sleep. Teaching the yoga part requires constant attention to the trainees’ practices or else detrimental accident may occur” (T3). T6 claimed that although the VR and 3D lessons were predetermined, he was asked to review all the materials to ensure that all the activities were safe enough for the trainees to practice

at home, which was “exhausting” as the trainers had to “watch hundreds of clips at a time.” This unnamed extra workload also made some trainers experience “constant migraine and dried eyes.”

In the Middle of the Course

The content and word frequency analysis revealed that while all three trainers (T1, T2, and T3) in the fully online courses felt even more exhausted and more cynical, the blended trainers felt more “balanced” as they became more “familiar with the new approach.” Fully online trainers reported that they experienced more sources of burnout as the course continued. Since interaction is minimal in the fully online classes, all three trainers even felt more inefficacious. T3 reported that “as the trainees often remained silent and some even turned off their webcam during the training session, I felt hopeless. Teaching sports online 100% does not make sense. The more we taught them, the more invaluable I felt.” Likewise, T2 confirms that the trainees became more and more demotivated as they trained at home. She started to feel cynical toward the job, stating that “Well, I stop caring about whether they reply or not. After all, this is just an emergency solution. They have the recordings to revise after our synchronous session.” The trainers even felt they were overburdened as the gym centers did not offer adequate support. T1 and T2 complained in the focus group interview that “the customer service team was not effective.”

In contrast, the trainers in the blended classes claimed that the only reason for their burnout state was just because some of the trainers and trainees suffered from the post-COVID syndromes. T5 reported that “I think everything is getting ok as all of us have familiarized ourselves with the program.” T4 also added that “blended learning still allows us to meet the trainees and provide the necessary support. I think the bone between the trainers and the trainees became more tightened, which made us happier and less burned out.” However, all the trainees reported that they experience some “burnout moments,” especially when some trainers become “slower and get fatigued faster due to the post-COVID syndromes.” Also, they claimed that the trainees were also demotivated at times when “they felt like they lose their confidence and energy as they had before COVID. They were not as durable as [...]” (T6). Noticeably, all the trainers of the blended class noted that their burnout in the middle of the course was not the result of the nature of blended teaching but was the consequence of the pandemic.

At the End of the Course

From the focus group interview, the fully online trainers agreed that they were still susceptible to various factors that lead to their constant high burnout level. All the problems with technology, demotivated trainees, lack of interactions, lack of regulations, and increased workloads remained to constitute the burnout state of all fully online trainers. All the three trainers (T1, T2, and T3) said that they “could not stand the pressure of online teaching any longer” as there was very “limited interaction,” and “many trainees” practiced their exercises “imprecisely,” which was likely to result in “injuries” in the long run. Also, many trainees also give feedback to the trainers that they would like to

TABLE 1 | Comparison of blended learning and online learning on teachers' burnout over the three stages ($n_1 = 30$ and $n_2 = 30$).

Variable	<i>M</i>	<i>SD</i>	<i>T</i>	<i>df</i>	<i>p</i>	<i>d</i>
Stage 1			0.53	53.37	0.594	0.14
Blended	3.30	0.60				
Fully online	3.40	0.82				
Stage 2			9.90	58	0.000	2.54
Blended	2.77	0.45				
Fully Online	4.06	0.55				
Stage 3			16.09	35.34	0.000	4.15
Blended	2.12	0.95				
Fully online	5.05	0.31				

“drop out” because the online lesson was not “effective in helping [them] to keep fit.” Also, over-exposure to the screen worsened the exhaustion and created some health issues for the trainers. Moreover, T1 said that “sports trainers are not used to teaching online like teachers of other subjects. They are supposed to move around and support people to get away from their sedentary lifestyle. So, at the end of the course, I totally felt cynical and lost all my efficacy.” Similarly, trainer T3 believed that a fully online training could not yield significant benefits for the trainees, and thus it lowered his sense of professional efficacy.

In sharp contrast, the trainers who participated in the blended classrooms reported that they were relieved from their burnout state at the end of the course. T4 said that “After all, I am used to blended teaching, and this saved us a lot of time reciting the theory.” Likewise, trainer T5 agreed that “blended learning is effective although I was reluctant to use it at first. I did not feel burned out at the end of the course anymore.” In particular, T6 endorsed that blended learning can “reduce the workload” and as they can meet the trainees offline, “interaction is guaranteed to meet our requirement.” The only remaining factors that the trainers found to have “some limited effects that may make us feel burnout” were concerns about unanticipated accidents that may occur to the trainees when they practice at home using VR and 3D videos. However, all the three trainees agreed that “we did not worry much about that because after all, we had checked all the contents so that we expected that severe injuries are hardly likely to happen.”

