Making the impossible, possible. Lessons learnt to ensure embodied physical education teacher education within COVID-19 times and beyond, regardless of the learning medium

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Lessons learnt to ensure embodied physical education teacher education within COVID-19 times and beyond, regardless of the learning medium.

Kristy Howells[a]*, Alison Murray[b], Julie Pearson[c] and Emma Whewell[d]

aSchool of Psychology and Life Sciences, Faculty of Science, Engineering and Social Sciences, Canterbury Christ Church University, Canterbury, UK.

bSchool of Education, University of Roehampton, London, UK.

cThe Institute of Education, St Mary's University, Twickenham, London, UK.

dSport and Exercise, Faculty of Arts, Science and Technology, University of Northampton, Northampton, UK.

*Corresponding author - Dr Kristy Howells, kristy.howells@canterbury.ac.uk

Provide short biographical notes on all contributors here if the journal requires them.

Dr Kristy Howells - Kristy is a Reader in Sport Pedagogy and Physical Education. She lectures physical education primary teacher education. She is also a researcher who focuses on young children's physical education, physical activity, sport sciences, mental health, diet and fluid intake. She also co-leads the Early Years SIG for AIESEP. Orcid ID - 0000-0002-0758-7532 LinkedIn www.linkedin.com/in/dr-kristy-howells Twitter @KristyHowells1

Dr Alison Murray - Alison is a Senior Lecturer and Subject Lead in Primary (Elementary) Physical Education, who specialises in complexity, connectiveness and collaboration to bring

creative Physical Education to life. She is also a track and field coach and researcher in
metacognition. Orcid ID - 0000-0001-9998-7666

Dr Julie Pearson - Julie is a Senior Lecturer at St Mary's University. She is the Course Lead for
the Primary PGCE (M) PE Specialism course and for Primary PE. Her value-led research is
about developing a culture of care within educational settings, especially within PE. Orcid ID
- 0000-0002-5042-0471

Dr Emma Whewell - Emma is an Associate Professor of Learning and Teaching. She is Deputy
Subject Leader for Sport and Exercise and the Programme Leader for the Physical Education
and Sport degree. Her research focuses upon teacher identity, physical education, mental
health, digital pedagogies and active digital learning.

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Abstract

This think piece discusses and examines how four teacher educators made what seemed like the impossible, possible. Through robust analysis of Newell's (1986) theoretical framework of constraints, we focused on developing innovative, creative, meaningful ideas to continue to effectively teach primary student teachers (students) how to teach physical education. This feat was attempted and attained in the absence of facilities, often without equipment and at times solely online. Physical education is understood through an embodied lived experience. Our findings share new ways of how to use constraints as a means to proactively attend to unforeseen subject enactment. We used the lens of the individual, environmental and task constraints to have positive lived embodied experiences of physical education. We found this was possible if the learning: was student centred; involved both student choice and voice; included sense making activities; involved team building collaborative activities and facilitated required digital fluency. We offer our thoughts as contextually framing guidance. We aspire to support and inspire the next generation of teachers in teaching physical education competently and confidently through all types of learning mediums that may be required in the future.

Keywords: Physical education; Teacher education; Embodied; Collaborative.

<u>Introduction</u> 53

In this think piece, we examine the experiences of four Physical Education (PE) teacher 54
educators within the South of England, and how they share experiences to support one another, 55
to maintain a sense of reflective embodied PE within their teacher education practice, amidst 56
the varying contexts, constraints and challenges. Embodied PE is encapsulated when the body 57
is wholly connected to and immersed in the learning experience. This moves away from a 58
dualistic approach seen in natural sciences to both 'having and being our bodies' (Aartun et al., 59
2020). Nixon (2008: 10) proposed that education is critically about 'learning from one another'. 60
This collective approach occurred during COVID-19 times, however the lessons we learnt go 61
beyond the pandemic to enable sustainable PE teacher education practice to be 'possible' 62
regardless of the learning medium. Our think piece offers a sense of hope, as we share 63
experientially informed solutions collected and collated when the world felt closed and difficult 64
to navigate. 65

