

WHAT DID PHYSICAL EDUCATION TEACHERS LEARN FROM THE TECHNOLOGICAL DISRUPTION IN THEIR CLASSES? CHALLENGES AND UNCERTAINTIES ABOUT TECHNOLOGY USE AFTER THE PANDEMIC

O QUE OS PROFESSORES DE EDUCAÇÃO FÍSICA APRENDERAM COM A DISRUPÇÃO TECNOLÓGICA EM SUAS AULAS? DESAFIOS E INCERTEZAS SOBRE O USO DA TECNOLOGIA APÓS A PANDEMIA 

¿QUÉ APRENDIERON LOS PROFESORES DE EDUCACIÓN FÍSICA ANTE LA DISRUPCIÓN TECNOLÓGICA EN SUS CLASES? DESAFÍOS E INCERTIDUMBRES SOBRE EL USO DE LA TECNOLOGÍA DESPUÉS DE LA PANDEMIA 

 <https://doi.org/10.22456/1982-8918.144332>

 **Allyson Carvalho Araújo*** <allyssoncarvalho@hotmail.com>

 **Ashley Casey**** <a.j.b.casey@lboro.ac.uk>

* Universidade Federal do Rio Grande do Norte (UFRN). Natal, RN, Brazil.

** Loughborough University. Loughborough, Leicestershire, United Kingdom.

Abstract: The pandemic caused global disruptions to in-person teaching and led to the unplanned adoption of digital technology. This article explores the challenges, fears, and uncertainties faced by PE teachers during the pandemic and seeks to understand whether these experiences encouraged them to consider using technology post-pandemic. Data were collected through a survey of 203 Brazilian and British PE teachers who taught PE classes before, during, and after the pandemic. The findings indicated that teachers changed their teaching during the pandemic. They reported concerns related to technology use. However, they stated that online communities contributed to their professional development during COVID. Analysis showed that Brazilian teachers were more likely than UK teachers to continue using technology post-pandemic. We conclude that teacher-specific experience and local context may determine what the new post-pandemic “normal” of PE looks like and how technology could be integrated.

Keywords: Physical Education. COVID-19. Physical distancing. Technology

Received on: Nov. 11, 2024
Approved on: Feb. 11, 2025
Published in: Aug. 04, 2025



This is an article published in open access under the Creative Commons Attribution 4.0 (CC BY 4.0)

1 INTRODUCTION

Physical Education (PE) has been historically understood as an area that is both socially constructed (i.e. “defined by what is said, done, and written in its name” (Kirk, 2010, p. 1) and resistant to pedagogical change (Kirk, 1992, 2010). That said and bearing in mind that the outcomes of Physical Education have traditionally focused on decontextualised or sport-based activities (Quennerstedt, 2019) it is understandable how resistant PE has become to change. With almost a century and a half of history, coupled with practices that have shaped PE as a sport-based subject, it is hard to say something new, do something different, or write something that meaningfully alters this dominant way of doing PE.

In his exploration of possible Physical Education futures, Kirk (2010) affirms that it is not possible to understand PE as a subject without engaging in a historical analysis. In his illustration, inspired by Denning (1993), Kirk suggests that our lives can be visualized as a double helix of past and present intertwined, where each helix has its significance. In this logic of thought, we need to be mindful that what we are doing today is intertwined with our past. Without this awareness, we may create a false sense that we are always developing something new that responds to the needs and aspirations of our times, but without an understanding of the criticisms that have been voiced before.

In this sense, the recent pandemic, as an important historical moment, required PE to operate unexpectedly and change its pedagogical approach. Initially, any troubles experienced when delivering classes remotely were exacerbated by the historical and socially constructed nature of PE as a face-to-face, practical, and experiential subject (Araújo; Ovens, 2022; O’Brien *et al.*, 2020). Indeed, teaching PE online, it could be argued, was unthinkable prior to the pandemic.

The COVID literature has explored PE teachers’ feelings and experiences of making shifts in their pedagogical approaches needed when teaching in the pandemic. This included: a) teachers being afraid of the uncertainty regarding COVID-19 (Silva *et al.*, 2021); b) teachers feeling inadequate and experiencing anguish regarding to adjust their personal and professional activities and reinvent their didactic and pedagogical actions through online classes and digital platforms (Leite *et al.*, 2022); c) teachers feeling scared about the possibility of verifying student learning or even being unsure about the effectiveness of their efforts (Almonacid-Fierro *et al.*, 2021); d) Teacher self-efficacy was shown to significantly decrease (Gobbi *et al.*, 2021), as was their motivation for work (Korcz *et al.*, 2021). As a result, teachers reported experiencing elevated stress, anxiety, and emotional exhaustion (Kamoga; Varea, 2021; Varea *et al.*, 2023), and feeling that PE was further marginalization when taught in an online context. (Silva; Dinis, 2023; Cruickshank; Pill; Mainsbridge, 2021)

Importantly, the challenges acknowledged by PE teachers when teaching classes remotely can be considered as being both technological and pedagogical. Technologically, teachers noted the lack of internet access (Godoi; Novelli; Kawashima, 2021; Nurulfa *et al.*, 2021; Phong *et al.*, 2022) and of digital devices (Nurulfa *et al.*, 2021; Korcz *et al.*, 2021) among their students. Pedagogically, teachers mentioned

difficulties in keeping students engaged (Phong *et al.*, 2022) and of low student participation (Godoi; Novelli; Kawashima, 2021). Most of the challenges described in the literature reveal how inequalities in access to technology both negatively impacted students' ability to engage in learning and teachers' pedagogical approaches. Such challenges made some teachers conclude that a practical subject such as PE is not suitable for online teaching (Nurulfa *et al.*, 2021) or, in the opposite way, feel that PE should have played a more important role during lockdown (Fuentes Nieto *et al.*, 2023).

Conversely, literature also suggests that teachers reported positive perceptions of teaching remotely during the pandemic. In this case, teachers mentioned the successful use of digital technologies in the teaching-learning process (Godoi; Novelli; Kawashima, 2021) and welcomed the opportunity to collaborate in creating interactive and digital didactic materials (Leite *et al.*, 2022; Méndez-Giménez, 2023; Méndez-Giménez *et al.*, 2023). They also declare that online teaching was an opportunity to critically reflect on PE teaching (Kucera *et al.*, 2022), learn about technology and their ability to create good content for their students (Centeio *et al.*, 2021) and encourage autonomy and responsibility among students (Monguillot *et al.*, 2023).

In their work considering what happened to PE pedagogy during the pandemic, Lambert, Hudson, and Luguetti (2023) posited that even if we position the pandemic as an opportunity to advance an engaging pedagogical approach, there is no robust evidence that PE took advantage of such an opening. In considering 38 articles in a critical study review that focused on Bell Hooks' engaged pedagogy, the review pointed out that some authors were worried about the end of pandemic restrictions and the possibility that many schools in many countries would return to practices observed in PE before the pandemic (Blain; Standage; Curran, 2022; Cuenca-Soto *et al.*, 2021). Such a return would suggest that the period of restrictions and online teaching did little to help the teachers rethink their practices.

