



PHYSICAL EDUCATION TUTORS PERCEPTIONS OF THE USE OF TECHNOLOGICAL TOOLS FOR REMOTE TEACHING DURING COVID-19

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Abstract

The emergence of the Covid-19 pandemic created the need for the use of dissimilar remote teaching methods and strategies in many subject areas including Physical Education (PE). While this was somewhat successful in developed countries, little is known about the use of technological tools to deliver PE lessons online in developing countries. This study examined the perceptions and experiences of colleges of education PE tutors in adopting technological tools for remote teaching during the Covid-19 pandemic. Semi-structured interviews were used to collect data from 12 tutors (4 females and 8 males) in Ghana. Content analysis was employed as the tool for the analysis of the data. Based on the results, the PE tutors perceived that accessibility was a major challenge to the successful teaching of practical PE lessons online. The tutors further posited that they were motivated to deliver practical lessons online because of the Covid-19 pandemic as they don't want students to be left idle. In furtherance, the participants recommended Transforming Teaching, Education and Learning and colleges' management for assisting them to participate in an online course and providing them with ICT support and data. Again, the participants agreed that they prefer face-to-face to online lessons as the latter do not promote socialisation, develop only the cognitive domain and even certificates acquired online are not given due recognition. It is recommended that theory lessons should be held online while face-to-face interaction is better for practical lessons in PE due to accessibility issues connected to poor internet connectivity and difficulty in performing some of the skills online.

Keywords: Online physical education, remote teaching, the community of enquiry model, technological tools.

INTRODUCTION

The advent of the Covid-19 pandemic created plentiful variations in the educational system (Sá & Serpa, 2020) which resulted in an adjustment to instructional disparities from the conventional method to a more remote approach online. Both theory and practical lessons were affected. Therefore, it was necessary to adjust the way Physical Education (PE) lessons were conducted (González-Calvo, Varea, & Martínez-Álvarez, 2020). The genesis of PE instructions required the subject to be taught socially, demanding learners to perform instructions based on what is seen and heard at specific places (Kirk, 2010). College of Education tutors in Ghana also migrated online for the first time with little/no knowledge on how to use technological tools to deliver effectively. Many of the tutors were given general information to teach without specific training in major areas resulting in unexplained challenges (Aboagye, 2020). PE tutors in colleges were among the groups who have been conducting lessons traditionally without prior experience in virtual teaching, specifically, practical lessons.

PE instructions are naturally considered practical in schools and therefore, one-on-one interaction and proximity are required. Notwithstanding, the advent of the Covid-19 pandemic created the need for compulsory online delivery in many places to promote social distancing and reduce the spread. This



generated a lot of challenges for the tutors especially in adaptation to the new learning environment. Gard and Pluim (2014) hypothesised that in the future, there will be a shift to digital PE in many places and this has been fulfilled by the emergence of the pandemic. However, Ghana is not renowned for using the technological approach to PE lessons delivery but rather a more conventional method that allows learners to engage in meaningful hand- on activities (National Council for Curriculum and Assessment, 2019). Presently, there are no clear-cut policies to direct how online practical lessons delivery should be conducted. This is an indication that individual tutors are adopting different strategies to deliver online. Again, studies conducted have examined the perception of PE teachers at primary and elementary schools in different parts of the world (e.g., Kim et al., 2021). However, little has been done on PE tutors at colleges of education. Therefore, this study top-up knowledge by examining the perceptions and experiences of colleges of education PE teachers in using technological tools for remote teaching during the Covid-19 pandemic. The main research problem was - What challenges do physical education teachers at colleges of education in Ghana face when using technological tools for remote teaching? The findings from this study will assist the Ministry of Education in Ghana on how to assist PE teachers in teaching practical lessons especially, how to effectively use technological tools in a remote approach.

Literature

Numerous studies have examined the impact of the Covid-19 pandemic on children's physical activity. For example, An (2020) in her study anticipated an increase in obesity among children, with substantial differences in race and gender, and recommended the need for public health intercessions. These were identified after she replicated a study to assess the effects of the closure of educational institutions and misplaced time for physical activity in PE. Again, findings from a short period study in the USA and China reported a decrease in PA activity during the period schools were closed down and subsequent staying at home by the children (Dunton, Do, & Wang, 2020; Xiang, Zhang, & Kuwahara, 2020). Arguably, this literature which identified the importance of consistent physical activity, recommends the public health requirement for an emphasis on physical activity for children during the Covid-19 pandemic. Considering this, it was eminent for PE tutors to adjust their pedagogical approaches to meet the basic health requirements of the populace especially, children.

The switch from the traditional approach to online delivery in the advent of the Covid-19 pandemic affected instruction delivery and learning. Many teachers adopted experimentation techniques in teaching remotely (Jeong & So, 2020). With PE as a demeaned area, the instructors are always excluded when it matters to design strategies to implement quality lessons without assistance (Richards et al., 2018). The situation became more compounded when the pandemic made it compulsory for them to move online. It is supposed that this condition isolated the teachers forcing them to make decisions influencing students learning results (Mercier et al., 2021). While some teachers made conscious efforts to continue with practical PE lessons, others stopped completely. This is an indication that the PE teachers require assistance in learning about how to effectively deliver in a more remote approach.

Some studies have been conducted on PE teachers' perceptions and experiences during the Covid-19 pandemic and how the subject has been taught in a more remote approach. In their study, Mercier, et al., (2021) explored the experiences of PE teachers with online technological tools amid the outbreak of the Covid-19 pandemic in the USA. Using a large sample size involving PE teachers in all the fifty states, the study reported exclusive limitations to deliver reasonable and effective isolated PE teaching. Varea, González-Calvo, and García-Monge (2020) examined the changes in the delivery of PE among preservice teachers in the advent of Covid-19 and identified that teachers are having difficulties in re-developing PE and that this has resulted in challenges such as distress and insecurity. Besides, the study identified a swing of pedagogical challenges. The participants found it ridiculous to understand why PE interactions could be successful without meeting the learners in one-on-one situations. Other findings identified from the study were challenges like experiences with digital technologies, which permitted specific starts and completions for PE interactions. Despite these studies, little is known about the challenges (experienced and perceived) PE tutors in colleges of education in Ghana face when using a remote approach.



