'Just do some physical activity': Exploring experiences of teaching physical education online during Covid-19

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This study aimed to explore teacher experiences of online delivery of physical education (PE). Research has noted the use of blended learning and flipped classrooms in PE, yet little is known about the delivery of fully online school PE. The move to online teaching required by Covid-19 suppression measures in 2020 provided an opportunity to explore the delivery of PE online. Data was obtained from teachers forced to shift to online teaching delivery of primary school PE in one Australian state during 2020. Semi-structured interviews occurred with 11 primary school PE specialist teachers providing qualitative data for analysis. The analysis of teachers' experiences indicated that in most cases PE did not happen, rather, physical activity provision was initiated or PE was marginalised to a movement break between subjects with perceived higher status and priority. The importance of teacher-student connection to the teachers and inconsistency surrounding the use of online learning platforms emerged as concerns of the teachers. The results show that the move to online provision of PE resulted in diminished educative purpose.

Introduction

In Australia, physical education (PE) is an essential education provision that is central to the development of the skills, knowledge, and attitudes necessary for lifelong health and wellbeing. It is a part of the essential learning area called *Health and Physical Education* (HPE), within which all Australian students within compulsory ages of schooling are required to take physical education (Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA), 2008). As an element of the minimum 80 hours of curriculum time per year suggested necessary for students to meet the achievement standards of the Australian Curriculum: HPE (AC:HPE), participation in physical activity on a weekly basis is recommended (Australian Curriculum, Assessment and Reporting Authority (ACARA), 2012, 2020). We recognise that the extant PE literature contains a historical tension in PE, between PE as an educative endeavour and PE as a context for the promotion and accumulation of physical activity. The Australian Curriculum: HPE is clearly focused on PE having an educative focus and an inquiry emphasis directed by the key propositions providing the curriculum rationale and objectives (ACARA, 2020).

The site for this study was primary schools, where it is recognised that regular participation in primary/elementary school PE is an important foundation to 'becoming' physically educated and to the physical literacy that informs physical activity as an ongoing lifestyle choice (Hyndman & Pill, 2017). Additionally, PE helps establish and maintain

children's physical, social, cognitive, and emotional interest in current and future participation in physical activity (Kohl & Cook, 2013). However, in Australia concerns about levels of sedentariness and the diminishing development of movement ability of children and young people and its effects on the self-efficacy to pursue physical activity are well documented (e.g., Pill & Harvey, 2019; Rudd, Barnett, Butson, Farrow, Berry & Polman, 2015). There is evidence that in Australia most students may now leave primary school physical education with deficits in fundamental movement skill attainment (Active Healthy Kids Global Alliance, 2020; Pill & Harvey, 2019).

Primary school PE is a contested space with the quality of school programs continually questioned while acknowledging the difficulties of delivering what is an important but not necessarily a priority subject (Hyndman et al., 2019). While all learning areas, along with general capabilities, are considered critical to student learning, research (e.g., Gaudreault, Richards & Woods, 2018; Richards, Templin & Graber, 2014) has noted education stakeholders ascribe higher status to subjects such as maths and science which are considered more academically rigorous and more centrally aligned to the academic priorities of the school. Additionally, the requirement for all Australian students in Year 3, 5, 7 and 9 students to undertake annual standardised tests in literacy and numeracy has narrowed the curriculum to focus on testable content (Bleazby, 2015) and marginalised other, traditionally lower status learning areas such as HPE which are often not afforded the priority and time allocation they require (Cruickshank, Hyndman, Patterson & Kebble, 2020; Curry, 2012).

In most Australian states, historically, the classroom teacher has been responsible for delivery of primary school PE unless the school decides to employ a specialist teacher to take PE and give the classroom teacher non-contact time for marking, preparation and administration (Morgan & Hansen, 2007; Pill, 2007). Barriers to class teacher delivery of PE include inadequate pre-service preparation (Dinham & Williams, 2019), 'crowded curriculum' expectations on subject coverage, knowledge and priorities, confidence to teach physical education, low expectations and value placement on PE, and a preference for teaching subjects that are 'in the classroom' (Jenkinson & Benson, 2010; Usher, Anderton & Ellis, 2014). Class teachers often report they would prefer to teach other learning areas in preference to physical education and agree that 'specialist teachers' should be involved in the teaching of physical education. Specialist teachers of physical education in primary schools face the additional challenge of insufficient time allocation to deliver the curriculum (Morgan & Hansen, 2007; Pill, 2007; Sloane, 2010). Qualification and preparation to teach PE are also barriers to quality PE in primary schools (Lynch & Soukup Sr, 2017).

While some teachers and school administrators have expressed concern that time allocated to PE will affect literacy and numeracy attainment, there is no evidence that schools with relatively high PE time disadvantage students in subjects considered more academic (Dollman, Boshoff & Dodd, 2006). Despite the absence of evidence, PE has a history of marginalisation in many countries in primary schools to accommodate the demands of other learning areas (Brown, Lewis, Murtagh, Thorpe & Collins, 1999; Fox & Harris, 2003; Marshall & Hardman, 2000), contradicting consistent evidence of gains in

academic attainment with exposure to structured physical activity in schools (Dollman et al., 2006). PE in Australian schools has faced a history of persistent challenges in curriculum implementation and status (Pill, 2016; Tinning, 2010).

Teaching for effective learning

Contemporary interest in PE is not only on increased provision but also on 'teaching for effective learning' of 'quality' PE programs (Light, Curry & Mooney, 2014; Pill, 2011; UNESCO, 2015; Williams & Pill, 2019). Teaching for effective learning, which underpins the provision of quality PE is dependent on the teachers responsible for the organisation and delivery of the curriculum. In the Australian context, the AC:HPE is informed by an Arnoldian perspective (Arnold, 1979) suggesting PE is more than the provision of movement contexts and physical activity, it is deliberately constructed learning environments for education in movement, about movement, and through movement (ACHPER, 2009; Williams & Pill, 2019).