DISCUSSION

Professional Trainer Burnout in Fully Online Classrooms vs. Burnout in Blended Classroom

The quantitative data present that, although both modes of teachers created a high burnout level for trainers at first, fully online teaching increased trainers' burnout when blended teaching witnessed a gradual downward trend as time passed by. This result is confirmed by the qualitative data which further clarify that professional sports trainers of the fully online mode constantly experienced various dimensions of the CHAT framework. Their counterparts, who participated in the blended

mode, in contrast, could curb many different sources of burnout as they entered the latter stage of their teaching. It can be implied that the nature of fully online training is not suitable for physical education and sports training as it exacerbates trainers' burnout, which is different from studies in other subjects claiming that online learning and teaching are as effective as the face-to-face mode of training. While other studies highlight that fully online instruction classrooms are as effective and successful as traditional face-to-face ones (Beard and Konukman, 2020; Kwon, 2020; Centeio et al., 2021), this study reveals that such success and effectiveness of a fully online classroom cannot be found in physical education and sports training area.

Significantly, while the high level of burnout among professional trainers who were involved in fully online instruction classrooms as compared to those of blended ones indicates the ineffectiveness of fully online classroom delivery, it also implies a lack of preparation and support provided for the professional trainers in implementing this important instruction mode. In addition to sufficient infrastructures and facilities equipped for online teaching, the preparation for trainers needs to include appropriate trainings in online teaching for trainers and updates of the current syllabi to be suitable for online instruction practice (as the syllabi used for the traditional face-to-face instruction cannot be used for fully online instruction classrooms). An implication from the findings of this study about the ineffectiveness of fully online instruction is consistent with those from previous studies that lack preparation and support in online instruction which can create challenges and stress to professional trainers, and that such challenges and stress would create burnout among trainers (Klapproth et al., 2020; Mishra et al., 2020; Toquero, 2020; Tria, 2020; Baker et al., 2021; Maatuk et al., 2021). As the trainers who were involved in blended instruction classroom had 50% of their instruction length meeting face-to-face with the trainees, they had the opportunity to explain to students the details of the lessons or made up the instructional parts which could not be delivered during the online instruction sessions. In short, they had the opportunity of resolving and releasing their stress created by online instruction sessions. However, for professional trainers who were involved in fully online instruction classrooms, they were not able to find such valuable opportunity during their instruction. Obviously, trainers of fully online instruction classrooms would suffer and

TABLE 2 | Overarching themes and coding instructions.

Mode of sport training delivery	Corresponding dimension of the CHAT framework	Sub-theme and coding instructions	Sample of coded text	
Fully online	Mediating artifacts	Technical facility and internet connection	Delivering online sports training requires me to turn on my webcam continuously. However, the internet connection in Vietnam is not stable at peak hours. I had to struggle a lot to reconnect whenever Zoom kicked me out.	
		Over-exposure to the screen	I was physically and mentally drained after spending the whole day in front of the computer planning my lesson and teaching. I had never trained sports online before, so I had to adapt all of my lesson plans. Sports are meant to make people more active, rather than gluing them to the screen and ruin their physical and mental health. I find my job meaningless when I have to go against my mojo with this mode of teaching.	
		Unfamiliarity with online teaching	I am overwhelmed as I have to prepare too many things so that I can deliver an online lesson. I am scared at times when I have to talk to the screen.	
	Outcome	Demotivated trainees	I started to feel cynical toward this job after a month. Teaching sports online is not motivating enough for the trainees to get beyond their limits.	
	Rules and regulations	Online regulations	Unlike face-to-face lessons, we cannot impose regulations to force students to train more strenuously. After all, they are at their home. Thus, I don't think the trainers like us are efficient enough in this kind of classroom.	
	Division of labor	Increased workload	Institutional roles	I have never taught a sports course online before, and thus, I had to work overnight on my lesson plans. I felt like all my sources of life had been squeezed out. Except for the delivery of the course, I did not notice any support from the center. They should have joined and helped us take care of the trainees in the online class. I doubt the effectiveness of the customer service team.
			Lack of interaction	I am under constant tension when nobody replies to me in the online training session. The whole lesson started to be "mentally damaging" because both the trainers and the trainees should have contributed equally to the content
Blended	Objects	Concerns about unanticipated accidents	Well, it is a little bit daunting at first. I have never taught a blended class before. I could not sleep well and usually felt tired after having a nightmare about my trainees getting injured as they practiced at home.	
	Division of labor	Unnamed extra work	Although the lesson was readily made, we had specifically asked to watch all the VR and 3D lessons first to see if they were safe enough, which also took us extra days to review. It was exhausting watching 100 of clips at a time	
	Community	Coronavirus anxiety	I always felt tense whenever I had to teach the face-to-face practical sessions. It is very dangerous. Sometimes my family asked me to quit teaching because they were afraid, although we have all been vaccinated.	
	Outcome	Post-COVID syndromes	Many trainees had post-COVID syndromes, so they were not fine enough. I felt worthless as I could not help them at times.	
	Subject	Post-COVID syndromes	I myself had been infected with COVID-19. I was exhausted when I had to come and teach in person.	