Theoretical Background

The study is guided by the Community of Inquiry Model (CIM), which is adopted as a framework for the study and practice of online learning. According to Garrison (2007), this framework is influenced by the work of John Dewey and corresponds to constructivist approaches to learning. The framework consists of three core principles: classroom presence, social presence, and cognitive presence (Garrison, Anderson, & Archer, 2000). The combination of these three elements is relevant to enhanced learners' educational experience (Figure 1).

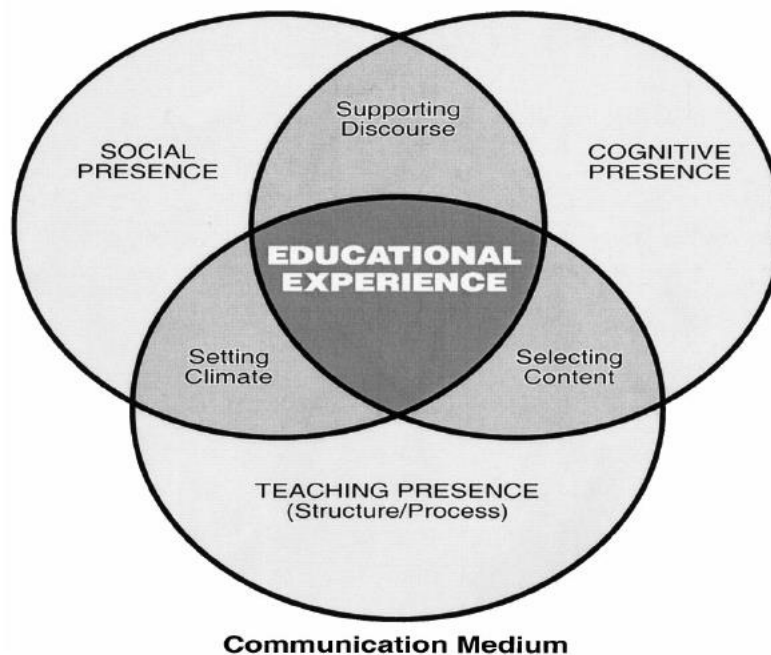


Figure 1. The community of inquiry model.

Cognitive presence refers to the extent to which learners in the research community can gain understanding through ongoing communication (Garrison et al., 2000). It is an important factor in intellectual discourse, an important element of critical thinking and learning (Kanuka & Garrison, 2004).

Social presence refers to "the ability of participants in the Community of Inquiry to project their characteristics into the community, thereby presenting themselves as "real people" (Garrison, Anderson, & Archer, 2001, p. 89). The interaction between the instructors and the learners, and between learners from diverse settings are significant issues because the level to which the individual perceives familiarity, proximity and their exact role in a relationship (Belderrain, 2006) result in social presence which represent the sense of togetherness with others and a sense of engagement with them.

The teaching presence is made up of two key components. The first component is the setting up of the educational experience, which comprises the selection, organisation and delivery of the course content (Lowenthal & Parscal, 2008) to occupy and stimulate students. The second component comprises facilitation to articulate eloquent and valuable knowledge (Garrison et al., 2000). During the instructional stage, teachers not only promote students' relations with materials and with their peers but also offer appropriate directives, experiences and responses to learners (Garrison et al., 2010). This theory was relevant to help determine if the three approaches were achieved in practical online PE lessons during the pandemic.

The overarching purpose of the study was to examine the perceptions and experiences of colleges of education PE tutors in adopting technological tools for remote teaching during the Covid-19 pandemic. The study was sub-divided into the following objectives:



1. To examine the perceptions of PE tutors at colleges of education in a remote teaching environment.
2. To determine the level of knowledge and skills of PE tutors in using technological tools for remote teaching.
3. To analyse what motivates PE tutors to participate in online lesson delivery.
4. To evaluate the behaviour and attitude of stakeholders (institutions, parents and students) during the remote teaching process.
5. To identify the type of preparations made by PE tutors to create a highly productive online teaching.
6. To critically analyse and evaluate the differences between online PE lesson delivery and face-to-face.

METHOD

Research Model

This study used a qualitative case study of enquiry to gather thorough information from the participants. Creswell (2007) confirmed that in qualitative research, the researcher is interested in obtaining in-depth information about an event, an activity, individual or process to define the situation naturally. This is important where the researcher is interested in acquiring detailed information and understanding of a social phenomenon and also, interested in finding answers to why, how and what questions (Ellinger, Watkins, & Marsick, 2005).

Data Collecting Tools

Semi-structured interviews were the main tool that served as data collection in the study. The interview questions were structured to receive open responses and to enable the participants to express their views (perceptions and experiences) on the research questions. The interviewees were provided with the opportunities to partially revise and edit the questions to enable them to express themselves well (Büyükoztürk et al., 2014; Sönmez & Alacapınar, 2014). The questions were based on six main themes perceptions of PE tutors in online teaching, PE tutors' knowledge and readiness for remote teaching, PE tutors' motivation for remote teaching, Behaviour and attitudes of stakeholders-institution, students and parents, PE tutors' preparations before online lessons and comparing face-to-face to online PE lesson delivery. The data collection item is displayed in Table 1