Despite the growing evidence that teachers enhanced their pedagogical and technological skills after the pandemic (González-Rivas *et al.*, 2022), there is no research that explores teachers' perceptions of the impact of COVID on contemporary PE practice nor the current relationship teachers might see between pedagogy and technology. In considering the work of Kirk (2010) and Denning (1993), we are drawn to ask the question "What have we learned from the recent pandemic-impacted past that might provoke disruptive changes in PE teaching practices related to technology?". We are concerned that a lack of change may mean teachers feel trapped or paralyzed in their respective practices and have simply returned to traditional PE classes without considering past criticism and future aspirations. To do so without criticism of previous practices may only serve to reaffirm PE resistance to pedagogical change. That is problematic and potentially closes the door on ongoing PE pedagogical development and our openness to new futures.

In recognition of the above concerns, this study explores the challenges, fears, and uncertainties faced by PE teachers during the pandemic and seeks to understand whether these prompted them to consider using technology post-pandemic.

2 METHODS

An exploratory descriptive design was used to investigate teachers' feelings during the pandemic and practice perspective post-pandemic. An online survey to collect data from Brazilian and British PE teachers was used. The survey had multiple-choice questions and free-text questions, which allowed us to use a mixed approach.

2.1 PARTICIPANTS AND CONTEXT

Data collection took place between November 2023 and April 2024 with 203 teachers (one hundred men, ninety-one women, and three prefer not to answer or prefer to describe themselves as other) from different regions of Brazil (n=158) and the United Kingdom (n=45). Participants were aged between 25 and 63 years old and declared to have more than 5 years of teaching experience working in primary and secondary public and private schools. The characteristics of the participating schools are presented in Table 1.

Table 1 - Characteristics of responding teachers.

		Brazil		United Kingdom	
		Survey (n = 158) Frequency %		Survey (n = 45) Frequency %	
Age	25 to 34 years old	30	19%	19	42.2%
	35 to 44 years old	94	59.5%	20	44.5%
	45 to 54 years old	27	17.1%	04	8.9%
	55 to 64 years old	07	4.4%	02	4.4%
Gender Identity	Man	80	50.6%	25	55.6%
	Woman	75	47.5%	20	44.4%
	Non-binary	00	0%	00	0%
	Prefer not to answer	02	1.3%	00	0%
	Other	01	0.6%	00	0%
Educational qualification	Bachelor's degree	73	46.2%	26	57.8%
	Master's degree	71	44.9%	19	42.2%
	Doctorate degree	14	8.9%	00	0%
Education level of work	Primary	84	53.2%	01	2.2%
	Secondary	29	18.4%	35	77.8%
	Both	39	24.7%	8	17.8%
	Other	06	3.8%	01	2.2%
Teaching experience	5 to 10 years	49	31%	18	40.0%
	11 to 15 years	51	32.3%	10	22.2%
	More than 16 years	58	36.7%	17	37.8%

Source: prepared by the authors.

2.2 INSTRUMENT

The data collection instrument was developed using the JISC Online Surveys platform (<https://www.onlinesurveys.ac.uk/>). The online survey was created for this research and validated by an International Advisory Group consisting of six Physical Education academics working in six different contexts/countries. The survey focused on teachers' attitudes and perceptions of teaching during and post-pandemic. The 37-item survey addressed six sections with the following information: a) Personal Information and Demographic Details, b) School strategies for conducting activities during the pandemic, c) Teacher strategies for conducting activities during and after the pandemic, d) Physical Education during and after the pandemic, e) Technology during and after the pandemic, and f) Young people during and after the pandemic.

The first three sections were composed of multiple-choice questions and free-text questions, which were presented using descriptive statistics. The last three sections were composed just of statements evaluated by multiple-choice questions. Each item was rated on a 5-point Likert scale, ranging from 1 to 5 using descriptors such as 1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, and 5-Strongly Agree. Those three last sections were analyzed with inferential statistics.

3 RESULTS AND DISCUSSION

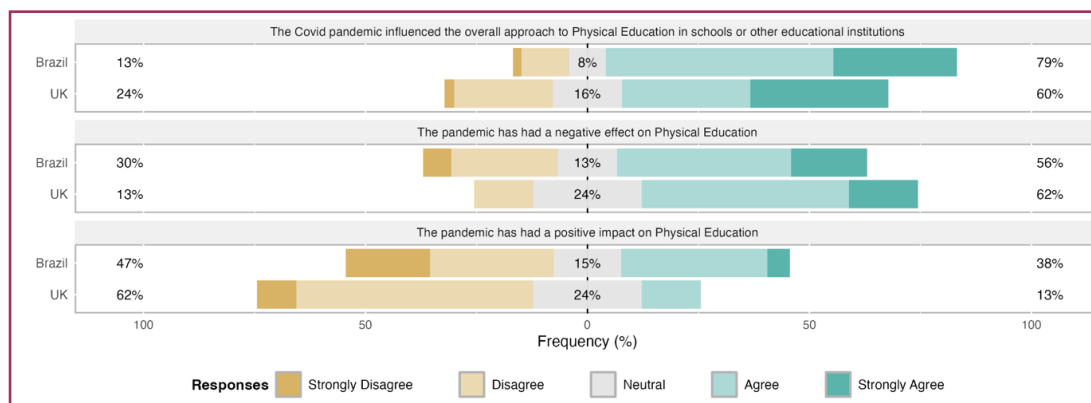
Three themes were generated from the analysis: a) the perceived impact of the pandemic on Physical Education, b) the challenges and changes experienced during the pandemic, and c) long-term pedagogical and/or technological changes. The first and second themes refer to the experiences of teachers during the pandemic, while the third theme addresses teachers' expectations regarding their continuing use of technology after the pandemic. Importantly, the first two themes demonstrated a certain homogeneity in the teachers' responses about their impressions of the possible impacts of the pandemic on Physical Education, including challenges and changes in their practices, with no notable discrepancies between teachers from different countries, of different genders, or different lengths of professional experience. The third theme, in contrast, highlights one significant statistical difference between teachers of different countries.

3.1 THE PERCEIVED IMPACT OF THE PANDEMIC ON PHYSICAL EDUCATION

The results from the survey showed that teachers in both Brazil and the UK agreed that the pandemic had an influence on the teaching of Physical Education. As Figure 1 shows, the majority of teachers in both countries (79% Brazil and 60% UK) "agreed" and "strongly agreed" that the pandemic influenced the overall approach taken to teaching Physical Education in schools and other educational settings. Importantly, many teachers "agreed" and "strongly agreed" that the influence of the pandemic was negative (56% Brazil and 62% UK). Despite this overall impression, some teachers (30% and 13% respectively) "disagreed" and "strongly disagreed" with this statement while others (13% and 24% respectively) "neither agreed or disagreed"

with this negative impression. Similarly, and in answering a related question about the positive impact of the pandemic, many teachers (47% and 62% respectively) “strongly disagreed” and “disagreed” that the impact of the pandemic was positive. Despite this continued shift towards the negative, 15% and 24% and 38% and 13% respectively either “neither agreed or disagreed” or “agreed” and “strongly agreed” that the impact of the pandemic was positive.

Figure 1 - Teachers’ opinions on the impact of the pandemic on Physical Education



Source: prepared by the authors.