Research has noted the use of blended learning, exergames and flipped classrooms in PE (e.g., Hinojo Lucena et al., 2020; Pedersen, Cooley & Cruickshank, 2017; Webster, Coe & Cruickshank, 2017), yet, little is known about the delivery of fully online school PE. School of the Air provides distance education in Australia through online delivery to children living in remote and isolated situations with course material linked to the Australian Curriculum or where relevant the state derivative of that curriculum. Author 2 (Shane Pill) has experience advising School of the Air PE teachers with meaningful physical education curriculum delivery. In higher education settings, online delivery is relatively common, with synchronous and asynchronous delivery the subject of research consideration. In the PE setting, Hyndman (2017) investigated engaging generalist pre-service teachers with practical learning components via online platforms in PE through asynchronous online delivery. Relevant to schools, Watson (2008) suggested, "online learning offers the advantage of personalization, allowing individualized attention and support when students need it most" (p. 2).

Into the already complex situation that is the provision of teaching for effective learning in primary school PE, schools in Australia were forced into online only in Term 2, 2020, due to measures taken to suppress and restrict the spread of Covid-19. The aim of this study was to investigate the effects on the educative purpose of PE when primary school teachers are forced into an online delivery of the curriculum. Students were required to study online from home for 10 weeks, with schools only being 'open' to families of essential workers who continued in the workforce while the rest of the population were under work from home requirements. Within this socio-historical context, the formulation of the research problem was informed by the context that we know little about: provision of primary/elementary school PE curricula by online delivery. It is important to know more about this phenomenon to inform future situations like that experienced by Covid-19 suppression measures as well as existing distance education by online delivery.

Participants taught in primary schools in the state of Tasmania. Tasmanian schools deliver the AC:HPE (ACARA, 2020). This common curriculum framework sets out the

objectives of the curriculum via five key propositions to guide teacher planning and the 12 content focus areas, curriculum content divided into two strands of learning described by elaborations of student performance from which teachers can plan and implement student learning experiences, and assessment expectations via descriptions of student achievement standards to be met by Grades 2, 4, 6, 8 and 10.

Physical education online during Covid-19

Research is beginning to emerge on the experience of teaching PE online during Covid-19 suppression measures. It is appearing that few if any guidelines are being provided to teachers by education departments, teachers are finding out 'what works' by 'trial and error', many PE teachers miss the face-to-face interaction with students, and often new teaching skills need to be cultivated. During online schooling, children were more likely to use remote/streaming services for activity classes and lessons (Dunton, Do & Wang, 2020; Jeong & So, 2020).

Method

The study adopted an interpretive perspective based on the assumption that the social reality of teaching physical education online is not singular or objective, but is shaped by human experiences and social contexts (ontology). As a social reality, the human experience of teaching physical education online during Covid-19 suppression measures was therefore able to be studied within its socio-historic context by interpreting the individual experiences of participants (epistemology). Consistent with an interpretive perspective, qualitative methodology was used to collect and analyse data from the participants appropriate to our interest in the thoughts and feelings of the participants (Gratton & Jones, 2004).

Participants

This article reports on the experiences of eleven Tasmanian HPE specialist teachers (7 male, 4 female) with an average age of 35.6 years (+/- 8.6), and an average of 11.6 years teaching experience (+/- 8.4). Participants taught in co-educational primary schools across a variety of Tasmanian locations.

Procedures

Primary school HPE specialists were contacted through their school principals and invited to participate in semi-structured interviews which focused on their experiences of teaching HPE during Covid-19 suppression measures. All interviews were conducted through *Zoom* as Covid-19 suppression measures were still in place when interviews were conducted during April and May 2020. The questions (Appendix A) were developed specifically for this study but were informed by the extant literature on the challenges teaching primary/elementary PE and blended and online learning in education. As a semi-structured interview, the direction of the interview was led primarily by the experiences and views shared by the participant, with the interviewer clarifying questions as required.

Interviews lasted approximately 20 minutes on average. The decision to cease interviews after conducting eleven was based on clear and recurrent themes emerging from the participant responses to questions, thus a point of saturation was reached at this time (Saunders et al., 2018).

All interviews were audio-recorded and transcribed by Author 1 before being returned to participants to check for accuracy and add additional explanatory information if required. All interview participants added clarification and additional material to their transcripts using track changes before sending the document back. Member checking is an important strategy for minimising researcher bias (Berger, 2015), and was undertaken to try and ensure that the collection and representation of data was done in a way that authentically represented the voices of participants.

Ethics permission statement

This study was approved by the University of Tasmania Social Sciences Research Ethics Committee (Approval Number H18190).

Data analysis

The qualitative data provided by the interviews was interpretively analysed, recognising that the social reality of PE teaching is embedded within and impossible to abstract from its social settings, and so the researcher interprets the reality though a sense-making process (Bhattacherjee, 2020). An inductive approach was employed, beginning with a set of empirical observations, seeking patterns in those observations, and then theorising about those patterns (DeCarlo, 2018).

The qualitative data used in this paper was considered as a single data set to gain an impression of the 'whole picture' of the studied phenomenon. Author 2 undertook an initial analysis, firstly by an initial reading to allow insight and understanding to develop. Following the initial reading, lines of data were coded to allow regularities or similarities to be recognised. The coding was an iterative process in which priority was given to the data, but understanding was inevitably facilitated by the previous understanding developed in the initial reading (Elliott & Timulak, 2005). Author 1 then reviewed the single data set and coding, and further delineated the codes and the relationships between the codes. Author 1 and 2 continued this process of review and refinement until there was agreement on main findings that communicated the essence of the phenomenon that could be tracked back to the data (Elliott & Timulak, 2005) . Indicative quotes have been chosen for brevity, yet other participants also gave similar responses.