Table 1. The semi-structured interview questions

Questions	Main ideas
1. What are your perceptions about online remote teaching?	Perceptions of PE tutors in online teaching
2. What is your level of knowledge and skills in using Technological tools for remote teaching?	PE tutors' knowledge and readiness for remote teaching
3. What motivates you to take part in online lesson delivery?	PE tutors' motivation for remote teaching
4. What are the behaviours and attitudes of your institution and stakeholders like students and parents you work with for the remote learning process? To what extent have these attitudes and behaviours affected your satisfaction with the remote lesson delivery?	Behaviours and attitudes of stakeholders-institutions, students and parents
5. What kind of preparations do you conduct in order to create a highly productive lesson environment in remote physical education lessons?	PE tutors' preparations before online lessons
6. How would you rate the level of achievement of the student's target behaviors according to the face-to-face classroom environment? What are the plus or minus aspects? What aspects of Remote P.E. instructional delivery is the main reasons that make this difference?	Comparing face-to-face to online PE lessons delivery



When creating the interview form, the relevant literature was taken into account and these studies were considered. Items were submitted to experts for review and feedback was obtained to ensure the construct validity of the items on the interview form.

Study Group

The study used the Purposive sampling technique to reach the participants. In research of this nature, the intent was to acquire detailed information on the topic and therefore, require participants with in-depth knowledge (Buchanan, 2012). As Patton (1990, p.184) postulated, in qualitative studies' sample size is attained in agreement to the aim, what will be valuable and consistent; what can be done with the time and resources available to the researcher(s); that's the justification why there is no method for sample size in qualitative enquiry. Therefore, 12 PE tutors at colleges of education in Ghana who used technological tools for distance learning during the Covid-19 pandemic were selected because of their in-depth knowledge of the subject under study. Their ages aged between 35-50 years old, and they were all Ghanaians. The participants have teaching experiences of three to fifteen years as tutors at colleges of education in Ghana. The participants were asked to air their views on the use of technological tools to teach online both perceived and experienced. These tutors were teaching students studying for a degree in basic education. They lecture specific courses for students majoring in PE and general PE-related courses for all the students. The minimum educational qualification for the participants is a masters' degree with a doctorate as the highest qualification.

Data Analysis

Verbatim transcription of responses was done manually. In order to disguise the identities of the participants, code numbers were assigned to the names of the participants. Content analysis was used for data analysis. This analysis examines the content of the data, then groups the data into upper and lower classifications (Sönmez & Alacapınar, 2016). The codes were originally created and similar codes were merged to create categories. The coding and categorization of the data were done on several occasions by the researchers to ensure that no relevant information was leftover.

Validity and Reliability

Trustworthiness of the data was done through member checking where the participants were informed to review the interview transcripts and confirm if they represent what they actually wanted to say and provide additional thoughts or information (Lincoln & Guba, 1985). Eight of the participants representing 66.6% confirmed that the results represented what they wanted to say. They provided a few additions and subtractions.

Research Procedures

At the beginning of the academic year for the 2020/21 first semester, students at colleges of education in levels 200 and 300 were asked to study six weeks online and six weeks face-to-face. Therefore, all the tutors were expected to teach online including the PE tutors. This scenario created the need for the PE tutors to prepare adequately on how to use technological tools for this remote experience. They were expected to engage the students online and lecture them on practical aspects as well. This system continued as the introduction of degrees at the colleges created a shortage of accommodation compelling some students especially in levels 200 and 300 to rotate online and face-to-face.

The data collection was gathered based on 6 themes similar to the work of Orhan and Beyhan (2020) that were used to measure the perceptions and experiences of teachers on distance education. The themes were: perceptions of the PE teachers in using technological tools, PE tutors' readiness for remote teaching experience, PE tutors' motivation for remote teaching, behaviour and attitudes of stakeholders, PE tutors' preparation before online lessons and comparing online PE lessons to face-to-face. The semi-structured interviews conducted by the two researchers lasted 20-30 minutes and were audio-recorded. Each researcher interviewed six participants between June 2021 and October 2021 face-to-face. Before the main interview questions, broad questions were asked to determine the participants' number of years in the profession.



Ethical approval was obtained from the college of one of the researchers. The participants were made to sign consent letters before participating in the studies and pseudonyms were used to guarantee concealment of participants in writing the results. The pseudonyms used were T1, T2, T3, and T12.

FINDINGS and DISCUSSION

The first question of the interview was, to examine the perception of the PE tutors in the remote teaching experience and the responses and the analysis are displayed below in Table 2.

Table 2. Tutors perceptions of online PE lessons

Theme	Codes	Participants	Frequencies
Tutors Perceptions	Accessibility Issues	T2, T4, T5, T6, T7, T8, T11, T12	8
	Low Tutors Knowledge on Technology	T3, T8, T9, T10, T12	5
	Difficulty Demonstrating Certain Skills Online	T1, T2, T3, T8.	4
	Ways of Engaging Students	T5, T4, T6	3

Four different codes emerged from the analysis of Tutors' perceptions on online PE lessons delivery. “Accessibility issues, Low level of tutors knowledge on technology, difficulty in demonstrating certain skills online, ways of engaging the students”.

8 tutors have the perception that the delivery of online PE lessons is associated with accessibility issues. Some of the accessibility issues raised are as follows:

“Most of us, looking at our area, we cover from the middle belt of Ghana to the north, so we can look at the village nature which our students come to school with and the kind of phones they use.”. [T2]. “Sometimes the network is not reliable, you may have the smartphone and the data alright but the network wasn’t reliable”. [T7] “Online teaching is very difficult in our part of the world; teaching is not effective as many students will not even come online” [T11].

A low level of tutors’ knowledge on technology was the perception of the PE tutors in online lesson delivery. The following were statements made to support this assertion; “It wasn’t easy and it has still not been easy because we are still teaching them online”. [T8] reported “I lack the practical skills, what I was doing was that I engage the ICT department and fortunately we have lab ICT assistants, they helped me. In fact, when I am supposed to be online, I arrange for them to come, they set up the lab for me I just teach, they record everything audio, video whatever and after that, they will edit and they will help me put it on the platform and the internet so, that is how we managed the situation”.