The predominantly negative impact teachers noted as a result of the pandemic found in this study is not new and has been noted in previous research in Physical Education. Araújo and Ovens (2022) and O’Brien *et al.* (2020) found that during remote teaching teachers struggled to shift their face-to-face knowledge and expertise, which focused on interaction strategy or corporal challenges, to a virtual environment. It is interesting, however, to note that most teachers in these two studies considered the changes induced by the shift online to be negative. We believe the negativity reported in both these studies and ours is related to traditional PE sporting activities and their resistance to change pointed out by Kirk (2010), now based on digital technology dissent. Varea, González-Calvo and García-Monge (2022) already pointed out preservice teachers struggles to create familiarity and the ability to adapt to the new Physical Education delivered by technology. According to the authors, it happens because “preservice teachers have been traditionally educated into a previous notion of PE” (Varea; González-Calvo; García-Monge, 2022, p. 40).

The literature registered that traditional Physical Education sports activities are shaped by beliefs and practices shared across generations that contribute to the profession’s resistance to change (Parker; Patton; Tannehill, 2016). Studies before the pandemic highlighted that PE teachers form a homogeneous group with a strong disposition towards sports (Ferry, 2018; O’Neil; Richards, 2018). Similarly, a post-pandemic study (Flemons *et al.*, 2024) highlighted that Physical Education teachers still recognize themselves through symbolic and cultural capital based on effort, enthusiasm, and physical competence. These elements reinforce a traditional pedagogical approach based on sports, which struggles to adapt to a virtual environment. Consequently, it is understandable that teachers’ perceptions of the pandemic were negative, as its impact destabilized their idea of Physical Education.

In articulating their impression that the impact of the pandemic was predominantly negative, teachers indicated that the pandemic forced them to change their approach to PE. 56% of Brazilian teachers and 62% of UK teachers indicated that they felt the pandemic harmed PE. The two most cited negative aspects of the pandemic mentioned by teachers, with more than 50% of answers from Brazilian and UK PE teachers, were a) lack of technological devices or Internet connectivity and b) student apathy or disengagement. Those findings match concerns voiced by Godoi, Novelli and Kawashima (2021), Korcz *et al.* (2021), Nurulfa *et al.* (2021), and Phong *et al.* (2022), who noted a lack of Internet access among their students and the absence of technological devices in students' homes as barriers to either synchronous or asynchronous engagement in school work.

In their study of 526 Spanish PE teachers, for example, Fuentes Nieto *et al.* (2023) found that a digital gap in terms of access to both technological devices and the Internet prevented students from following teacher designated activities online. Similarly, Montenegro, Raya and Navaridas's (2020) study in Spain reported that 27% of the 252 teachers surveyed suggested their students did not meet the expected levels of learning and development outlined in the Physical Education curriculum during the pandemic. They attributed this to the impact of the digital divide which they in turn linked to inequality. Furthermore, Fernández-Río *et al.* (2022), in their quantitative study with 3700 Spanish teachers, reported that 75% of respondents indicated that 20% of their students had not been able to participate in online lessons because they lacked the infrastructure to engage.

Whilst teachers' overall impressions of the impact of the COVID-19 pandemic appears to be negative, there were, at least for a minority of respondents in the current study, some positives to come out of the pandemic. The most positive aspects cited by teachers were "the possibility of discovering new technological teaching tools," noted by 50% of UK teachers and 31% of Brazilian teachers, and the possibility of interacting online with students, highlighted by 23 % of UK teachers and 28% of Brazilians. This finding mirrors those from Centeio *et al.*'s (2021) study carried out with 4,302 American PE teachers. This research found that more than 28% of teachers surveyed declared that overcoming challenges or learning about technology during the pandemic was one of their greatest successes.

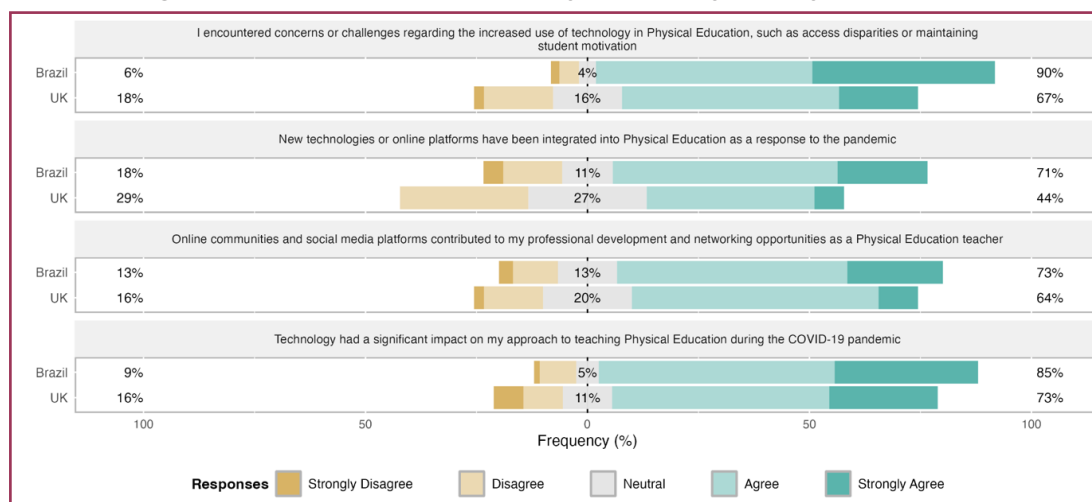
In general, our findings support those of previous research which shows that the pandemic affected PE negatively. Specifically, teachers have previously indicated they needed to overcome challenges such as lack of equipment and Internet access (Nurulfa *et al.*, 2021) or felt unprepared to use technology during the pandemic (Leite *et al.*, 2022). The positive aspects, which relate to discovering tools or ways to connect with students, are less well documented. In their critical review of 38 pandemic-related articles, Lambert, Hudson and Luguetti (2023) found that teachers were frustrated with the pandemic and focused on finding platforms on which to host remote learning rather than develop themselves pedagogically. In this sense, it is understandable that some teachers felt pride when overcoming or learning about technology in this disruptive moment (Centeio *et al.*, 2021) and were able to see this small victory as a positive aspect.

As we have seen in our data and the literature, the theme of the impact of the pandemic on Physical Education teachers' perceptions could offer us both positive and negative aspects. On the whole, the negative aspects were more prevalent than positive ones in our study. It is important to highlight, however, that all elements of the complex situation created by the pandemic should be analysed in its local contexts. For instance, a study of 1,148 teachers from six European countries presented notable differences in teachers' evaluations of online teaching, with a positive evaluation reported by teachers from Croatia, Poland, and Bulgaria, a negative one by teachers in Macedonia and Kosovo, and a neutral valuation by Turkish teachers (Korcz *et al.*, 2021). Thus, it is noticeable that even in close geographical spaces we have different perceptions of the impact of the pandemic and such differences are due to the social contexts of each group of teachers.

3.2 THE CHALLENGES AND CHANGES EXPERIENCED DURING THE PANDEMIC

The second theme explores teachers' perceptions of the challenges, changes, and possibilities of the pandemic. Survey results indicated that Brazilian and UK teachers agreed that they faced challenges and changes during the pandemic. As seen in Figure 2, the majority of teachers (85% Brazil and 73% UK) "agreed" and "strongly agreed" that technology had a significant impact on their approach to teaching during the pandemic. These data indicate that both Brazilian and UK teachers had already been using digital technology before the pandemic (not only as a response to it). Equally, it suggests that during the pandemic teachers came to realize the significant impact technology had on their teaching.