struggle with the recurrent challenges in online instruction. Such challenges and stress combined with lack of support from the leadership of the institute and inadequate supplies and equipment for online instruction would certainly lead to burnout and increase their burnout level.

Additionally, although the level of burnout among professional trainers who were involved in blended instruction

classrooms is much lower than those who were involved in fully online classes, such level of burnout again confirmed that online instruction is not suitable for practice in physical education and sports training unless it is made up with face-to-face instruction sessions where trainers can have real communication with the trainees to back up what was missed or unable to deliver in the online instruction sessions, especially those related to the distinct

values of physical education and sports training. Our study is in line with other studies which stated that blended learning and teaching might be suitable for various disciplines like nursing, dentistry, and math (Magtibay et al., 2017; Ndlovu and Mostert, 2018; Nijakowski et al., 2021). As our studies is amongst the few studies investigating trainers' burnout in a blended mode of physical education and sports training, it is possible that this mode can be implemented with more consideration of the next advancement in sports and physical training, especially with the aid of VR and 3D technologies, to reduce the unnecessary pressure and stress that the trainers suffer every day.

Underlying Reasons Causing the Discrepancies in Burnout levels Between Two Modes of Training Delivery

There are different sources yielding burnout among professional trainers of fully online and blended instruction classrooms (Maslach et al., 2001; Kania et al., 2009; Mazerolle et al., 2018). Whilst burnout among trainers of fully online classrooms resulted from the teaching methods and techniques, burnout in blended classrooms was produced as an outcome of post-COVID syndromes.

Specifically, analysis of quantitative data indicates that professional trainers experienced severe exhaustion and cynicism as well as having a low sense of performance accomplishment when they were delivering fully online lessons. These findings are further confirmed by qualitative data analysis which states that fully online instruction in physical education and sports brings about critical challenges and risks to both trainers and trainees. These challenges, as clarified by the trainers participating in this study, include demotivation in both teaching and learning due to lack of adequate resources for demonstrating distinct values and objectives of the lessons and restriction to trainers in giving feedback on the trainees' demonstration of physical movements. Additionally, according to these trainers, limitations in having adequate sports equipment for physical demonstration may lead to unexpected accidents in practice among trainees. In the traditional face-to-face classrooms, these accidents are certainly fixed and resolved with the trainers' help; however, such practice may not be completely done when the trainers and trainees are engaged in fully online instruction classrooms. In the meantime, when one of the distinct values and objectives of physical education and sports training is to raise trainees' awareness and develop their sports protocols which can be done through their frequent participation in sporting and physical activities (Laar et al., 2021); findings from the study show that these values and objectives seem not to be achieved due to trainees' lack of frequent participation in physical and sports activities. One of the obvious reasons is that the trainees are not well equipped with adequate supplies and facilities for their frequent sporting and physical practice at home and that some trainees may not have sufficient space at home for their practice. Such constraints not only demotivate the trainees in having frequent physical and sporting practices but also disable them to keep themselves healthy for effective sporting performance.

Analysis of both quantitative and qualitative data also reveals that long-term fully online instruction delivery produces inferior interaction between trainers and trainees, a huge workload for trainers, and a lack of confidence among trainers in physical education and sports training practice. These findings are similar to those of other studies examining the challenges in online instruction in physical education and sports training, as proposed by Deming et al. (2015), Limone and Toto (2018), Antonia and Pierpaolo (2019), and Jeong and So (2020). Overall, all professional trainers of this study believe that physical education and sports is a particular distinct subject area whose crucial objective is to keep the trainees healthy lifelong through the frequent and adequate practice of physical and sports activities, which can be done only in face-to-face instruction classrooms, rather than having both trainers and trainees fully stick themselves to the computer screen *via* Zoom platform.