Again, the PE tutors perceived that there were difficulties in demonstrating certain skills online. This code is very relevant as internet issues and technological knowledge could be contributing factors. A tutor posited “Teaching practical PE using the remote approach has been difficult because the skill that you would have wanted your students to exhibit on the face to face, you only have to show them how it is done by describing it which in this case is difficult to assess how they will also participate or exhibit that particular skill using the remote approach” [T1]. “How can I let the students perform underarm serve online? How can I assist them with the basic stands online, in fact, practical lesson delivery is not effective in an online lesson delivery”? [T8].

Lastly, tutors perceived online learning to be a way of engaging the students. To augment this code, tutors, mention the following statements; [T5] also asserted, “although the online teaching was tedious, it was a way of letting students do something during the pandemic era”, many of our students were at home idle so the online teaching was to engage the students in some ways” [T6].

On the level of knowledge and skills in using ICT and making use of P.E. technologies tutors expressed how experienced they were in numerous ways. This is presented in Table 3.

**Table 3.** PE tutors knowledge and readiness for remote teaching

Theme	Codes	Participants	Frequencies
PE Tutors Readiness for Remote Teaching	Colleges and T-TEL Organised Workshops	T1, T5, T6, T8, T9, T11, T12	7
	Little Experience in Online Teaching	T2, T3, T4, T6, T8	5
	Network Issues	T4, T6, T8, T10.	4

Based on the responses from Table 3, and Table 7 of the tutors confirmed that Transforming Teaching, Education and Learning (T-TEL) in collaboration with the colleges organised a workshop for them to prepare them for the online teaching experience. However, 5 of the tutors maintained that even after the workshop, they have little experience teaching online while 4 of the tutors asserted that their knowledge and readiness were affected by network issues making the remote experience tutor-centered. The following were some of the direct quotes from the tutors' responses.

“Prior to that, I had the opportunity to receive training online. Training programme organised by T-TEL that was a brief one though but it gave me the necessary skills and in-depth knowledge on how to organise online teaching lessons” [T1].

“For what I know now I cannot really say whether that is the best approach to be using, I think that the knowledge keeps on evolving so, emmm just as it is advancing then we also have to advance in our ideas and knowledge in it but so happened that we are still using the little experience and the old approach that we know.” [T4].

“Hmmm because during the online teaching we were not interacting face to face with the students, mostly we record the..... what we want them to know and then do the videos and kinds of stuff. I think most of them were complaining that they couldn't get access due to internet problems, where they are coming from and then others too were complaining they couldn't understand the concepts with you recording it and putting it on the platform unless the students get access to it and decide to ask questions, you wouldn't know whether they understood it or not so that is something I think we have to look out to.” [T10].

On what motivated the PE tutors to adopt the remote teaching approach, the main issues raised are presented below.

Table 4. PE tutors motivation for remote teaching

Theme	Codes	Participants	Frequencies
PE Tutors Motivation for Remote Teaching	Because of Covid-19	T2, T3, T4, T5, T6, T8, T10, T11,	8
	Students were Idle	T1, T2, T5, T4, T6, T7, T8	7
	Opportunity to Upgrade Online Teaching Skills	T3, T5, T6, T8, T12.	5

The tutors were asked to mention what motivated them to teach online and from Table 4, and Table 8 tutors claimed that it was the coronavirus pandemic that gingered them to engage in online lesson delivery. Again, 7 of the tutors confirmed that they found that many of the students were idle at home during the pandemic era. Considering this, they were motivated to teach because they don't want the student to be engaged. Lastly, tutors were motivated to teach online because they considered it as an opportunity to upgrade their online teaching and learning experience. Below were some of the direct quotes from the interviews to support the findings.

“Because that is the norm because of the Covid-19 pandemic” [T3]. “One I will say it is a requirement by my college that I am supposed to teach online because of the Covid-19” [T8].



“Apart from that, the students were at home, schools were closed down and yet they have to write exams, so, we’re supposed to do whatever we can to help them and thinking about your students, as a teacher you know your students are your everything when they do well, you are happy and that alone was another motivation to help them so that they will do well in the exams, because whiles at home and they were not being taught, and they preparing to come and write exams was a motivation to teach.” [T4].
“Another thing was, it was an opportunity to upgrade ourselves because we are in the era of technology so, if there is an opportunity to upgrade ourselves, we see that to be a motivating factor” [T5].

For a situation like the Covid-19 pandemic, the role of stakeholders is very significant to promote remote teaching Table 5 gives details about their roles during the pandemic.

Table 5. College, parents, students and T-TEL behaviours and attitudes

Theme	Codes	Participants	Frequencies
Behaviours and Attitudes of Stakeholders (College)	Supplied Data	T1, T2, T3, T5, T6, T8, T11, T12	8
	Supplied Laptops and Tablets	T1, T2, T6, T7, T8, T10	6
	Trained Tutors for Online Teaching	T3, T4, T6, T8, T12	5
	Made ICT Labs Available	T4, T5, T7, T10	4
Behaviours and Attitudes of Stakeholders (Parents)	Bought Smartphones and Tablets	T2, T3, T4, T6, T8, T10	6
	Provided Data	T1, T4, T7, T11, T12	5
Behaviours and Attitudes of Stakeholders (Students)	Prefer Assynchronous Learning	T2, T3, T4, T5, T6, T7, T8, T10	8
	Bought Data and Smartphones	T1, T2, T3, T6, T12	5
Behaviours and Attitudes of Stakeholders (T-TEL)	Organised Online Courses for Tutors	T1, T2, T3, T4, T5, T6, T7, T8, T9, T10	9
	Assisted Students to get Smartphones	T4, T5, T6, T11, T12	5