Results

This article articulates specialist primary PE teachers' experiences of teaching PE online during Covid-19 suppression measures. As indicated in Table 1, analysis of teachers' experiences led to the emergence of three key themes:

1. *PE did not happen*, but, in most cases, was altered to physical activity/fitness or marginalised to just be a movement break between subjects with higher status and priority;
2. *Online learning platforms* are already used by schools, but not with consistency. Using them to teach PE can be a lot of work and teachers had varying levels of confidence and inclination to use them;
3. *Connection* is an important part of teaching, teachers preferred to connect with their students face to face and had concerns about delivery of feedback and student engagement online.

Table 1: Themes, sub themes and example quotes

Theme	Sub theme	Example quotes
PE did not happen	PA not PE	Health and PE, as most people know it, definitely has not occurred. We've kind of taken the route of just keeping people physically active. So, it is definitely not like a normal PE lesson. I have just sent out a daily fitness challenge every single day of the week. There is skipping, running, jumping, throwing a ball, etc. I will get them out doing a bit of a run and then go back in and do schoolwork for 45 minutes just to get them active. One [activity] was they needed to get their heart rate to 200, I don't care how you do it but you've just got to do it. And then a lot of workout videos and whatnot, just physical challenges to get them out and about. I just did a P-2 task card and a 3-6 task card with activities on it. I provided the 3-6s with a fitness workout like climb [upstairs] Mount Everest and back down, spell your name workouts, so kind of just little activities where the kids were just able to sort of have a break and just do some physical activity.
	Marginal-isation of PE	I just did a two-and-a-half-minute video with a movement phase. So, it could be as quick as a brain break or get up and move you have sat on your computer for an hour from nine o'clock to 10 o'clock, at 10 o'clock, you're up, and you do this. I have got them doing a small fitness challenge or a little run, then back in and do some schoolwork, but it is not explicit teaching of any skills. It is literally just a babysit kind of thing I think, to give the teachers a break. I have run a *Zoom* and my numbers have been good. So that is reassuring. Because I did make it an optional *Zoom*, because the kids are doing so many *Zooms*.
Online platforms	Confid-ence	I started doing a bit of online teaching in term one just to get a less paper going through the school. So, it is doing okay, I am struggling to be on the computer all the time. I was like a duck on water, my feet were like how am I going to do this? Because I am not the online queen. I was pretty confident. I use a lot of technology in my class anyway.

Theme	Sub theme	Example quotes
	Workload	It would have been a Mount Everest for me to set up all the *Dojo* accounts, all the classes on *Seesaw*, and all the classes on *Teams*, yeah. And then to do, you know, an infant or an early childhood video, a you know, grade 2/3/4 sort of video and then a 5/6 one and disseminate it all. Anyone that sends in a photo of them undertaking, our timed run or an obstacle course, you know, they sort of would expect naturally some sort of feedback or a tick.
	Varied use	I do one video, I'll start with like a medium and you can work backwards from that to make it easier for you or I can give some ideas to make it an extension to make it harder for the other kids. So, we've uploading it to *Seesaw* and *Teams*. I've got the activity grid; we have a quick read of it and pick something and we go and do it. And I sort of feel like, do we need to spend 20 minutes taking a photo of it? Is that what movement and physical activities are about, logging onto your computer?
Connection	Relation-ships	Nothing can replace face to face contact in our sphere, you need that face to face contact, you need explicit instructions. Some days you think if this and if that, but it does really give you an appreciation for the job that we are in and the effect that we do have on these kids. When they go home their parents can't get an ounce of work out of them. But when they come to school, we know they are here and keen to get into it.
	Feedback	They are not getting proper feedback on their work, yeah, they are not even getting an assessment because you can't assess things that they do at home. In terms of the feedback side of things, that is probably the bit that has been the most difficult. The actual feedback process online is a lot more efficient than being in the classroom and having a stack of books to try and get through.
	Engage-ment	There are activities to do depending on what grade you are in, but whether or not they actually do that is another question. I have been getting videos of obstacle courses and pictures of doing push ups and stuff like that. We are pretty lucky that the kids here are pretty keen to jump on and just be active. We have obviously got kids that aren't engaging.

Discussion

The results suggest that for these teachers, the influence of Covid-19 forcing school curricula delivery online was (further) marginalisation of expectations for PE. As outlined in the introduction, PE is already recognised in the literature as a valued but not necessarily priority focus of learning, especially in primary schools. The 'everyday pragmatics' (Pill, 2016) of the primary school teacher responsible for PE delivery understandably were challenged and changed in the need to move teaching online. However, the significant degree of contradiction between the value of PE and the provision of PE as a vague notion of physical activity accumulation (Pill, 2016) became

accentuated during this period. The departure of the education in physical education became acceptable as physical activity accumulation was pursued. The following discussion explores this development through the three themes identified from the qualitative interpretive analysis.