For clarification purposes within the think piece the phrase 'teacher educator' is used to 66
describe the practitioners from the 4 institutions who are involved in both Initial Teacher 67
Training (ITT) and Initial Teacher Education (ITE). The phrase 'teacher education' is used to 68
describe both ITT and ITE. 69

In England during 2020 and 2021, three national lockdowns impacted teacher education in an 70
unprecedented way, with providers utilising face to face taught sessions, where possible 71
alongside hybrid blended online learning as well as going entirely online. In terms of PE as a 72

subject, most learning within teacher education is embodied, experienced through in situ learning. Aartun et al. (2020) proposed that PE should be taught through pedagogies of embodiment where learners are given the opportunity to explore movements and to understand the development of body awareness and meaningful experiences. Within this type of embodied learning, students construct their learning: through joining the body and mind; through physically learning within a practical space environment; through using their own bodies; through partner work; and then through breaking down how to teach the movement they have just learnt. Embodied learning can strengthen students' confidence and competence for such a practically dynamic subject.

When the pandemic hit and the world stopped our PE and physical activity spaces were closed. Our sports facilities that we used for practical experiences, were turned into mass testing centres and then vaccination hubs overnight, leaving us practically 'homeless'. We had to learn quickly how to make the impossible, possible and how to find a new home virtually. We had to navigate such extreme disruptions, that few other primary education subject areas experienced to the same extent and find ways to ensure embodied learning continued. We had to turn PE totally virtually within a matter of days. The notion of PE becoming virtually, initially felt at the time quite *impossible*, and left us with the ultimate challenge of reconceptualising the way PE was taught and experienced.

Varea and González-Calvo (2020) described teaching PE during COVID-19 times in Spain as touchless amidst the absence of bodies. We did not want our students to miss out. PE within teacher education is deeply rooted in experiential learning, constructivism and collective

knowledge building (Caldwell, Whewell and Heaton, 2020). With those definitions in mind, 94

we set about to make certain our students would be ready to teach PE in school settings. 95

However, we had to be mindful that those school settings also changed. The majority of 96

children were learning from a home setting, some vulnerable children were still in school. 97

Furthermore, we needed to be aware of equipment that was and was not allowed to be used 98

across settings. We embraced Nixon's (2008) thoughts on change, postulating as positive 99

action, we identified and imbedded non-negotiable policy and concomitant change, to re-focus 100

upon emergent and resultant ways of developing embodied PE. To support our thinking and 101

development, we drew from Newell's (1986) theoretical framework. 102

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Materials and methods 104

Newell's (1986) theoretical framework can be utilised to illuminate and address influences 105

around motor skill development (see figure 1). As teacher educators, we are accustomed to 106

using Newell's theoretical framework of constraints with the students, to increase awareness 107

upon factors that facilitate, debilitate or pertain to movement development (Gabbard, 2021). 108

Pragmatically, it was a practicable pedagogical tool which served to guide common solution 109

focused direction within our discussions. This avoided focusing upon the presented struggles, 110

as noted by Jordan-Daus et al. (2021). We analysed each impacting constraint, through 111

reflective discursive and photographical approach. Our findings amalgamate our professional 112

reflections. Those shared by our students informed much of our decision making. Identified 113

constraints were interpreted and analysed through students' and teacher educators' (our)   114