Concurrently, the majority of teachers (90% Brazil and 67% UK) "agreed" and "strongly agreed" that they had concerns or faced challenges regarding the increased use of technology in PE. However, the majority of teachers (73% Brazil and 64% UK) "agreed" and "strongly agreed" that through technology, such as online communities and social media platforms, they had improved either their professional development and/or their networking opportunities as PE teachers. Whilst Aguilar *et al.*'s (2021) study indicated that "teachers' professional uses of social media are diverse and highly specific to each teacher", this finding suggests that the pandemic was a time in which teachers sought of professional development opportunities. Indeed, it seems to affirm that teachers (at least those in this study) were more likely to use social media to learn, connect, and/or share content and experiences after the pandemic had begun. This finding contrasts that of Aguilar *et al.* (2021) who reported no statistical significance in social media use by teachers either before or during the pandemic.

Figure 2 - Teachers' opinions on challenges and changes during the pandemic.

Source: prepared by the authors.

In regard to challenges and changes, our data suggests that the majority of teachers (71% Brazil and 44% UK) “agreed” or “strongly agreed” that technology had been integrated into their practices in response to the pandemic. This finding matches that of Fuentes Nieto *et al.* (2023), who showed that 61% of teachers surveyed claimed that while they used “little” or “none” technological applications and resources prior to the pandemic this increased to 100% usage during the pandemic. In the same way, most PE teachers in this study agree that technology had an impact on their approach to teaching.

One of the enduring problems to emerge from the literature both during and after the pandemic relates to PE teachers ill-preparedness to deliver online classes and manage technology platforms (e. g. Cece; Guillet-Descas; Lentillon-Kaestner, 2022; Centeio *et al.*, 2021; Kim *et al.*, 2021; Leite *et al.*, 2022). In keeping with this literature, our findings indicate that PE teachers sought to overcome this lack of preparation by supporting or seeking support from other teachers in their online networks. López-Fernández *et al.*, (2023) showed that teachers understood that they were not alone in facing the teaching challenges brought about by the pandemic. In their efforts to overcome these challenges the teachers in López-Fernández and colleagues' study (2023) engaged in collaborative and peer learning through online communities and social media platforms (explicitly blogs and online messaging platform groups). Another study reported that social networks helped PE teachers who experienced difficulties when creating content in the early stage of online classes during the pandemic (Jeong; So, 2020).

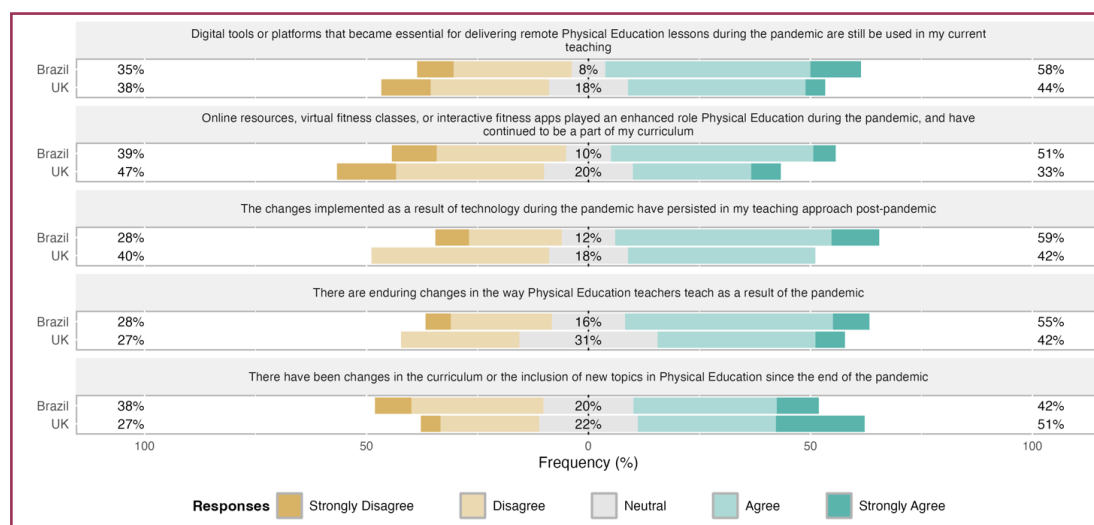
Whilst this study indicated that PE teachers overcame several difficulties through collaboration, challenges remained. One of the most significant findings from our survey was that 90% of Brazilian and 67% of UK PE teachers indicated concerns regarding the increased use of technology. Such concerns are mirrored in a number of other studies. In Brazil, for example, Silva *et al.* (2020) reported that 33.2% of students stated that they had difficulty accessing the content provided by the school due to a lack of access to devices, the Internet, or skills on digital platforms. In Spain,

Fontes Nieto *et al.* (2023) and Montenegro, Raya and Navaridas (2020) reported that teachers expressed concerns that the digital divide, especially with regard to the socio-economic and socio-cultural standing of families may affect the ability of students to following online classes. In other studies, this time in Portugal and Spain, support was shown for the idea that the pandemic harmed students' motivation in PE classes during the pandemic (López-Fernández; Burgueño; Gil-Espinosa, 2021; Mata *et al.*, 2021). For the most part those concerns in different contexts are related more to a health situation and social context than the PE class environment.

3.3 LONG-TERM PEDAGOGICAL AND/OR TECHNOLOGICAL CHANGES

The survey results also showed teachers' opinions related to long-term pedagogical and/or technological changes. In this theme, we found heterogeneity regarding teachers' responses about their beliefs about PE after the pandemic, with at least one statistical difference between teachers from different countries, of genders, or lengths of professional experience. For instance, Brazilian teachers suggested they were more likely to persist in using technology in their teaching approach post-pandemic (59% agree or strongly agreed) than their UK counterparts (42% agree or strongly agreed).

Figure 3 - Teachers' opinions on long-term pedagogical and/or technological changes.



Source: prepared by the authors.

In this case, we perceive the answers difference as statistically significant ($U = 2896.500$; $p < 0.05$ - see table 2) in which Brazilian teachers ($MD = 4.0$) have higher rates of agreement than teachers in the UK ($MD = 3.0$). These findings converge with the recent tendency of Brazilian PE pedagogy to absorb technology in their practices and curriculum (Araújo; Cavalcante, 2023; Farias; Impolcetto, 2021).

Table 2 - Test Statistics for the third category

Variable	Test type	There have been changes in the curriculum or the inclusion of new topics in Physical Education since the end of the pandemic.	There are enduring changes in the way Physical Education teachers teach as a result of the pandemic.	The changes implemented as a result of technology during the pandemic have persisted in my teaching approach post-pandemic.	Digital tools or platforms that became essential for delivering remote Physical Education lessons during the pandemic are still being used in my current teaching.	Online resources, virtual fitness classes, or interactive fitness apps played an enhanced role Physical Education during the pandemic, and have continued to be a part of my curriculum.
Country	Mann-Whitney U	2972.500	3318.500	2896.500	3089.500	3093.000
	Asymp. Sig. (2-tailed)	0.083	0.471	0.043	0.155	0.161

Source: prepared by the authors.

Similarly, Brazilian teachers indicate that while digital tools or platforms become essential for delivering remote Physical Education lessons during the pandemic they are still being used in their current teaching, with 57.6% agreeing or strongly agreeing, while just 44.4% of UK teachers agree or strongly agreed with this statement. Simultaneously, more than half Brazilian teachers (with 51% agreeing or strongly agreeing) suggested that they have continued to include the online resources, virtual fitness classes, and/or interactive fitness apps that played an enhanced role in PE during the pandemic in their post-pandemic curricula. In contrast only a third of UK teachers had done similar (with 33% agreeing or strongly agreeing).