PE did not happen

The most prominent theme evident in participant responses was that PE did not happen. A focus on educative purposes is one of the five interrelated propositions that shaped the writing of the AC:HPE. Yet, most participants noted that the 'E' in PE had not occurred, but rather that PE had been marginalised and been replaced with physical activity (PA) tasks and in some cases online fitness activities. While participants 7 and 9 mentioned the sharing of activities within their teacher networks, it appeared that, consistent with previous findings (Jeong & So, 2020), most participants developed their own activities utilising a trial and error approach. Online fitness videos can be a great resource for young people wanting to increase their movement levels during isolation, to accumulate sufficient physical activity through the day for healthy growth and development. However, PA provision of itself is not PE and HPE teachers are not personal trainers (Pill, Cruickshank & Hyndman, 2020). Despite indicating an awareness of the difference between PE and PA, participants made comments such as "if children are out on the beach, riding a bike or on a trampoline, as long as they've done something physical every day I'm happy with that" (Participant 6) and "I've set my expectations pretty low. But the main aim is that I want kids moving every day" (Participant 7).

While students being active outside should be encouraged, particularly in light of recent research (Dunton et al., 2020) noting PA decreases during Covid-19, this PA should be undertaken in addition to PE lessons where students can be taught concepts such as health literacy and critical inquiry, and provided with ideas and feedback on how to refine movement patterns. This educative focus plays an important role in children becoming 'competent' in being active. Put simply, 'education' in and about movement allows a child's 'competence' to be developed, one of the three C's which provide incentives for children to be physically active: competence, confidence and choice (Pill & Harvey, 2019). Encouragingly, some participants did specifically refer to teaching skills, for example "my year 2 class and my year 3s I'm giving explicit throwing and kicking skills to do" (Participant 8) and "I've always put things like ball skills, so trying to get them to do a trick shot or a target game" (Participant 11). Overall, however, there was a struggle to find 'the E in PE' in the teachers' descriptions of subject delivery, with noticeably the HPE Curriculum Framework (ACARA, 2020) not mentioned by anyone during interviews. It is apparent that in general, teaching perspectives gave way to activity prescription and promotion.

The marginalisation of the HPE learning area can be seen in participant comments around PE being optional or used as a break between other subjects, both at school and online. For example "I've posted not necessarily explicit activities, but they're more like on mini brain breaks that they can get out and do" (Participant 9) and "I provided the 3-6s with a fitness workout like climb Mount Everest and back down, just little activities where the

kids were just able to have a break and just do some physical activity" (Participant 1) . Further research is required to understand if teachers decided this was their best option in the limited time they had to prepare activities or if they were complying with a school decision to prioritise other learning areas.

PE also appeared to be marginalised for those students who continued to attend school face to face. Participant 9 stated:

> I've got them doing a small fitness challenge or a little run, then back in and do some schoolwork, but it's not explicit teaching of any skills. It is literally just a babysit kind of thing I think, to give the teachers a break.

This comment appears to indicate that PE was not given adequate time or priority for students at school during Covid-19 suppression measures. This finding aligns with previous research (e.g., Cruickshank et al., 2020, Gaudreault et al., 2018) that has noted PE is afforded lower priority, status and time allocation than other subjects such as maths and science which are considered more academically rigorous.

The AC:HPE aims for students to develop the skills and dispositions necessary for lifelong participation in physical activities (Humphrey & Cruickshank, 2018). Substituting PA for PE long term is going to be highly detrimental to this aim. However, it is important to acknowledge that expectations on teachers during Covid-19 suppression measures are unprecedented in living memory. Teachers were given very little time to prepare online content and very little professional development to teach online. They were often simultaneously teaching online and teaching children of essential workers face to face, all while having to deal with the effects of the suppression measures on their personal lives. It is unrealistic to expect PE teachers to have developed a high-quality online PE program while dealing with all the professional and personal intricacies of this extraordinary situation. It could be considered that expectations of a high-quality online PE program were unrealistic and a focus on PA accumulation was perceived to be a temporary move until suppression measures had eased and teaching returned to normal. However, in Australia the quality of provision of primary school PE was already questioned, suggesting that the E in PE could be historically more rhetoric than reality.

Online learning platforms

Many schools across Tasmania use online platforms such as *Seesaw, Canvas* and *Google Classrooms* as a part of teaching and learning, and communication with parents. Participant comments indicated an increased use of these platforms by classroom teachers during Covid-19, but not always by PE teachers. For example, Participant 4 stated, "I have got students on Google Classroom, and I've made a Google slideshow each week. I've videoed myself or the kids here doing different skills and then that's all been accessible to them anytime", whereas Participant 5 noted, "I haven't had to actually get onto Canvas and set anything up, which is good. I just send it out to the class teacher and then they've been disseminating". Further research is needed to understand if these contrasting experiences are related to school directives or personal levels of confidence and experience with technology.

Most participants appeared to be confident users of technology, yet some did not believe they should be using it for PE. Numerous participants made comments such as "I didn't want kids to have to log into a device every day and see what I'm posting them to do" (Participant 10). and "My tasks are things that get kids off the devices and outside" (Participant 8). These PE teachers seemed to be concerned about the amount of time students were spending online for their other learning areas and therefore did not want to add more online activities for PE. These teacher concerns have been noted by previous research (e.g., Adelantado-Renau et al., 2019; Robinson & Borzekowski, 2006). It appeared this was a conscious decision motivated by apprehension at the level of screen time students were experiencing while learning online. This concern might go some way to explaining why some teachers chose to prioritise movement accumulation by setting physical activity tasks that would require students to get off their laptops.

With respect to specialist or 'key teachers' of PE in primary schools, it is not uncommon for PE specialist teachers who take the primary school class while the class teacher is on a non-instructional time for planning, administration and assessment tasks, to teach across multiple primary schools so that they have the equivalent of a full time teaching load (Turner, Johnson, Calvert & Chaloupka, 2017). Some participants in this study who are in this situation noted that a lack of consistency in the online platforms used across schools, and sometimes even within schools, could incur a lot of work for specialist teachers, as they had to adapt to different delivery media. For example, Participant 3 noted:

> I wasn't asked to do videos and to tell you the truth, I wasn't jumping at it because as a specialist teacher, I have to communicate with every class there and one class is on Seesaw, one class is on Dojo, one class is on Microsoft Teams, so I've got to be across using three different online learning platforms, you know, to quite a proficient level. It would have been a Mount Everest for me.