perspectives.   115
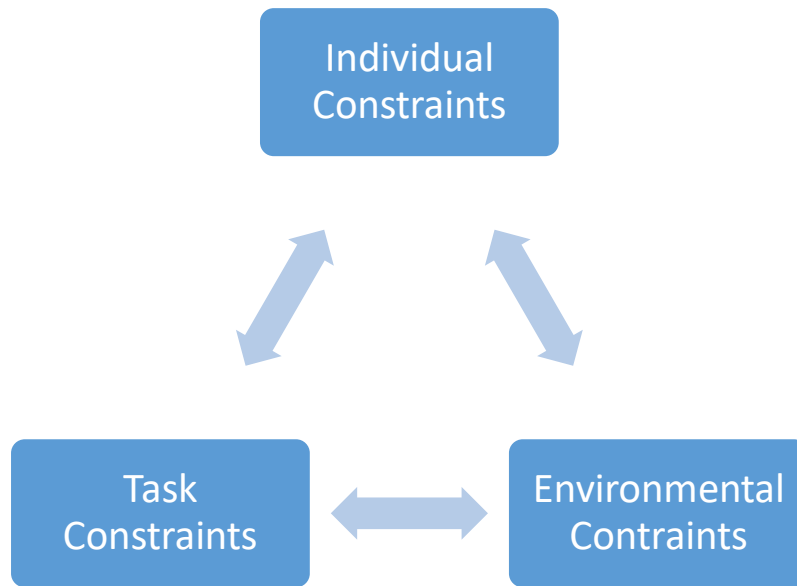
Figure 1. Newell's (1986) theoretical framework of constraints.   117

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Results and Discussion   119

Individual constraints   120

Our three main individual constraints can be seen in figure 2. Due to the swift timescale of   121

moving learning mediums, this demanded a seismic change for all, challenging personal and   122

professional resilience and confidences.   123

> *'we had such a tiny amount of time to change our practice. And most of us went on to*   124
> *online within literally a week'* (Teacher Educator 1).   125

Participation wise, there existed disparity between facilities and access to suitable accessible technology. With practise, confidence to implement teaching and learning through the varied iterations for a changing student cohort grew. Modifications to adapt to emerging student constraints; from being physically present through to those (online) shielding, were energetically pursued.

'We had to understand the facilities, the access to technology, how we wanted our students to be able to participate.…or those of us still delivering face to face, we had to overcome the idea of teaching and the group sizes' (Teacher Educator 2).

There was a need to rebuild previous connections to ensure that this touchless and lost existence did not occur. This was undertaken through team building and developing learning communities. These learning communities were used to co-create knowledge, to understand the constraints, and to build trust with each other again, almost humanising our interactive spaces.

'...co-creating knowledge and building a trusting and humanizing environment was actually really quite difficult for us' (Teacher Educator 3).

At times as teacher educators, we likened the process to air traffic controllers, directing rather than connecting, as we had to decide who goes into which break out group and when and what we are learning. Yet as our experiences surfaced, we realised that during a pandemic, a culture of care (Pearson, 2019) and the voice of care (Gilligan, 1982) were intrinsic to rebuild if not revisit our connections, to share our value of relationships, responsibility and concern for

others. We appreciated the value of connection and needed to ensure our students felt   146

comfortable in their learning for them to then find meaning for themselves. In Arendtian terms,   147

thinking must include other people within the process and as teaching is a human activity, it   148

must involve the whole person, linking emotions, values and life experiences (Rowland 2000).   149

This encouraged relevant ways to illuminate, support and maximise individual constraints (see   150