Regarding the long-term pedagogical and technological changes post-pandemic, the literature, up to now, does not support our findings. Some studies have, however, suggested inferences based on their interpretations of teachers' experiences. For instance, an Indonesian study with 41 PE teachers (Ardiansyah; Setiawan, 2023) pointed out that some benefits (such as the increase in the teachers' ability to use learning technology or the habits of communication developed between teachers and parents) may endure post-pandemic. Similarly, Erwin *et al.*'s (2021) study in the USA suggests there were aspects of technology use during the pandemic that teachers should focus on in the post-pandemic context. For example: being consistent in delivering content through platforms, always considering e-learning as supplementing student learning, and utilizing recording technologies to increase physical activity beyond the classroom.

In turn, López-Fernández *et al.* (2023), highlighted teachers' resilience through the pandemic and asserted that even though teachers struggled in the early pandemic months they left the lockdown more prepared. In their words "the post-pandemic teacher felt like a professional with more resources, versatility, flexibility, and preparedness to face new and challenging situations" (López-Fernández *et*

al., 2023, p. 1091). Even though the promising teachers' attitudes described in the literature are welcome, none of them are based explicitly on teachers' opinions.

One of the possible explanations for why Brazilian PE teachers stated they were more likely to persist in using technology post-pandemic is the length of time in which they faced lockdown. In the Brazilian case, schools were closed for 178 instruction days (excluding school holidays, public holidays, and weekends, while the UK lost a maximum of 88 instruction days to closure (OECD, 2022). This data shows us that Brazilian teachers had twice the amount of time to incorporate technology into their practices than UK teachers. Alternatively, the Brazilian curriculum positions PE in the Language Area (Brasil, 2018) offering teachers the possibility to approach PE content across different modalities of language (e.g. Written, Oral, Visual, and Spatial, among others), including the use of digital technology (Araújo *et al.*, 2021, 2024). Indeed, Brazilian teachers have taken the chance to mix those modalities of language to deliver classes through digital technology as is registered in the literature (Araújo; Leite, 2024; Melo *et al.*, 2021; Silva *et al.*, 2021). In its turn, the UK Curriculum is shaped by "competencies", "performances", and "abilities" in which "there is significant reference to a discourse of performance, where learning motor skills and engaging in competitive sports appear to be the primary function of PE" (Gray *et al.*, 2022, p. 585).

Conversely, 51% of UK teachers, in comparison to 42% of Brazilian teachers, indicated that they agreed or strongly agreed that there have been changes in the curriculum (with the introduction of new topics) since the end of the pandemic. These findings show that while the pandemic has provoked impact and change in Physical Education, the responses are different in each context.

4 PRACTICAL IMPLICATIONS AND STUDY LIMITATIONS

In general, this study raises further concerns [see Blain; Standage; Curran, (2022) for more information] that resistance to technologically-assisted pedagogical change in Physical Education has been firmly associated with the enforced disruptive period of the pandemic. Whilst the ubiquitous use of technology has resulted in teachers learning to use new tools and/or create of online communities to exchange knowledge and experiences, it has also raised questions about the ongoing relevance of technology in Physical Education.

Reflecting on the findings, we recognise that one key lesson from the pandemic is the importance of using technological tools thoughtfully to enhance or support teaching when necessary. Simply rejecting their use now that we have returned to face-to-face teaching disregards the valuable learning experiences gained during this time. Conversely, an uncritical and excessive reliance on technology in the post-pandemic period risks overlooking the pedagogical and accessibility challenges faced during lockdown.

Furthermore, we believe that each context requires specific reflection, as the process of learning to teach Physical Education remotely was shaped by the unique realities of each teacher. This included, but were not limited to, their cultural background

and societal and personal perceptions of technology use in Physical Education, their proficiency with digital technology, and their students' access to devices and overall connectivity.

When seeking the opinions of teachers from Brazil and the UK, each of whom worked in distinct social and pedagogical contexts, we must acknowledge some of the limitations inherent in our study. While the findings reveal clear trends in their perspectives, the sample size is a limitation when compared to the larger population of Physical Education teachers in these countries. Furthermore, exploring the opinions and perceptions of teachers from only two countries limits the scope of what we can discern. It would therefore be important to broaden the scope of the discussion and enrich the debate by surveying teachers from other contexts or countries.

In summary, the key themes generated in this paper allow us to extract three key implications for Physical Education teaching and learning in the post-pandemic period:

- a) Negative Perceptions of the Pandemic's Impact: The negative view of the pandemic's influence on Physical Education highlights a continued resistance to pedagogical change in the field. Even in the face of significant global social and health challenges, many teachers appeared to be constrained by a fixed and traditional understanding of Physical Education (Kirk, 2010) and struggled to implement meaningful changes to their teaching practices as a consequence of the pandemic. Thus, it is desirable to invest in continuing Physical Education teacher education (Souza Jr.; Oliveira; Araújo, 2022) to attempt to promote more organic changes in the pedagogical practice of Physical Education.
- b) Challenges and Changes During the Pandemic: The experiences of teachers during the pandemic reveal both positive and negative aspects. Their situated experiences produced varied narratives, with technology and pedagogy taking turns as the primary focus of their attention. Aligning with Fawns (2022) and Calderón and Sargent (2024), we advocate for an "entangled pedagogy", where technology and pedagogy co-evolve and influence one another to create a more integrated approach to Physical Education.
- c) Long-Term Pedagogical and Technological Changes: To better understand how teachers' opinions and practices evolve over time, a longitudinal study is needed. Importantly, this was the only area where teachers from Brazil and the UK showed significant differences, underscoring the need to critically examine teacher training and teaching practices through different socio-cultural lenses. While there are clearly differences in how digital technology is used in Brazil and the UK, the growing literature points to blended learning as a promising trend in Physical Education pedagogy (Blain; Standage; Curran, 2022; Killian; Kinder; Woods, 2019; Østerlie *et al.*, 2023).

5 CONCLUSION

This study has explored the challenges, fears, and uncertainties faced by PE teachers during the pandemic and has sought to understand whether these prompted these teachers to consider using technology post-pandemic. The main findings highlight elements already pointed out by the literature, such as teachers' perception of the negative pandemic effect on PE or challenges/possibilities and changes during the pandemic. However, the data also suggest a tendency for teacher attitude to persist in using technology in their teaching approach post-pandemic, mainly Brazilian teachers.

However, the findings should be interpreted in light of the study's methodological limitations. The sample of 203 teachers in this study does not represent all Physical Education teachers in Brazil and the United Kingdom, which limits the generalizability of the results. Additionally, a key limitation of the study is the reliance on self-reported data from the teachers, who may have provided responses that were biased or based on limited understanding.

Anyway, challenging times, such as the pandemic, could have had powerful effects on social practices such as teaching. However, continuing to teach as before is presuming that we have not learned much from the pandemic. It suggests a belief that unique elements, such as technology, which were used extensively during the pandemic, offer nothing in the way of reform in PE. If this is the case, then, as a field, PE has once again failed to respond to the criticisms that have been voiced before, and has failed to grasp, with both hands, the opportunities that the pandemic presented. PE has, it seems, as Quennerstedt (2019) suggested, once again continued to prioritise the P whilst simultaneously ignoring the potential of the E in PE.