The increased work required to become proficient with multiple learning platforms would have been a complex undertaking for primary PE specialists, even without having to grapple with how best to transfer their learning area online. Faced with this situation, it is unsurprising that some participants elected to disseminate relevant information and tasks through classroom teachers. This reduced their interaction and surveillance of student participation and achievement in PE during this time, as the class teachers were more proficient in the one learning platform they used with their class. If required to be teaching PE online again in the future, a consistency in adoption of learning management systems across Tasmanian primary schools would make the task of the specialist subject teacher much easier, when working across multiple sites.

Interestingly, those participants who interacted with their students via videos noted that using online platforms resulted in an increased workload, even if classes did all use the same platform, as Participant 11 noted:

> I'm giving myself a lot of work because I'm uploading the video to the 15 classes which I teach so it goes out to all 300 children. And they can write back to me, those first two weeks every day, I had over 100 children respond. So, I've been on my computer the whole time responding to the children and watching their videos. Some go for 12 seconds some go for a minute and 40.

Using PE videos is a sensible solution to the challenge of online delivery, but teachers do need to be aware of the time required to give feedback. The potential is there for the video delivery to become a 'busy, happy, good' provision (Placek, 1983). The intensification of workload for teachers committed to quality PE through teaching for effective learning strategies (Light, Curry & Mooney, 2014; Pill, 2011; Williams & Pill, 2019) was evident during the Covid-19 suppression requirement for schools to move to online learning delivery. We acknowledge that the process of becoming physically educated is not straightforward and is not confined to the subject called PE, as the process of becoming physically educated is essentially about engagement in movement experiences that have meaning. This can occur 'in the backyard' with a parent, at a sport club, or in PE. However, while game play and PA accumulation is inherent in PE, PE is an educational process of meaning making providing 'growth' of movement ability (Siedentop, 1972).

Connection

Connecting with students is an important part of being a teacher (Gillespie, 2005). Participants showed a definite preference for face to face delivery and the relationship with students that comes from this context and made comments such as: "the most enjoyable part of the job's not there anymore" (Participant 2) and "kids also missed all their social integration" (Participant 10). These and other comments indicated both a concern for students missing the social benefits of learning together and working within a team, and their personal feelings related to missing their students. The 'learning with others' and the intra and inter-personal social skills development possibilities that come from PE teachers who deliberately plan for personal and social skills learning in PE, connects with the education through movement dimension of the Arnoldian perspective (Arnold, 1979) that frames the AC:HPE.

Participant comments indicated differing opinions on the delivery of feedback and student engagement online. While engagement in online learning can be dependent on factors such as a stable Internet connection (Lester & Perini, 2010) and parent engagement (Nash et al., 2020) the contrasting comments surrounding feedback (e.g., on fundamental motor skills) may indicate deeper differences in beliefs around effective pedagogy. For example, similar to recent research findings (Jeong & So, 2020), Participant 8 stated that "the feedback has been given so far after the activity that it's not really valid", whereas Participant 2 asserted that "I think that type [comments on online posts] of feedback appeals to them [students] a little bit more than say a comment in a book or you know, a red pen tick or cross sort of thing". Teachers are not one homogenous group and consequently have a variety of opinions on teaching related topics such as effective feedback (Zacharias, 2007). Being required to adapt and change their teaching approaches during Covid-19 suppression measures may have allowed teachers to see that there are other ways of doing things, and this may influence how they teach when they return to face to face delivery.

Considering the sub-theme of engagement, while participants predominantly detailed the challenges of adapting their PE program for online delivery, several participants shared

anecdotes of positive experiences with student engagement that had emerged during the move to online delivery. For example:

> We had a virtual cross country, nearly 95% of the kids at school were running cross country and you know, even kinders were running two to three kilometres when traditionally they only run 800m (Participant 8).

> Some of our kids have got into really good habits with their family, they have been doing some PE with Joe or one of the apps that I've sent every day. And you know, some of the families they weren't doing it before, so I think it has been quite good, that extra time, for some kids (Participant 10)

These comments indicated an increase in PA for some students and their families. Exercise was one of the few reasons that Tasmanians were permitted to leave their homes during isolation (Maloney, 2020), so it is important to acknowledge that some families may have increased their PA levels due to boredom and 'cabin fever'. Nevertheless, these comments indicated that online delivery of PE did have some benefits for students and their families, which teachers may be able to build on in the future as parents' self-determination and motivation are key initiators of their potential to stimulate their children's physical activity provision. PE that provides family based PA interventions that help parents identify personal value in physical activity while avoiding the use of external control or coercion to motivate behaviour, may be beneficial for both adult and child physical activity behaviour (Solomon-Moore et al., 2017).

Practical applications from the findings

A focus on PA accumulation during Covid-19 suppression measures was perceived by participants to be a temporary move until suppression measures had eased and teaching returned to normal. Despite this perception, several recommendations can be made for PE teachers presented with a similar situation in the future. PE teachers might need to 'flip their classroom' by setting content and activities for students to do, both individually and in groups, and then, to avoid marginalisation, arguing for the importance of a scheduled *Zoom* session (or similar) each week (at the normal timetabled time) when they can ensure the 'E in PE' is present by, for example, providing immediate feedback on student skill performance (on skills that students have been practising at home) and leading class discussions on the importance of health literacy and the five dimensions of health.