figure 2).   151

Immediacy
- Staff and student capabilities
- Positionality
- Suitability

Accessibility
- Technology
- Digital confidence
- Learning and Teaching in PE

Connections
- Open
- Safe and Caring
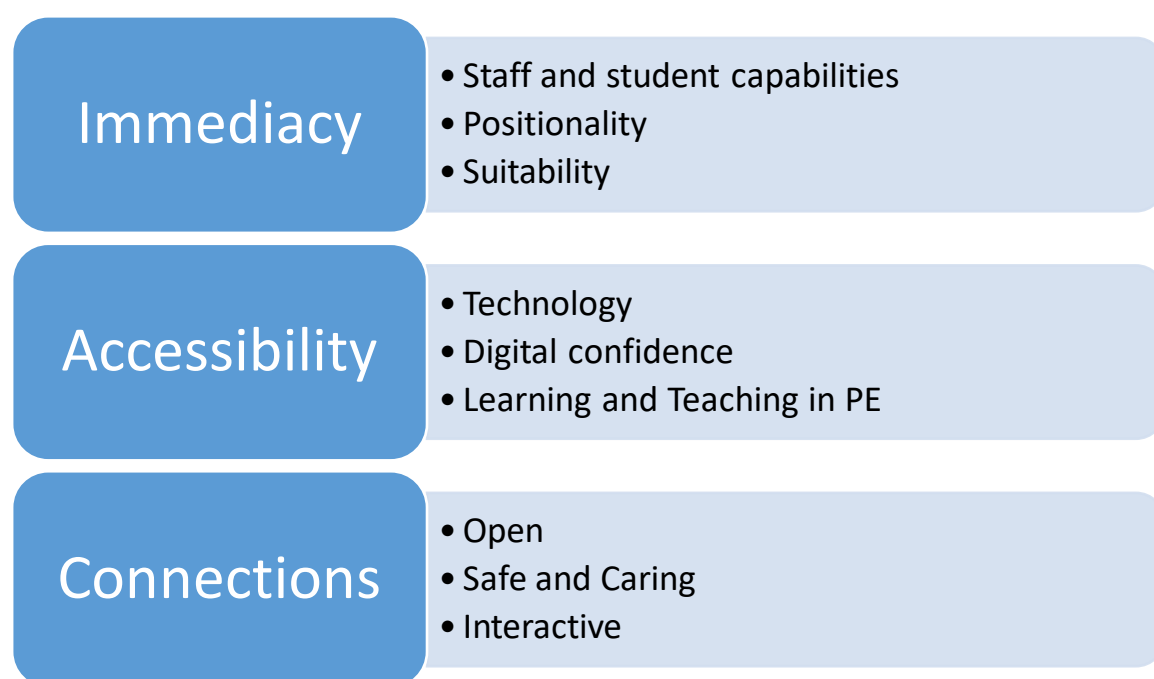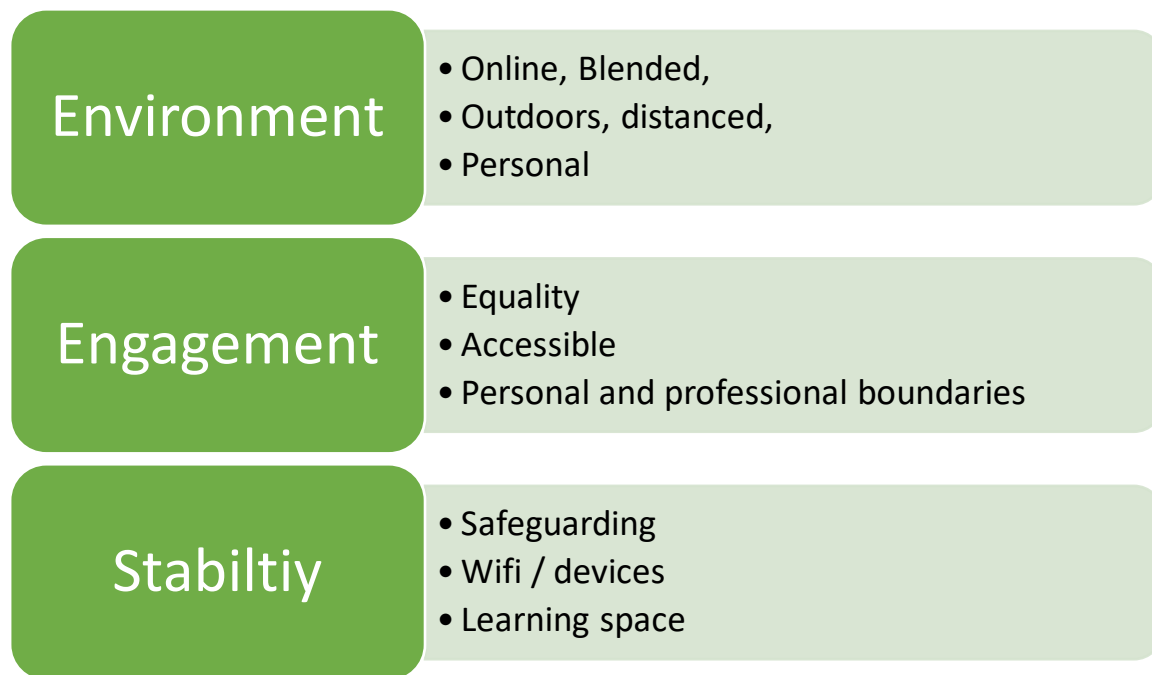- Interactive