Concerning the college, 8 participants mentioned that they were provided with data to assist in the whole process. However, 3 out of the 8 disclosed that they were provided with data only at the beginning. 2 of the 6 participants who asserted that the colleges provided laptops or tablets mentioned that the management was supposed to provide laptops for tutors who don’t have one. One of them confirmed that the tablets promised by the college are yet to be provided. 5 tutors explained that their institutions trained them for the remote experience while 4 of the tutors asserted that the institution made the ICT lab available for them. With parents, 2 of the tutors stated that they did not have any issues with the parents while 6 tutors confirmed that parents supported their wards with smartphones and laptops. Again, 5 tutors said that parents supported their wards with data to join online lessons. The attitude of the students was surprising, 8 tutors observed and confirmed that many of the students joined the online learning asynchronously. Lastly, 9 tutors mentioned T-TEL as stakeholders assisted tutors to attend online courses 5 participants acknowledge them for helping students to get smartphones that were used for remote learning. Below are some of the statements by participants about stakeholders:

“Apart from the services the computer and everything need to also be in place and good shape for us to also use and through that I think the college did well by supplying every tutor a tablet to enhance our work, so with that, I think college did their best it was a challenge for them and they lived up to the expectation”. [T2].

“Now to other stakeholders, parents the online teaching came to stay and that was the means students at home were supposed to have their lessons, so most of them depend on their parents, so, they have to force parents to get them smartphones and you know it is not easy, money is not easy to come by especially during the era of Covid most parents work were in suspense so, it wasn’t easy and some parents will call to find out, this is what our wards are saying is it true? So, parents also, have their challenges”. [T4].

“T-TEL also, came in and they did so well, as a stakeholder, they contributed their part, they saw the need from the report coming from colleges that students don’t have a smartphone, they arranged and



ordered smartphones from the UK at very affordable prices for students. So, T-TEL as a stakeholder concerning the online teaching this is where I can commend them for the good work done”. [T5]

“Okay, for the students the only thing was that they don’t come online. We have what we call synchronous and asynchronous. Some people will be online to learn. Others will not come, later then they come and read”. [T6].

Before tutors go online to deliver, there was the need for them to prepare adequately. This was to enable them to teach effectively. The views of the teachers are presented in Table 6.

Table 6. Tutors preparation before online lessons

Theme	Codes	Participants	Frequencies
Preparation before Online Lessons	Preparing Videos and Audios	T1, T4, T3, T6, T8, T10, T11	7
	Preparing Powerpoints	T1, T2, T3, T4, T5, T6, T12	7
	Personal Research to Get Documents Ready	T3, T4, T5, T6, T7, T8	6
	Arrangement with the Lab crew	T2, T8, T9, T10, T11, T12	6
	Get Data on Phones	T4, T5, T6, T12	4

From the Table 6, preparing videos and audios and presenting them online as well as preparing PowerPoints were the most advanced preparations made by the PE tutors before the online delivery. Tutors also mentioned that they have to conduct personal research to get other documents ready before the lessons (6). Again 6 tutors asserted that they have to arrange with the lab crew to set up the place for them while 4 tutors argued that before the lessons one of the preparations made is getting data on their phones. Some of the statements made by the tutors can be found below:

“Okay with the preparation, when I have to do my studies, I select the topics and the areas that I will be teaching and then the content and just like every tutor or teacher does before going to class, you have to also, study and be equipped yourself with the content so that there will be mastery so that you can really impart concerning students understanding”. [T2].

“Like I even said right now, before the lesson I do audio. I remind them that in the next 30 minutes or 1 hour we will start a lesson. Tell a friend to tell a friend is one. And one thing I make the lesson more practical. You call people who are online to respond. And when it is an activity, I the teacher, I perform the activity through a video and I send it to the platform”. [T8].

“Besides, you need to make sure that when you are going to have the recorded version, is conducive enough so you prepare the place and, in my case, because I was that good in ICT, I have pre-arranged with the lab crew and for them to also prepare, sometimes they give me time that they would be free, so my lesson may not be necessarily come on at the regular schedule because it is a collaboration when they can help or feel free to help me”. [T6].

“And sometimes, personally too you have to get your data, you make sure you have enough data on your phones and other things, so, these are some of the preparations we put in place to have effective lessons”. [T5].

Finally, tutors were provided with the opportunity to compare the online teaching environment to the face-to-face lesson delivery. Table 7 showed the themes and codes generated.

Based on the results from Table 7, many of the tutors made statements that likened the face-to-face learning approach to the online method of delivery. The first two codes supported this (8) and (9). However, it was surprising to note that 6 tutors mentioned that online certificates are not given the needed recognition like the face-to-face approach in their part of the world. Also, 4 tutors were of the view that the face to face improves socialisation while four other tutors argued that online learning improves only the cognitive domain to the neglect of the other domains. Some of the expressions made are found below:

**Table 7.** Comparing face-to-face to online PE lesson delivery

Theme	Codes	Participants	Frequencies
Comparing Online PE Lessons to Face to Face	Face to Face is Better	T2, T3, T4, T5, T6, T8, T9, T11	8
	There Should be Online but Practical Should be Face to Face	T1, T2, T3, T4, T5, T6, T7, T8, T12	9
	Non-Credibility of Online Certificates	T5, T6, T4, T7, T8, T11	6
	Face to Face Improve Socialisation	T1, T2, T4, T5	4
	Online learning develop Only Cognitive Domain	T6, T7, T9, T12	4

“Now looking at the difference that we can make, as far as face to face and online is concerned, obviously, traditionally, most of us would have loved the face to face, because this is the student and as the name goes, face to face, the student is there, you look at the student face present the student sees everything teacher is doing and it makes learning lively and lovely and even the facial expressions of your students will signal you something whether things are going on well or not and students are there any question they don’t understand you can ask”. [T8].