Limitations of this study

Some caution should be employed when considering these findings, as data collection was from a relatively small sample in one Australian state. Generalising beyond the sample is difficult, with the organisation of Australian schools, their staff and their curriculum being the responsibility of the Departments of Education in each state. Different states may have different priorities which could affect staff arrangements and curriculum delivery. This study could be replicated on a much larger scale to collect more representative data that can be used to make inferences about teaching PE online and the issues teachers face

when doing so. Including the views of other stakeholders such as classroom teachers, students, parents and school leaders would also be beneficial for identifying the obstacles to a high-quality online PE program and who (e.g., teachers, parents, school, government) is responsible for different aspects of this shared challenge.

Conclusion

PE retreated from educationally defensible formats to become PA provision as an opportunity to break sedentary time and expend some energy. Where an educative perspective was attempted, it was primarily through the use of video analyses of student work. This added to the workload of teachers as teaching PE became more time consuming when videos had to be reviewed to monitor each child's participation and potential progress, and also used formatively to assist teachers' planning for future lessons. Overall, the Covid-19 situation appeared to amplify the marginalisation of PE, as it became less emphasised as an educational endeavour. Future research could consider focusing on the design and implementation of online approaches to PE that include a more educative approach.

References

Active Healthy Kids Global Alliance (2018). *The Global Matrix 3.0 on physical activity for children and youth*. https://www.activehealthykids.org/global-matrix/3-0/

Adelantado-Renau, M., Moliner-Urdiales, D., Cavero-Redondo, I., Beltran-Valls M. R., Martínez-Vizcaíno, V. & Álvarez-Bueno, C. (2019). Association between screen media use and academic performance among children and adolescents: A systematic review and meta-analysis. *JAMA* Pediatrics, 173(11), 1058-1067. https://doi.org/10.1001/jamapediatrics.2019.3176

Arnold, P. J. (1979). *Meaning in movement, sport and physical education*. London: Heinemann.

Australian Council for Health, Physical Education and Recreation (ACHPER) (2009). *The ACHPER national statement on the curriculum future of health and physical education in Australia*. Hindmarsh, SA: ACHPER. https://www.achper.org.au/documents/item/75

Australian Curriculum, Assessment and Reporting Authority. (2012). *The shape of the Australian curriculum: Health and physical education*. Sydney, NSW: Australian Curriculum, Assessment and Reporting Authority. http://www.acara.edu.au/verve/_resources/Shape_of_the_Australian_Curriculum_Health_and_Physical_Education.pdf

Australian Curriculum, Assessment and Reporting Authority (2020). *Australian curriculum: Health and physical education*: *Structure*. https://www.australiancurriculum.edu.au/f-10-curriculum/health-and-physical-education/structure/

Berger, R. (2015). Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. *Qualitative Research*, 15(2), 219-234. https://doi.org/10.1177/1468794112468475

Bhattacherjee, A. (2020). Chapter 12 Interpretive Research. In *Research methods for the social sciences*. Lumen. https://courses.lumenlearning.com/atd-herkimer-researchmethodsforsocialscience/

Brown, R., Lewis, F., Murtagh, M., Thorpe, S. & Collins, R. (1999). *100 Minutes project: Researching PE and Sport in DETE schools*. Adelaide, SA: Flinders University of South Australia.

Council of Australian Governments Education Council (2019). *Alice Springs (Mparntwe) Education Declaration*. Carlton South, VIC: Education Services Australia. http://www.educationcouncil.edu.au/Alice-Springs--Mparntwe--Education-Declaration.aspx

Cruickshank, V., Hyndman, B., Patterson, K. & Kebble, P. (2020). Encounters in a marginalised subject: The experiential challenges faced by Tasmanian health and physical education teachers. *Australian Journal of Education*, online first. https://doi.org/10.1177/0004944120934964

DeCarlo, M. (2018). *Scientific inquiry in social work*. Open Social Work Education. https://open.umn.edu/opentextbooks/textbooks/591

Decorby, K., Halas, J., Dixon, S., Wintrup, L. & Janzen, H. (2005). Classroom teachers and the challenges of delivering quality physical education. *The Journal of Educational Research,* 98(4), 208-221. https://doi.org/10.3200/JOER.98.4.208-221

Dinham, J. & Williams, P. (2019). Developing children's physical literacy: How well prepared are prospective teachers? *Australian Journal of Teacher Education,* 44(6), 53-68. https://doi.org/10.14221/ajte.2018v44n6.4

Dollman, J., Boshoff, K. & Dodd. G. (2006). The relationship between curriculum time for physical education and literacy and numeracy standards in South Australian primary schools. *European Physical Education Review,* 12(2), 151-163. https://doi.org/10.1177/1356336X06065171

Dunton, G. F., Do, B. & Wang, S. D. (2020). Early effects of the COVID-19 pandemic on physical activity and sedentary behavior in children living in the U.S. *BMC Public Health,* 20, article 1351. https://doi.org/10.1186/s12889-020-09429-3

Elliott, R. & Timulak, L. (2005). Chapter 11. Descriptive and interpretive approaches to qualitative research. In J. Miles & P. Gilbert (Eds.), *A handbook of research methods for clinical and health psychology*. Oxford: OUP. https://www.oxfordclinicalpsych.com/view/10.1093/med:psych/9780198527565.001.0001/med-9780198527565 [also http://nideffer.net/classes/GCT_RPI_S14/readings/interpretive.pdf]

Fox, K. & Harris, J. (2003). Promoting physical activity through schools. In J. McKenna & C. Riddoch (Eds.), *Perspectives on health and exercise* (pp. 181-201). Basingstoke: Palgrave Macmillan. https://www.macmillanihe.com/page/detail/perspectives-on-health-and-exercise-chris-riddoch/?k=9780333787007