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Figure 2 – Individual constraints   153

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Environmental constraints   155

Due to the changing nature the environmental constraints (see figure 3) were at times, rapid,   156

continuous, unstable and often challenging. We needed to adapt, move out of previous comfort   157

zones and extend and deploy skill sets in accessible and engaging ways. There was the   158

assumption or hope that staff had the skills, the interactive tools and teaching methods for online or blended learning.   159
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'The kind of engagement that we found with variable it kind of depended upon where you were learning from what you were learning from home or place of work or learning face to face socially distance and particularly with some hybrid models' (Teacher Educator 4).   161
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Environment	• Online, Blended, • Outdoors, distanced, • Personal
Engagement	• Equality • Accessible • Personal and professional boundaries
Stabiltiy	• Safeguarding • Wifi / devices • Learning space

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Figure 3 – Environment constraints   165

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Filiz and Konukman (2020) proposed that distance education needs to involve students within the decision-making process to enable them to still have an information rich learning environment. Therefore, we worked with the students to be partners in learning, asking them how they would like to learn PE. The students voiced their ideas and desires to keep practical activities intertwined within the new online virtual learning. We needed to remain flexible and responsive to student needs in relation to emergent environmental constraints. Practical activities then had to be created and or adapted for accessible home environment use. Environmentally, many students were limited in home space and equipment, yet needed   167
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meaningful ways to develop and deepen subject knowledge, competence and confidence, all vital Ofsted ready to teach requirements for students.

'We had to think about lots of different ways that we could adapt to that staff and students had to learn a range of skills to be able to participate' (Teacher Educator 4).