REFERENCES

- AGUILAR, Stephen J. *et al.* A different experience in a different moment? Teachers' social media use before and during the COVID-19 pandemic. **AERA Open**, v. 7, 2021. DOI: <https://doi.org/10.1177/23328584211063898>
- ALMONACID-FIERRO, Alejandro *et al.* Impact on teaching in times of COVID-19 pandemic: a qualitative study. **International Journal of Evaluation and Research in Education**, v. 10, n. 2, p. 432-440, 2021. DOI: <https://doi.org/10.11591/ijere.v10i2.21129>
- ARAÚJO, Allyson Carvalho; CAVALCANTE, Everton. Aproximação de professores de Educação Física com mídia e tecnologia e seus reflexos com relação à pandemia de COVID-19. **Revista E-Curriculum**, v. 21, p. e61515, 2023. DOI: <https://doi.org/10.23925/1809-3876.2023v21e61515>
- ARAÚJO, Allyson Carvalho; LEITE, Leilane S. G. P. Why may the pandemic experience help Brazilian physical education teachers better understand a national curriculum proposal? A study case. In: INTERNATIONAL CONFERENCE ON EDUCATION AND NEW LEARNING TECHNOLOGIES, 16., 2024, Palma, Spain. **EDULEARN24 Proceedings**, [...]. Palma: IATED, 2024. v. 1, p. 6648-6653. DOI: <https://doi.org/10.21125/edulearn.2024.1575>

ARAÚJO, Allyson Carvalho; OVENS, Alan. Social distancing and Physical Education teaching: strategies, technologies, and new learning. **Movimento**, v. 28, p. e28017, 2022. DOI: <https://doi.org/10.22456/1982-8918.122671>

ARAÚJO, Allyson Carvalho *et al.* Digital technology in national curricula: a dialogue among Iberoamerican countries. **Frontiers in Sports and Active Living**, v. 6, p. 1355967, 2024. DOI: <https://doi.org/10.3389/fspor.2024.1355967>

ARAÚJO, Allyson Carvalho *et al.* Mídia e tecnologia no currículo de Educação Física: um estudo exploratório em diálogo internacional. **Currículo Sem Fronteiras**, v. 21, n. 3, p. 1768-1785, 2021. DOI: <https://doi.org/10.35786/1645-1384.v21.n3.39>

ARDIANSYAH, Rizal; SETIAWAN, Caly. Physical Education teachers' reflection about their learning in post-pandemic era: a mixed-method study. **International Journal of Social Science Research and Review**, v. 6, n. 6, p. 279-286, 2023. DOI: <https://doi.org/10.47814/ijssrr.v6i6.1363>

BLAIN, Dylan O.; STANDAGE, Martyn; CURRAN, Thomas. Physical Education in a post-COVID world: a blended-gamified approach. **European Physical Education Review**, v. 28, n. 3, p. 757-776, 2022. DOI: <https://doi.org/10.1177/1356336X221080372>

BRASIL. Secretaria de Educação Básica. **Base Nacional Comum Curricular**. Brasília: MEC, 2018. Disponível em: https://www.gov.br/mec/pt-br/escola-em-tempo-integral/BNCC_EI_EF_110518_versaofinal.pdf. Acesso em: 10 set., 2024.

CALDERÓN, Antonio; SARGENT, Julia. Digital technology in Physical Education: an entangled pedagogy perspective. *In*: THE 2024 AIESEP INTERNATIONAL CONFERENCE, 2024. **Book of abstracts** [...]. Jyväskylä: University of Jyväskylä, 2024. v. 1, p. 100-1001. Disponível em: <http://urn.fi/URN:ISBN:978-952-86-0158-6>. Acesso em: 10 set., 2024.

CECE, Valérian; GUILLET-DESCAS, Emma; LENTILLON-KAESTNER, Vanessa. Teacher well-being and perceived school climate during COVID-19 school closure: the case of Physical Education in Switzerland. **The Teacher Educator**, v. 57, n. 1, p. 45-60, 2022. DOI: <https://doi.org/10.1080/08878730.2021.1991540>

CENTEIO, Erin *et al.* The success and struggles of Physical Education teachers while teaching online during the COVID-19 pandemic. **Journal of Teaching in Physical Education**, v. 40, n. 4, p. 667-673, 2021. DOI: <https://doi.org/10.1123/jtpe.2020-0295>

CRUICKSHANK, Vaughan; PILL, Shane; MAINSBRIDGE, Casey. 'Just do some physical activity: exploring experiences of teaching Physical Education online during COVID-19. **Issues in Educational Research**, v. 31, n. 1, p. 76-93, 2021. DOI: <http://www.iier.org.au/iier31/cruickshank.pdf>

CUENCA-SOTO, Nuria *et al.* Impacto de la pandemia por COVID-19 en Educación Física: limitaciones percibidas y propuestas de mejora. **Qualitative Research in Education**, v. 10, n. 3, p. 260-290, 2021. DOI: <https://doi.org/10.17583/qre.8376>

DENING, Greg. Mr. **Bligh's bad language**: passion, power and theatre on the bounty. Cambridge: Cambridge University Press, 1993.

ERWIN, Heather E. *et al.* Lessons learned from COVID-19: pushing the field forward post-pandemic. **Journal of Physical Education, Recreation & Dance**, v. 92, n. 9, p. 56-62, 2021. DOI: <https://doi.org/10.1080/07303084.2021.1977743>

FARIAS, Alison Nascimento; IMPOLCETTO, Fernanda Moreto. Utilização das TIC nas aulas de Educação Física escolar em unidades didáticas de atletismo e dança. **Revista Brasileira de Ciências do Esporte**, v. 43, p. e004220, 2021. DOI: <https://doi.org/10.1590/rbce.43.e004220>

FAWNS, Tim. An entangled pedagogy: looking beyond the pedagogy—technology dichotomy. **Postdigit Sci Educ**, v. 4, p. 711–728, 2022. DOI: <https://doi.org/10.1007/s42438-022-00302-7>

FERNÁNDEZ-RÍO Javier *et al.* La brecha digital destapada por la pandemia del coronavirus: una investigación sobre profesorado y familias. **Revista Complutense de Educación**, v. 33, n. 2, p. 351–360, 2022. DOI: <https://doi.org/10.5209/rced.74389>

FERRY, Magnus. Physical education preservice teachers' perceptions of the subject and profession: development during 2005–2016. **Physical Education and Sport Pedagogy**, v. 23, n. 4, p. 358–370, 2018. DOI: <https://doi.org/10.1080/17408989.2018.1441392>

FLEMONS, Michelle E. *et al.* Recycling and resistance to change in Physical Education: the informal recruitment of Physical Education teachers in schools. **Journal of Teaching in Physical Education**, v. 43, n. 1, p. 21–30, 2024. DOI: <https://doi.org/10.1123/jtpe.2022-0215>

FUENTES NIETO, Teresa *et al.* Uso de las TIC durante el confinamiento por COVID-19 y nivel de conexión del alumnado en Educación Física. **Revista Complutense de Educación**, v. 34, n. 2, p. 401–414, 2023. DOI: <https://doi.org/10.5209/rced.79371>