Gaudreault, K. L., Richards, K. A. R. & Woods, A. M. (2018). Understanding the perceived mattering of physical education teachers, *Sport, Education and Society*, 23(6), 578-590. https://doi.org/10.1080/13573322.2016.1271317

Gillespie, M. (2005). Student-teacher connection: A place of possibility. *Journal of Advanced Nursing,* 52(2), 211-219. https://doi.org/10.1111/j.1365-2648.2005.03581.x

Gratton, C. & Jones, I. (2004). *Research methods for sport studies*. New York: Routledge. [3rd ed.] https://www.routledge.com/Research-Methods-for-Sports-Studies-Third-Edition/Gratton-Jones-Jones/p/book/9780415749336

Hinojo Lucena, F. J., López Belmonte, J., Fuentes Cabrera, A., Trujillo Torres, J. M. & Pozo Sánchez, S. (2020). Academic effects of the use of flipped learning in physical

education. *International Journal of Environmental Research and Public Health,* 17(1), 276. https://www.mdpi.com/1660-4601/17/1/276

Humphrey, A. & Cruickshank, V. (2018). Encouraging students to be active and healthy for life. *Active + Healthy Journal,* 25(1), 10-13. https://www.achper.org.au/products/volume-25-issue-1/encouraging-students-to-be-active-and-healthy-for-life

Hyndman, B. P. (2017). A simulation pedagogical approach to engaging generalist pre-service teachers in physical education online: The GoPro Trial 1.0. *Australian Journal of Teacher Education,* 42(1), 84-102. https://doi.org/10.14221/ajte.2017v42n1.6

Hyndman, B. & Pill, S. (2017). What's in a concept? A Leximancer text mining analysis of physical literacy across the international literature. *European Physical Education Review,* 24(3), 292-313. https://doi.org/10.1177%2F1356336X17690312

Hyndman, B., Suesee, B., McMaster, N., Harvey, S., Jefferson-Buchanan, R., Cruickshank, V., Barnes, M. & Pill, S. (2020). Physical education across the international media: A five-year analysis. *Sport, Education and Society,* 25(3), 274-291. https://doi.org/10.1080/13573322.2019.1583640

Jenkinson, K. A. & Benson, A. C. (2010). Barriers to providing physical education and physical activity in Victorian state secondary schools. *Australian Journal of Teacher Education,* 35(8). https://doi.org/10.14221/ajte.2010v35n8.1

Jeong, H-C. & So, W-I. (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. https://doi.org/10.3390/ijerph17197279

Kohl, H. W. & Cook, H. D. (Eds.) (2013). *Educating the student body: Taking physical activity and physical education to school.* Washington, DC: The National Academies Press. https://doi.org/10.17226/18314

Le Masurier, G. & Corbin, C. B., (2006). Top 10 reasons for quality physical education. *Journal of Physical Education, Recreation & Dance,* 77(6), 44-53. https://files.eric.ed.gov/fulltext/EJ794467.pdf

Lester, J. & Perini, M. (2010). Potential of social networking sites for distance education student engagement. *New Directions for Community Colleges,* 2010(150), 67-77. https://doi.org/10.1002/cc.406

Light, R., Curry, C. & Mooney, A. (2014). Game Sense as a model for delivering quality teaching in physical education. *Asia-Pacific Journal of Health, Sport and Physical Education,* 5(1), 67-81. https://doi.org/10.1080/18377122.2014.868291

Lynch, T. & Soukup Sr, G. J. | (2017). Primary physical education (PE): School leader perceptions about classroom teacher quality implementation. *Cogent Education,* 4(1), 1348925. https://doi.org/10.1080/2331186X.2017.1348925

Maloney, M. (2020). Tasmanian households ordered to go into lockdown for four weeks due to coronavirus pandemic. *The Examiner*, 30 March. https://www.examiner.com.au/story/6704057/tasmanian-households-to-be-in-lockdown-for-month/

Marshall, J. & Hardman, K. (2000). The state and status of physical education in the international context. *European Physical Education Review,* 6(3), 203-229. https://doi.org/10.1177/1356336X000063001

Ministerial Council on Education, Employment, Training and Youth Affairs (2008). *Melbourne Declaration on Educational Goals for Young Australians*. Carlton South, VIC: Curriculum Corporation. http://www.curriculum.edu.au/verve/_resources/National_Declaration_on_the_Educational_Goals_for_Young_Australians.pdf

Morgan, P. & Hansen, V. (2007). Recommendations to improve primary school physical education: Classroom teachers' perspective. *The Journal of Educational Research,* 101(2), 99-108. https://doi.org/10.3200/JOER.101.2.99-112

Nash, R., Cruickshank, V., Flittner, A., Mainsbridge, C., Pill, S. & Elmer, S. (2020). How did parents view the impact of the curriculum-based *HealthLit4Kids* program beyond the classroom? *International Journal of Environmental Research and Public Health,* 17(4), 1449. https://doi.org/10.3390/ijerph17041449

Pedersen, S. J., Cooley, P. D. & Cruickshank, V. J. (2017). Caution regarding exergames: A skill acquisition perspective. *Physical Education and Sport Pedagogy,* 22(3), 246-256. https://doi.org/10.1080/17408989.2016.1176131

Pill, S. (2007). Junior primary/primary pre-service teachers' perceptions of their work as effective teachers of physical education. *Healthy Lifestyles Journal* 54(3/4), 25-31. https://www.researchgate.net/publication/274639268_Junior_PrimaryPrimary_pre-service_teachers%27_perceptions_of_their_work_as_effective_teachers_of_physical_education