We were able to explore and examine coordination, control, agility, balance, flexibility skills all key skills of the National Curriculum for PE (DfE, 2013) through the use of kitchen roll and toilet roll tubes, post it notes, biscuits and also socks, as bouldering holds. Bouldering is a type of side-wards climbing with movement patterns, working horizontally at floor level, rather than vertically (as in climbing) to practise the foot and hand patterns and problem solving skills required for effective navigation of the bouldering challenges (see figure 4).
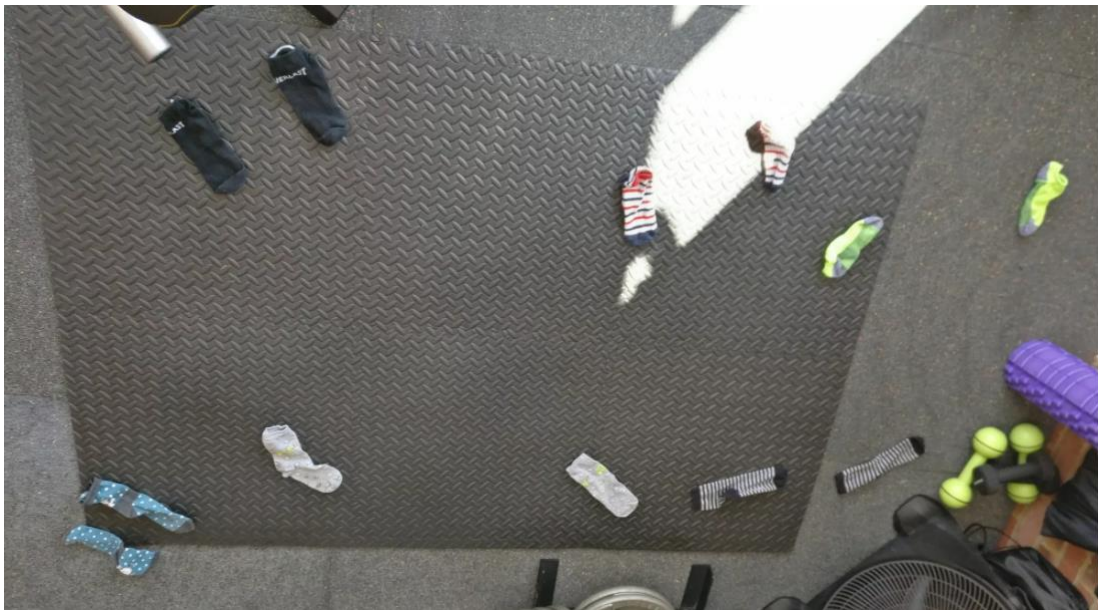
Figure 4 – Bouldering movement patterns through the use of socks as holds. In the photo the little socks represents the hand holds and the longer socks represent foot positions.

'we used socks and the floor, as accessible movement patterns that all our learners   190

could be involved in at home no matter what space they had.' (Teacher Educator 1).   191

We used environmental affordances when the weather included snow. We were able to   192

examine speed, control, coordination, agility and balance gymnastics skills (figure 5) through   193

the means of snow, sledges and technology. Through undertaking the intertwined practical   194

activities and support of technology and sharing of photographs through the Padlet app, we   195

could cooperatively to unpack the learning and how to then teach movement. The use of the   196

outdoors, allowed us to share a variety of ways to teach PE in different settings, which   197

replicated similar pedagogies, we would have used within a face to face session, therefore   198

supporting all to be successful.   199

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Figure 5 – Analysing extension and tension skills within snowy environments, to illustrate how   201

gymnastics skills could be transferred to a non-traditional gymnastics environment.   202
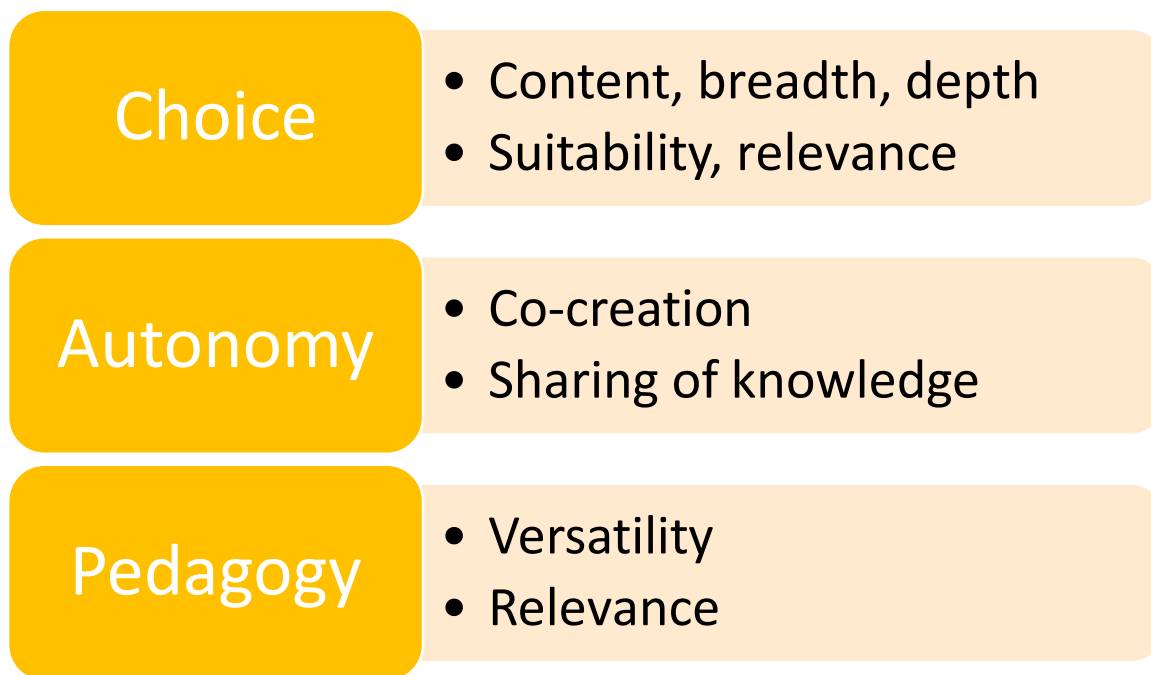
'By using snow our learners could experience an embodied version of gymnastics and