GODOI, Marcos; NOVELLI, Fabiula I.; KAWASHIMA, Larissa B. Educação Física, saúde e multiculturalismo em tempos de COVID-19: uma experiência no ensino médio. **Saúde e Sociedade**, v. 30, n. 3, p. e200888, 2021. DOI: <https://doi.org/10.1590/S0104-12902021200888>

GOBBI, Erica *et al.* Primary school Physical Education at the time of the COVID-19 pandemic: could online teaching undermine teachers' self-efficacy and work engagement? **Sustainability**, v. 13, n. 17, p. 9830, 2021. DOI: <https://doi.org/10.3390/su13179830>

GONZÁLEZ-RIVAS, Ramón Alfonzo *et al.* Adquisición de competencias pedagógicas en Educación Física durante el confinamiento COVID-19 en México. **Movimento**, v. 28, p. e28056, 2022. DOI: <https://doi.org/10.22456/1982-8918.117777>

GRAY, Shirley *et al.* A comparative analysis of discourses shaping Physical Education provision within and across the UK. **European Physical Education Review**, v. 28, n. 3, p. 575–593, 2022. DOI: <https://doi.org/10.1177/1356336X211059440>

JEONG, Hyun-Bhul; SO, Wi-Young. 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**, v. 17, n. 19, p. 7279–7213, 2020. DOI: <https://doi.org/10.3390/ijerph17197279>

KAMOGA, Seguya; VAREA, Valeria. 'Let them do PE!' The 'becoming' of Swedish Physical Education in the age of COVID-19. **European Physical Education Review**, v. 28, n. 1, p. 263–278, 2021. DOI: <https://doi.org/10.1177/1356336X211036574>

KILLIAN, Chad M.; KINDER, Christopher J.; WOODS, Amelia M. Online and blended instruction in K–12 Physical Education: a scoping review. **Kinesiology Review**, v. 8, n. 2, p. 110–129, 2019. DOI: <https://doi.org/10.1123/kr.2019-0003>

KIM, Minhyun *et al.* Physical Education teachers' online teaching experiences and perceptions during the COVID-19 pandemic. **Journal of Physical Education and Sport**, v. 21, n. 3, p. 2049–2056, 2021. DOI: <https://doi.org/10.7752/jpes.2021.s3261>

KIRK, David. **Defining Physical Education: the social construction of a school subject in postwar Britain**. London: Falmer Press, 1992.

KIRK, David. **Physical Education futures**. New York: Routledge, 2010.

KORCZ, Agata *et al.* Physical Education teachers' opinion about online teaching during the COVID-19 Pandemic - comparative study of European countries. **Sustainability**, v. 13, n. 21, p. 11730, 2021. DOI: <https://doi.org/10.3390/su132111730>

KUCERA, Carlos, *et al.* Google Sites como ferramenta de ensino de Educação Física a distância em tempos de Covid-19: pedagogia, estratégias, reflexões e barreiras de um professor. **Movimento**, v. 28, p. e28019, 2022. DOI: <https://doi.org/10.22456/1982-8918.122688>

LAMBERT, Karen; HUDSON, Christopher; LUGUETTI, Carla. What would bell hooks think of the remote teaching and learning in Physical Education during the COVID-19 pandemic? a critical review of the literature. **Sport, Education and Society**, v. 29, n. 6, p. 667–683, 2023. DOI: <https://doi.org/10.1080/13573322.2023.2187769>

LEITE, Leilane S. G. P. *et al.* Physical Education remote teaching in narrative: on the ruptures and learning experiences with technology. **Movimento**, v. 28, p. e28022, 2022. DOI: <https://doi.org/10.22456/1982-8918.122440>

LÓPEZ-FERNÁNDEZ, Iván; BURGUEÑO, Rafael; GIL-ESPINOSA, Francisco J. High school Physical Education teachers' perceptions of blended learning one year after the onset of the COVID-19 pandemic. **International Journal of Environmental Research and Public Health**, v. 18, n. 21, p. 11146, 2021. DOI: <https://doi.org/10.3390/ijerph182111146>

LÓPEZ-FERNÁNDEZ, Ivan *et al.* Physical Education teachers' reality and experience from teaching during a pandemic. **Sport, Education and Society**, v. 29, n. 9, p. 1085–1098, 2023. DOI: <https://doi.org/10.1080/13573322.2023.2254795>

MATA, Carlos *et al.* Motivation and perceived motivational climate by adolescents in face-to-face Physical Education during the COVID-19 pandemic. **Sustainability**, v. 13, n. 23, p. 13051, 2021. DOI: <https://doi.org/10.3390/su132313051>

MELO, Lucas Rafael Pacheco de *et al.* Uso de recursos educacionais digitais no PIBID: relato de experiência. In: CONGRESSO BRASILEIRO DE CIÊNCIAS DO ESPORTE, 22.; CONGRESSO INTERNACIONAL DE CIÊNCIAS DO ESPORTE, 9., 2021, Belo Horizonte. **Anais...** Belo Horizonte: RBCE, 2021. p. 342-244, 2021. Disponível em: <http://congressos.cbce.org.br/index.php/conbrace2021/9conice/paper/viewFile/15031/7707>. Acesso em: 10 set., 2024.

MÉNDEZ-GIMÉNEZ, Antonio. Autoconstrucción de material en Educación Física: perfil del profesorado, estrategias y recursos promovidos durante la pandemia. **Retos**, v. 50, p. 976–986, 2023. DOI: <https://doi.org/10.47197/retos.v50.100543>

MÉNDEZ-GIMÉNEZ, Antonio *et al.* Self-made material in Physical Education: teacher perceptions of the use of an emerging pedagogical model before and during the COVID-19 pandemic. **European Physical Education Review**, v. 29, n. 1, p. 107-124, 2023. DOI: <https://doi.org/10.1177/1356336X221118548>

MONGUILLLOT, Meritxell *et al.* Teachers' perceptions of Physical Education teaching in post-pandemic Spain. **Retos**, v. 47, p. 258–267, 2023. DOI: <https://doi.org/10.47197/retos.v47.95220>

MONTENEGRO, Sofia; RAYA, Esther; NAVARIDAS, Fermín. Percepciones docentes sobre los efectos de la brecha digital en la educación básica durante el COVID -19. **Revista Internacional De Educación Para La Justicia Social**, v. 9, n. 3, p. 317–333, 2020. DOI: <https://doi.org/10.15366/riejs2020.9.3.017>

NURULFA, Risky *et al.* Physical Education survey during the COVID-19 pandemic in Eastern Indonesia. **International Journal of Human Movement and Sports Sciences**, v. 9, n. 4, p. 668 – 675, 2021. DOI: https://www.hrpub.org/journals/article_info.php?aid=10907

O'BRIEN, Wesley *et al.* Implications for European physical education teacher education during the COVID-19 pandemic: a cross-institutional SWOT analysis. **European Journal of Teacher Education**, v. 43, n. 4, p. 503–522, 2020. DOI: <https://doi.org/10.1080/02619768.2020.1823963>

OECD - ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT. **Education at a Glance 2022**: OECD Indicators, Paris: OECD Publishing, 2022. DOI: <https://doi.org/10.1787/3197152b-en>

O'NEIL, Kason; RICHARDS, K. Andrew R. Breaking from traditionalism: strategies for the recruitment of Physical Education teachers. **Journal of Physical Education, Recreation & Dance**, v. 89, n. 2, p. 34–41, 2018. DOI: <https://doi.org/10.1080/07303084.2017.1404511>.