“Getting students to participate in the remote lesson within this period, I think that the best approach would have been to, for the practical lessons, I think we should wait for the students to come so that we organise them in groups, not necessarily meeting the whole class at once because of the social distancing we have been asked to practice. Organising students will be good so that we teach them the skill direct”. [T8].

“Mmm in my earlier submission I said that PE aims to help students to achieve the physical aspect, emotional, then the cognitive and the social but looking at the remote approach of teaching, I think students are getting only the cognitive aspects. They don’t get social and the physical achievement I don’t think they will get them and then affective, how they relate with others too”. [T9].

“Because traditionally, even the main universities, even when you present a certificate and you studied online, they will not accept it. But now because of Covid, everybody is also trying to move here and there to accept that there is a way that we can also teach or earn a certificate without the face-to-face interaction”. [T11].

DISCUSSION, CONCLUSION and SUGGESTIONS

While there is evidence of studies on PE teachers' experience and perception at the primary and elementary schools during the Covid-19 pandemic, little is done on the same topic at colleges of education. Therefore, to fill this gap, the current study examined the perceptions and experiences of the P.E. tutors at colleges of education in using technological tools for remote teaching during the Covid-19 pandemic. The results of this study support Varea et al., (2020) who confirmed that PE teachers face challenges with digital technologies. The findings from this study showed that PE tutors have accessibility issues and a low level of knowledge on technology which affected their ability to demonstrate certain skills online. Words such as village nature, not reliable and wasn’t reliable further explain that tutors encountered network and accessibility issues. According to Aboagye et al., (2020), accessibility was the most important factor affecting students at tertiary institutions in Ghana in their quest to transition online from a more conventional approach. Again, Aboagye (2020) contended that network issues which encompass unstable internet connectivity and difficulty in students joining online interactions were challenges facing tutors in a smooth transition online. These studies were conducted in a developing country. Notwithstanding, a similar study in a developed country by Muilenberg and Berg (2005) did not identify any issues with cost and internet accessibility. This indicates that accessibility issues are challenges confined to developing countries. Ahmed and Nwagwu (2006) supported this finding with the claim that telecommunications, ICT policies and human resource development are relevant challenges confronting developing countries.



Regarding the tutors' low-level technological knowledge, Bodsworth and Goodyear (2017) confirmed that inadequate experience with online technology generates the negative perception of PE teachers in their quest to integrate and use them in their lesson deliveries. Kim et al. (2021) propounded that the lack of technological knowledge and experience was an important barrier affecting PE tutors to transition from face to online amid the coronavirus pandemic. Krause and Lynch (2018), postulated that despite numerous technological knowledge and skills needed in online lesson delivery, knowledge on the basic technology is not adequate for PE teachers to successfully conduct online classes. Therefore, PE tutors should be able to know how to use various technological tools to enable them to teach effectively online. This has been supported by Gök's (2015) assertion that educators should have knowledge and skills essential to conduct more effective remote learning. Mercier et al. (2021) identified similar unique challenges and recommended that there should be continued support for physical education teachers through professional development sessions and additional resources, particularly in groups where inequalities have been identified, as teachers prepare to set students on a new path to advancement to guide students' learning in PE.

The responses from the participants in this study indicate that workshops were organised by the colleges and T-TEL to prepare them on how to use technological tools for online delivery despite tutors complaining of little experience in online teaching and network challenges. The organisation of workshops and seminars prepares teachers for a new experience and changes their behaviour in a way that led to improvement in the performance of learners (Harwell, 2003). It could be argued that despite the organisation of such courses the whole experience was something new to the tutors as they have no prior experience with online lesson delivery. Some of the tutors were of the view that they don't even know whether they were adopting the best strategies during the online experience while others confirmed that the workshop gave them some relevant in-depth knowledge before the whole experience.

On what motivated tutors to teach online, the majority of the participants confirmed that it was the Covid-19 pandemic that led them to accept the whole process. It is an undeniable fact that the advent of the pandemic made many institutions adopt online lesson delivery. This was confirmed by Sá and Serpa (2020) who posited that the advent of the Covid-19 pandemic created plentiful variations in the educational system which resulted in an adjustment to instructional disparities from the conventional method to a more remote approach online. Therefore, it seems that tutors do not have any option other than to engage the students online. Another issue seems to stem from the fact that the students were idle and the only way to assist engage them during the whole process was to adopt the online approach. A handful of the tutors also found the adoption of remote lesson delivery as an opportunity to upgrade their online knowledge. Although not the main intent some of the tutors admitted that their online knowledge improved considerably.

On the role of the stakeholders-college, parents, students and T-TEL. This study found that they contributed diversely to enhance the whole remote experience of the tutors. Bolliger and Wasilik (2009) characterised possible factors that influence teachers' satisfaction in online learning environments as students, teachers and institutional factors. In the current research, tutors mentioned that the colleges supported them with data, laptops, made ICT labs available and organised workshops for them. However, Ohan and Beyhan (2020) found in contrast that teachers had no idea of the type of support provided by their institutions. On the part of the students, it was found that many of them prefer to learn asynchronously, meaning they were not participating in the synchronous lessons. One of the possible reasons could be that the students were not familiar with the whole online learning process and do not possess the necessary capabilities for online learning affected their participation (Johnson, 2008). The role of the parents was not directly related to the tutors but it seems they assisted their wards to get data and smartphones in the whole process. T-TEL assisted students to get smartphones at a reasonable price to participate in remote learning. It can be concluded that most of the tutors benefited directly from their colleges despite students' unwillingness to join the online sessions.