Findings from this study indicate that when both trainers and trainees are not well-prepared for the fully online instruction lessons, especially essential conditions for delivering online lessons have not been provided, it is advised that fully online instruction classrooms in physical education and sports should be limited in Vietnam to avoid unexpected challenges and unnecessary pressure to trainers as well as risks in physical practice to trainees.

In sharp contrast, results of data analyses show that burnout among trainers of blended instruction classrooms was caused by post-Covid syndromes rather than those related to the conditions for delivering the online lessons. The trainers of blended instruction classrooms reported that their physical actions seem to be slower than before their infection of the Covid-19. Such post-Covid syndromes, such as frequent tiredness, depression, impaired sleep quality, breathlessness, muscle pain, and loss of concentration on work, were really burdened and disabled the trainers from having effective physical movements and demonstrations to students. Coming back to work after recovery from the infection, some trainers explained that they still faced severe fatigue and post-covid syndromes, which made them fail to return to their normal lives as well as to have the lessons delivered as effectively and efficiently as before. Significantly, although Vietnam has announced the new normal state across the country, results of qualitative data analysis indicate that the trainers of blended instruction classrooms face high pressure from their families objecting them to get back to face-to-face instruction due to the anxiety that they will get re-infected by the virus; this seems to be the most challenging source that causes burnout syndromes among trainers in addition to the post-COVID syndromes that they have suffered and struggled with. However, later during the course delivery, it is indicated by the findings of the study that the trainers' burnout syndromes become less severe when all of them are vaccinated with the third shot of vaccines.

Additionally, since physical education and sports training are traditionally instructed in face-to-face mode, most trainers were not completely confident in using digital technologies to enhance their instructional quality. However, as the trainers involved in blended instruction classrooms had 50% of their course length involved with face-to-face instruction, and the rest of the time

was saved for online lessons, as they indicated; such allocation of time, course structure development, and use of blended instruction platforms helped increase their confidence levels in teaching. Significantly, the trainers of blended classrooms emphasized that the utilization of both VR and 3D has critically reduced them from the pressure of delivering theoretical instruction to trainees since the trainees can review the target theories with the tutorials and applications provided. This view has been extensively confirmed by many studies about using VR and 3D in education, especially in physical education and sports training (Cook et al., 2019; Calabuig-Moreno et al., 2020; Liu and Pu, 2021). For example, Calabuig-Moreno et al. (2020) emphasize that the use of such technologies as VR and 3D helps reinforce trainees' learning and increase their motivation in learning motor skills and techniques while developing their offensive skills in physical and sporting practice. Similarly, Liu and Pu (2021) further stress that while 3D animation technologies enable trainers to simulate difficult and new physical movements and demonstrate a tactical process to students, they can help make up for weaknesses that can be found in the traditional face-to-face classroom instruction to improve the instructional quality. Particularly, 3D technologies can provide panoramic viewing angles and visual demonstration of the physical actions and movements while enhancing the controllability over the demonstration of technical action that is challenging for trainees to observe in the traditional demonstration methods (Liu and Pu, 2021).

Implications and Recommendations for Future Research

Findings from this study about professional trainers engaged in fully online and blended classroom instruction suggest the widespread integration of digital technologies in physical education and sports training in Vietnam while confirming the effectiveness of blended instruction in this particular area. The findings also imply that institutions need to have better preparations for the trainers to involve in this new and meaningful platform of teaching. In addition to having adequate resources for online instruction implementation, including sufficient supplies and facilities, for the trainers to effectively perform distinct values of the subject areas, these preparations include providing adequate medical and psychological consultancy services for both trainers and their families about how to protect the impact of COVID on people's mental and physical health and updated regulations from the government on safely getting back to new normal lives. Additionally, to enhance the online instructional quality, it is essential to have adequate trainings on using and creating VR/3D technologies in classrooms for physical education and sports trainers so that they can fully utilize the strengths of advanced technologies in improving the effectiveness and quality of the current teaching.

Whilst our study confirms the strengths of the CHAT framework in exploring factors causing burnout among professional trainers who were involved in both fully and blended online instruction classroom, especially in identifying the three dimensions of burnout (i.e., exhaustion, cynicism, and

low professional efficacy), the study still had two limitations. First, although the study was conducted with the participations of professional trainers coming from different gym centers, these gym centers belong to one gym center chain which may not fully represent the variety of professional trainer population across the country where there are different gym center chains in operation. Furthermore, this study was carried out right after the pandemic outbreak in Vietnam when the professional trainers were not provided with appropriate preparations for the online instruction, including trainings on using and creating VR and 3D technologies in teaching and learning. It is possible that the results of the study may be different when professional trainers are well prepared for online instruction and supported by their leaders and administrators in the implementation of this new mode.