ØSTERLIE, Ove *et al.* Flipped learning in Physical Education: a scoping review. **European Physical Education Review**, v. 29, n. 1, p. 125–144, 2023. DOI: <https://doi.org/10.1177/1356336X221120939>

PARKER, Melissa; PATTON, Kevin; TANNEHILL, Deborah. Professional development experiences and organizational socialization. In: Richards, K. Andrew; GAUDREAU, Karen Lux (org.). **Teacher socialization in Physical Education**. London: Routledge, 2016. p. 98–113. DOI: <https://doi.org/10.4324/9781315679471>

PHONG, Do Tan *et al.* Teachers of physical education survey on the effects of online learning on physical education during the COVID-19 pandemic. **Res Militaris**, v. 12, n. 3, p. 905–913, 2022. Disponível em: <https://resmilitaris.net/uploads/paper/64e3c532e788491c9057352b822c9ae7.pdf>. Acesso em: 14 nov., 2024.

QUENNERSTEDT, Mikael. Physical Education and the art of teaching: transformative learning and teaching in physical education and sports pedagogy. **Sport, Education and Society**, v. 24, n. 6, p. 611–623, 2019. DOI: <https://doi.org/10.1080/13573322.2019.1574731>

SILVA, Antonio Jansen F. da *et al.* A adesão dos alunos às atividades remotas durante a pandemia: realidades da Educação Física escolar. **Corpoconsciência**, v. 24, n. 2, p. 57–70, 2020. Disponível em: <https://periodicoscientificos.ufmt.br/ojs/index.php/corpoconsciencia/article/view/10664>. Acesso em: 14 nov., 2024.

SILVA, Nuno Miranda; DINIS, Sónia Pereira. As práticas letivas na Educação Física durante a pandemia: expectativas e realidades. **Educação & Pesquisa**, n. 49, e234016, 2023. DOI: <https://doi.org/10.1590/S1678-4634202349262256>

SILVA, Tatiana Camila L. A. *et al.* O uso da ferramenta podcast como estratégia de ensino da Educação Física durante o ensino remoto? Um relato de experiência no PIBID/UFRN. In: CONGRESSO BRASILEIRO DE CIÊNCIAS DO ESPORTE, 22.; CONGRESSO INTERNACIONAL DE CIÊNCIAS DO ESPORTE, 9., 2021, Belo Horizonte. **Anais...** Belo Horizonte: RBCE, 2021. p. 337–229, 2021. Disponível em: <http://congressos.cbce.org.br/index.php/conbrace2021/9conice/paper/viewFile/15027/7701>. Acesso em: May 31, 2024.

SOUZA JÚNIOR, Antônio F. de; OLIVEIRA, Márcio Romeu R. de; ARAÚJO, Allyson Carvalho. The debate of digital technology in the continuing Physical Education teacher education: uses and concepts for teaching and learning. **Retos**, v. 46, p. 694–704, 2022. DOI: <https://doi.org/10.47197/retos.v46.94484>

VAREA, Valeria *et al.* Physical Education and COVID-19: what have we learned? **Curriculum Studies in Health and Physical Education**, v. 15, n. 3, p. 340–357, 2023. DOI: <https://doi.org/10.1080/25742981.2023.2241443>

VAREA, Valeria; GONZÁLEZ-CALVO, Gustavo; GARCÍA-MONGE, Afonso. Exploring the changes of Physical Education in the age of COVID-19. **Physical Education and Sport Pedagogy**, v. 27, n. 1, p. 32–42, 2022. DOI: <https://doi.org/10.1080/17408989.2020.1861233>

Resumo: A pandemia causou interrupção global no ensino presencial e adoção não planejada de tecnologia digital. Este artigo explora desafios, medos e incertezas enfrentados por professores de Educação Física durante a pandemia e busca entender se isso os levou a considerar o uso da tecnologia pós-pandemia. Os dados foram coletados por meio de questionário com 203 professores de Educação Física brasileiros e britânicos em atividade antes, durante e depois da pandemia. As descobertas indicaram que os professores mudaram seu ensino durante a pandemia. Eles relataram preocupações relacionadas ao uso da tecnologia. Por outro lado, eles declararam que as comunidades online contribuíram para seu desenvolvimento profissional. A análise mostra professores brasileiros mais propensos do que os do Reino Unido a continuar usando a tecnologia pós-pandemia. Concluímos que a experiência específica do professor e o contexto local podem determinar como será o novo “normal” pós-pandemia da Educação Física em relação à tecnologia.

Palavras-chave: Educação Física. Covid-19. Distanciamento social. Tecnologia.

Resumen: La pandemia ha causado una interrupción global en la enseñanza presencial con la adopción de la tecnología digital. Este artículo explora los desafíos, miedos e incertidumbres enfrentados por los profesores de Educación Física durante la pandemia y busca entender si esto los lleva a considerar el uso de tecnología en el post-pandemia. Los datos fueron recolectados a través de cuestionario con 203 profesores de Educación Física brasileños y británicos en actividad antes, durante y después de la pandemia. Los hallazgos indican que los profesores cambiaron su forma de enseñar durante la pandemia. Informaron preocupaciones relacionadas con el uso de la tecnología, pero declararon que las comunidades en línea contribuyeron a su desarrollo profesional. El análisis muestra que los profesores brasileños son más propensos que los del Reino Unido a continuar usando la tecnología después de la pandemia. Concluimos que la experiencia específica del profesor y el contexto local pueden determinar cómo será el nuevo “normal” post-pandemia en la Educación Física en relación con la tecnología.

Palabras clave: Educación Física. COVID-19. Distanciamiento social. Tecnología.

USE LICENSE

This article is published as Open Access under the Creative Commons Attribution 4.0 International (CC BY 4.0) license, which allows its use, distribution and reproduction in any medium as long as the original work is properly cited. More information at: <http://creativecommons.org/licenses/by/4.0>

CONFLICT OF INTERESTS

The authors declare that this work involves no conflict of interest.

AUTHOR CONTRIBUTIONS

Allyson Carvalho Araújo: Conceptualization; Data curation; Formal analysis; Project management; Writing – original draft.

Ashley Casey: Conceptualization; Methodology; Validation; Writing – review & editing.

FUNDING

This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES) - Finance Code 001.

RESEARCH ETHICS

The research project was submitted and approved by the Universidade Federal do Rio Grande do Norte - UFRN Human Participants Ethics Committee, protocol number 73128823.4.0000.5537 Parecer - 6.565.897

HOW TO CITE

ARAÚJO, Allyson Carvalho; CASEY, Ashley. What did Physical Education teachers learn from the technological disruption in their classes? Challenges and uncertainties about technology use after the pandemic. **Movimento**, v. 31, p. e31020, Jan./Dec. 2025. DOI: <https://doi.org/10.22456/1982-8918.144332>.

EDITORIAL RESPONSIBILITY

 Alex Branco Fraga*

 Elisandro Schultz Wittizorecki*

 Mauro Myskiw*

 Raquel da Silveira*

 David Hortigüela Alcalá**

 Pedro Antonio Sanchez Miguel***

* Universidade Federal do Rio Grande do Sul, Escola de Educação Física, Fisioterapia e Dança, Porto Alegre, RS, Brazil.

** Universidad de Burgos, Burgos, Spain

*** Universidad de Extremadura, Cáceres, Extremadura, Spain