On preparation made before online PE delivery, the majority of the tutors prepare adequately before the online lessons. Some of them stated that preparations made were videos and audios, PowerPoints,



personal readings to get enough information for the lecture, arranging with the ICT members and getting data on phones. This means that the number of tutors who designed learning materials was many with both new and already prepared. The key factor could be that most of the tutors complained they don't have enough technological teaching experience and therefore, wanted to ensure effective delivery of the lessons. In contrast, Ohan and Beyhan (2020) confirmed that the number of distance education teachers who prepare before lessons was not considerable. Lloyd et al., (2012) opined that inadequate teaching experience in remote teaching and a change in the pedagogical approach compelled teachers to design effective teaching methods. It was not surprising that some of the tutors liaised with the ICT staff before the lectures to get technological support. This can improve the performance of the tutors and minimise frustrations and negative thoughts (Seaman, 2009).

On comparing the face to face to remote teaching, more than half of the tutors confirmed that the conventional method is far better than the online teaching in terms of practical PE lessons. Again, many of the tutors confirmed that there should be online for the theory but the practical lesson should be conducted face to face. Tutors also opined that online teaching does not promote socialisation and further develops the only cognitive domain. This contrasts with the Community of Inquiry Model (CIM) which posits that three key tenets are needed to enhance learning-teaching presence, social presence and cognitive presence (Garrison et al., 2000). In online interactions, only the cognitive aspects are enhanced neglecting the teaching presence and the socialisation. When tutors make videos and post them online, a student can encounter difficulties in performing these activities which the tutor will not be available to offer coaching points. Facial expressions that teachers at times use to determine whether students have understood particular lessons are lost in an online environment. McLean (2006) concurs that the absence of direct response and the absence of one-on-one communication in an online environment is worrisome to many teachers resulting in a decline in their interest. Kim et al (2021) in their study proposed that all the PE teachers look forward to the face-to-face approach in teaching the course because they missed interactions and in-person relationships with their students. The perception that certificates awarded online are not regarded by traditional universities and other institutions in our part of the world concludes that tutors prefer the conventional method to the remote approach not forgetting PE lessons which are more practical and demands an in-person relationship.

Conclusion and Suggestions

In conclusion, the findings of this study showed that the educators who participated in the study had accessibility issues arising from poor internet connectivity and were not prepared for the whole remote teaching. The participants maintained that they were motivated by the Covid-19 pandemic which made it a norm for them to transition online. Improving the network systems in institutions and the country at large can assist in delivering effective remote teaching.

Again, despite courses organised by the colleges and other stakeholders to prepare them for the online experience, most of the educators who participated in the study lack technological knowledge and have issues in presenting successful lessons online. At times, some of the tutors have to rely on the ICT personnel in their colleges for effective delivery. Therefore, more workshops and seminars should be organised for PE teachers on how to teach the course online.

Besides the participants claimed that they prefer the traditional face-to-face approach as the online lessons promote only the cognitive domain and did not provide opportunities for socialisation. The non-credibility of online certificates also, confirmed that students who did most of their courses online will encounter challenges in getting jobs and will not be given the due accreditation.

This piece suggests to practitioners that classroom teaching should be combined with online learning for all courses, both theoretical and practical. This offers teachers the opportunity to gain experience and become familiar with the use of both approaches. Again, the study suggests that stakeholders provide guidance on how to approach the essential components of physical education in the online environment.



For researchers, the study highlighted the need to examine teachers teaching at different levels and in different geographic locations to determine the nature of the challenges encountered when using remote approaches for hands-on teaching. This study has identified approaches that differ from studies conducted at other levels and in other parts of the world.

Limitations

The study did not involve any Physical Education lecturer at the universities offering the course as a major but rather only tutors at colleges of education. Again, senior high school PE teachers were not contacted to express their views on how they were teaching practical lessons during the pandemic. Therefore, future studies should use a quantitative strategy to capture PE teachers at all levels in the country.

Ethics and Conflict of Interest

The authors acted ethically during data collection and all other phases of the research process. We would also like to thank the tutors who dedicated their time to participate in the study during this pandemic period. The authors declared that there was no conflict of interest between them.

REFERENCES

- Aboagye, E., Yawson, J. A., & Appiah, K. N. (2021). Covid-19 and E-learning: The challenges of students in tertiary institutions. *Social Education Research*, 2(1), 1-8. DOI: <https://doi.org/10.37256/ser.212021422>
- Aboagye, E. (2020). Transitioning from face-to-face to online instruction in the Covid-19 era: Challenges of tutors at colleges of education in Ghana. *Social Education Research*, 2(1), 9-19. DOI: <https://doi.org/10.37256/ser.212021545>
- Ahmed, A., & Nwagwu, W. E. (2006). Challenges and opportunities of e-learning networks in Africa. *Development*, 49(2), 86-92.
- An, R. (2020). Projecting the impact of the coronavirus disease-2019 pandemic on childhood obesity in the United States: A microsimulation model. *Journal of Sport and Health Sciences*, 9(4), 302-312.
- Belderrain, Y. (2006). Distance education trends: Integrating new technologies to foster student interaction and collaboration. *Distance Education*, 27(2), 139-154.
- Bodsworth, H., & Goodyear, V. A. (2017). Barriers and facilitators to using digital technologies in the cooperative learning model in physical education. *Physical Education and Sport Pedagogy*, 22(6), 563-579.
- Bolliger, D. U., & Wasilik, O. (2009). Factors influencing faculty satisfaction with online teaching and learning in higher education. *Distance Education*, 30(1), 103-116.
- Buchanan, D. A. (2012). *Case studies in organizational research*. In: Qualitative Organizational Research: Core Methods and Current Challenges, 5, 351-370. Chapter DOI: <https://dx.doi.org/10.4135/9781526435620.n20>
- Büyüköztürk, Ş., Çakmak, E. K., Akgün, O. E., Karadeniz, Ş., & Demirel, F. (2014). *Bilimsel araştırma yöntemleri*. [Scientific research methods]. Ankara: Pegem Publishing.
- Creswell, W. J. (2007). *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks, CA: Sage Publications.
- Dunton, G. F., Do, B., & Wang, S. D. (2020). Early effects of the Covid19 pandemic on physical activity and sedentary behavior in children living in the U.S. *BMC Public Health*, 20, 1351. <https://doi.org/10.1186/s12889-020-09429-3>
- Ellinger, A. D., Watkins, K. E., & Marsick, V. J. (2005). *Case study research methods*. In, R. A. Swanson & E. F. Holton (Eds.), *Research in organizations: Foundations and methods of inquiry*, Berrett-Koehler Publishers, 327-350.
- Gard, M., & Pluim, C. (2014). *Schools and public health: Past, present, future*. Lanham, MD: Lexington Books.
- Garrison, D. R. (2007). Online community of inquiry review: Social, cognitive, and teaching presence issues. *Journal of Asynchronous Learning Networks*, 11(1), 61-72.
- Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking and computer conferencing: A model and tool to assess cognitive presence. *American Journal of Distance Education*, 15(1), 7-23. <https://doi.org/10.1080/08923640109527071>
- Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2-3), 87-105.