With the above two limitations, the authors would suggest that future research which explore professional trainers' burnout from online instruction in Vietnam need to take into consideration the diversity of the target participant group so that they can fully represent the large population of the participants. This will help strengthen the results of the research results and generalize the results for future practice purposes. Additionally, since burnout usually comes from anxiety and stress which results from exhaustion and cynicism when one person experiences an overload at work (Maslach and Jackson, 1981; Zhu et al., 2018), the burnout level may be increased when the study is conducted in the crisis time of the pandemic in which the trainers are exhausted not only from the workload but also from related inconvenient conditions of teaching and learning. Therefore, we would strongly recommend that future research in professional trainers' burnout in online teaching and learning in Vietnam need to critically take into account the time for conducting the research to ensure that the results of the research are not affected by surrounding factors which are not really related to online instruction, such as the trainers' family or personal affairs and inconveniences caused by the emergency or crisis circumstances, unless the objectives of the research are aimed at exploring issues in the particular context of these circumstances.

CONCLUSION

Although online teaching and blended learning has long been available in many other disciplines, they have not received adequate scholarly attention in the field of physical education and sports training, especially in Vietnam. While many gym centers in Vietnam were struggling due to shut-down and lock-down policies, some of them started to consider the possibility of technology-based training courses. However, one of the most important aspects to consider when teaching sports online is whether trainers are susceptible to moments of burnout. This study was conducted in a gym center chain that has been offering two special formats of blended courses and fully online courses utilizing VR and 3D technologies. This study confirms that trainers are more burned out in fully online classes than in the blended mode of teaching. Also, when the nature of a fully online class is incompatible with long-term training, trainers' burnout in the blended class only resulted from post-COVID syndromes

and from some initial fear, unfamiliarity, and reduced gradually. Thus, this study expects blended learning may be developed as a long-term option of sports training delivery that helps reduce trainers' burnout and discourage the implementation of fully online courses due to its trend to increase trainers' burnout stage. Findings from this study has significantly contributed to the literature of physical education and sports trainers' burnout due to online instruction classes, which is still scarce in Vietnam. With the current limitations in this study, including the possible negative effects that COVID-19 may have on the trainee's burnout and the lack of participant diversity, we suggest that more research investigating stress and burnout of professional trainers in physical education and sports training in Vietnam should be conducted in normal time. Also, it is important to take into consideration the participants of different age and social group for conducting further research.

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DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by HQT Education Ltd.'s Board of Research Ethics. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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The remaining authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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APPENDIX

TABLE A1 | Sample course training syllabus—month 1.

Unit	Main topic	Type
1	Course overview, learning guidelines, and monitoring intensity	Synchronous
2	Dynamic warm-up patterns	Synchronous
3	SMART goal development for daily self-training	Asynchronous
4	Basic moves in Hatha yoga (Part 1)	Synchronous
5	Sport nutrient for muscle building and weight loss	Asynchronous
6	Cardio exercise with weight and jumping ropes	Synchronous
7	The meaning of <i>Om</i> in Yoga practice and breathing control	Asynchronous
8	Jamba Basic Dance—Cardio exercise	Synchronous
9	Injury prevention and first aid for an at-home workout	Asynchronous
10	Basic moves in Hatha yoga (Part 2)	Synchronous

This Table provides a sample syllabus for one-month training. In the first month, the trainers provide six synchronous training sessions while the four asynchronous training sessions are available on the training management system (TMS), which the trainees can access after each synchronous lesson. The same syllabus was applied for both types of training courses, namely fully online and blended. The syllabus of the first month is aimed to provide trainees with the fundamentals of workout exercises, basic nutrient and sports knowledge, and injury prevention.

TABLE A2 | Trainer's burnout taxonomy.

Dimension	Item number
Exhaustion	I.1 – I.8
Cynicism	II.1-II.8
low professional efficacy	III.1-III.4

As mentioned above, the questionnaire examines three dimensions of lecturer burnout, including exhaustion, cynicism, and low professional efficacy. Also, the questionnaire is based on the study by Maslach et al. (1986) and is adapted to fit the context of sports trainers using Delphi's methods and pilot test.