Pill, S. (2011). Seizing the moment: Can game sense further inform sport teaching in Australian physical education? *Revue phénEPS-PHEnex Journal,* 3(1), 1-15. https://ojs.acadiau.ca/index.php/phenex/article/view/1327

Pill, S. (2016). Exploring challenges in Australian physical education curricula past and present. *Journal of Physical Education & Health,* 5(7), 5-17. http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.desklight-9e44700e-3487-4a0d-8890-11234c22a4e5/c/1._Shane_Pill__s._5-17.pdf

Pill, S., Cruickshank, V. & Hyndman, B. (2020). Physical education during self-isolation: maintaining the 'E' in PE. *Education HQ News*, 14 April. https://educationhq.com/news/physical-education-during-self-isolation-maintaining-the-e-in-pe-75994/

Pill, S. & Harvey, S. (2019). A narrative review of children's movement competence research 1997-2017. *Physical Culture and Sport. Studies and Research,* 81(1), 47-74. https://doi.org/10.2478/pcssr-2019-0005

Placek, J. (1983). Conceptions of success in teaching: Busy, happy and good? In T. Templin & J. Olson (Eds.), *Teaching in physical education* (pp. 46-56). Champaign, IL: Human Kinetics.

Richards, K. A. R., Templin, T. J. & Graber, K. (2014). The socialization of teachers in physical education: Review and recommendations for future works. *Kinesiology Review*, 3(2), 113-134. https://doi.org/10.1123/kr.2013-0006

Robinson, T. R. & Borzekowski, D. L .G. (2006). Effects of the SMART classroom curriculum to reduce child and family screen time. *Journal of Communication*, 56(1), 1-26. https://doi.org/10.1111/j.1460-2466.2006.00001.x

Rudd, J. R., Barnett, L. M., Butson, M. L., Farrow, D., Berry, J. & Polman, R. C. J. (2015). Fundamental movement skills are more than run, throw and catch: The role of stability skills. *PloS One,* 10(10), e0140224. https://doi.org/10.1371/journal.pone.0140224

Saunders, B., Sims, J., Kingstone, B., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H. & Jinks, C. (2018). Saturation in qualitative research: Exploring its conceptualization and operationalization. *Quality & Quantity,* 52(4), 1893-1907. https://doi.org/10.1007/s11135-017-0574-8

Siedentop, D. (1972). *Physical education: An introductory analysis*. Wm. C. Brown & Company.

Sloane, S. (2010). The continuing development of primary sector physical education: Working together to raise quality of provision. *European Physical Education Review,* 16(3), 267-281. https://doi.org/10.1177/1356336X10382976

Solomon-Moore, E., Sebire, S. J., Thompson, J. L., Zahara, J., Lawlor, D. A. & Jago, R. (2017). Are parents' motivations to exercise and intention to engage in regular family-based activity associated with both adult and child physical activity? *BMJ Open Sport & Exercise Medicine,* 2(1), e000137. https://doi.org/10.1136/bmjsem-2016-000137

Tinning, R. (2010). *Pedagogy and human movement: Theory, practice, research*. London: Routledge. https://www.routledge.com/Pedagogy-and-Human-Movement-Theory-Practice-Research/Tinning/p/book/9780415677349

Turner, L., Johnson, T .G., Calvert, H. G. & Chaloupka, F. J. (2017). Stretched too thin? The relationship between insufficient resource allocation and physical education instructional time and assessment practices. *Teaching and Teacher Education*, 68, 210-219. https://doi.org/10.1016/j.tate.2017.09.007

UNESCO (United Nations Educational, Scientific and Cultural Organization) (2015). *Quality physical education (QPE): Guidelines for policy-makers*. Paris, France: UNESCO Publishing. https://unesdoc.unesco.org/ark:/48223/pf0000231101

Usher, W. & Anderton, A. (2014). Giving the teacher a voice: Perceptions regarding the barriers and enablers associated with the implementation of Smart Moves (compulsory physical activity) within primary state schools. *Cogent Education,* 1(1), 980383. https://doi.org/10.1080/2331186X.2014.980383

Watson, J. (2008). *Promising practices in online learning: Blended learning - the convergence of online and face-to-face education*. Vienna, VA: North American Council for Online Learning. https://aurora-institute.org/resource/promising-practices-in-online-learning-blended-learning-the-convergence-of-online-and-face-to-face-education/

Webster, D., Coe, A. & Cruickshank, V. (2017). Lessons learned from flipping the ADP classroom. *Active + Healthy Journal,* 24(4), 25-29. https://www.achper.org.au/products/volume-24-issue-4/lessons-learned-from-flipping-the-adp-classroom

Williams, J. & Pill, S. (2019). What does the term 'quality physical education' mean for health and physical education teachers in Australian Capital Territory schools? *European Physical Education Review,* 25(4), 1193-1210. https://doi.org/10.1177/1356336X18810714

Zacharias, N. T. (2007). Teacher and student attitudes toward teacher feedback. *RELC Journal,* 38(1), 38-52. https://doi.org/10.1177/0033688206076157

Appendix A: Indicative interview questions

1. Can you explain what you/the HPE department at your school did while teaching HPE online during the time most students stayed home to self-isolate during Covid-19 suppression measures?

Potential prompt questions:

- Did you send HPE tasks home? Can you elaborate on these tasks? Did you run online webinars/classes?
- Did you adapt your face to face planning or did you have to plan unique online tasks?
- How were these tasks received? Did students engage with them?
- Was there school wide consistency in terms of what different learning areas did and what platforms they used?
- Do you think there are any advantages to teaching HPE online?
- Do you think there any disadvantages to teaching HPE online?
- Were you also required to teach some students face to face at school during this time? If yes, can you elaborate on what activities, etc. you did?

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