- Garrison, D. R., Cleveland-Innes, M., & Fung, T. S. (2010). Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework. *The Internet and Higher Education*, 13, 31-36.
- Gök, T. (2015). The Evaluations of the College Students' Perceptions on Distance Education from the Point of the Technical and Educational Factors. *Turkish Online Journal of Distance Education*, 16(2), 84-93.
- González-Calvo, G., Varea, V., & Martínez-Álvarez, L. (2020). “‘I Feel, Therefore I am’: Unpacking Preservice Physical Education Teachers’ Emotions.” *Sport, Education and Society*, 25(5), 543-555. doi:10.1080/13573322.2019.1620202.
- Harwell, S. H. (2003). *Teacher professional development: It's not an event, it's a process*. Published and distributed by CORD
- Jeong, H. C., & So, W. Y. (2020). Difficulties of online physical education classes in middle and high school and an efficient operation plan to address them. *International Journal of Environmental Research and Public Health*, 17(19), 7279, 1-12.
- Johnson, A. E. (2008). A nursing faculty's transition to teaching online. *Nursing Education Perspectives*, 29(1), 17-22.
- Kanuka, H., & Garrison, D. R. (2004). Cognitive presence in online learning. *Journal of Computing in Higher Education*, 15(2), 21-39.
- Kim, M., Yu, H., Park, C. W., Ha, T., & Baek, J. H. (2021). Physical education teachers' online teaching experiences and perceptions during the Covid-19 pandemic. *Journal of Physical Education and Sport*, 21, 2049-2056.
- Kirk, D. (2010). *Physical education futures*. New York: Routledge.
- Krause, J. M., & Lynch, B. M. (2018). Faculty and student perspectives of and experiences with TPACK in PETE. *Curriculum Studies in Health and Physical Education*, 9(1), 58-75.
- Lincoln, Y. S., & Guba, E. G. (1985). Case reporting, member checking, and auditing. *Naturalistic Inquiry*, 357, 10-23.
- Lloyd, S. A., Byrne, M. M., & McCoy, T. S. (2012). Faculty-perceived barriers of online education. *Journal of Online Learning and Teaching*, 8(1), 1-12.
- Lowenthal, P. R., & Parscal, T. (2008). Teaching presence. *The Learning Curve*, 3(4), 1-2.
- McLean, J. (2006). Forgotten faculty: Stress and job satisfaction among distance educators. *Online Journal of Distance Learning Administration*, 9(2), 1-6.
- Mercier, K., Centeio, E., Garn, A., Erwin, H., Marttinen, R., & Foley, J. (2021). Physical education teachers' experiences with remote instruction during the initial phase of the Covid-19 pandemic. *Journal of Teaching in Physical Education*, 40(2), 337-342.
- Muilenburg, L. Y., & Berge, Z. L. (2005). Student barriers to online learning: A factor analytic study. *Distance education*, 26(1), 29-48.
- National Council for Curriculum and Assessment (2019). *Ministry of Education*, Accra.
- Orhan, G., & Beyhan, Ö. (2020). Teachers' perceptions and teaching experiences on distance education through synchronous video conferencing during Covid-19 pandemic. *Social Sciences and Education Research Review*, 7(1), 8-44.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods*. SAGE Publications, inc.
- Richards, K. A. R., Gaudreault, K. L., Starck, J. R., & Woods, A. M. (2018). Physical education teachers' perceptions of perceived mattering and marginalization. *Physical Education and Sport Pedagogy*, 23(4), 445-459.
- Sá, M. J., & Serpa, S. (2020). The global crisis brought about by SARS-CoV-2 and its impacts on education: An overview of the Portuguese panorama. *Science Insights Education Frontiers*, 5(2), 525-530.
- Seaman, J. (2009). Online learning as a strategic asset. Volume II: The Paradox of Faculty Voices-Views and Experiences with Online Learning. Results of a National Faculty Survey, Part of the Online Education Benchmarking Study Conducted by the APLU-Sloan National Commission on Online Learning. Association of Public and Land-Grant Universities.
- Sönmez, V., & Alacapınar, F. (2014). *Örneklendirilmiş bilimsel araştırma metotları* (4. Baskı) [Illustrated methods of scientific research (4th Ed.)], Ankara: Anı publishing.
- Varea, V., González-Calvo, G., & Garcia-Monge, A. (2020). Exploring the changes of physical education in the age of Covid-19. *Physical Education and Sport Pedagogy*, 27(1), 32-42.
- Xiang, M., Zhang, Z., & Kuwahara, K. (2020). Impact of Covid-19 pandemic on children and adolescents' lifestyle behavior larger than expected. *Progress in Cardiovascular Disease*, 63(4), 531-532.