understand that gymnastics doesn't have to be limited to the school hall. It could in fact be

transferrable to non-traditional activities, through creative and innovative ways, and who

doesn't love the snow! (Teacher Educator 1).

Online education provision can potentially create a digital divide (Webster and D'Agostino, 2021). Filiz and Konukman's (2020) remind us that some students do not have a private study room for them to undertake live online lectures or may not be able to turn microphones on from interactive chat facilities due to their home environments. The idea of sharing videos from students' bedrooms brought up similar responses from students as those found by Castelli and Sarvary (2021). We ensured students were included through teaching them how to use filters and background blurring to ensure they felt safe sharing their environments. There remained however, students who due to their home learning set up were unable to turn on web cameras. Consequentially, many students relied on the typographical chat function to interact in their learning. It was vital to develop 'pause' moments, often filled with songs and hums just like transition times within primary school. This allowed time for responses to come in via chat, and not to rush the thinking and typing process, to ensure that all students were able to be reflective no matter what means of learning they were using. The use of the chat feature as well as the breakout rooms, allowed for connecting interaction during the sessions developing a community feel, and functional group work. Cavinato et al. (2021) recommends prompts, clarifications and hints to breakout groups to help support the learning processes. These varied emergent affordances guaranteed opportunity for social connectedness throughout the sessions, raising personal accountability of learning (Cavinato et al., 2021).

Task constraints

As informed by individual and environmental constraints, task and curriculum constraints

offered possibilities to reconceptualise how to embody PE teaching and learning (see figure 6).

Choice	• Content, breadth, depth • Suitability, relevance
Autonomy	• Co-creation • Sharing of knowledge
Pedagogy	• Versatility • Relevance

Figure 6 – Task constraints

One distinct curriculum constraint was that of content, and the decisions that we needed to take

as teacher educators to reduce content breadth usually extended to classes. Focus shifted to

depth of knowledge, to unpack and approach the learning through suitable, relevant accessible

environments such as the park, home, garden, and campus.

'We had to really consider not only what and how to teach, but why to teach' (Teacher

Educator 2).

We delved into the co-creation and sharing of knowledge, through the use of one drive, chat   240

box, Padlets, zoom rooms, as seen in figure 7 (active learning strategy 1). We sought to   241

maintain student voice and choice.   242

'our pedagogies were also a little bit of a challenge as we were teaching across a range   243

of different ways from face to face, blended flipped learning online, live online, a synchronous   244

online, and our pedagogical choices were constrained by number one, what we could achieve   245

with the technology that we had our mindset, so how quickly we could learn and adapt to   246

technology' (Teacher Educator 4).   247

We strove for a higher level of learning as regards pedagogical content, developing directed   248

tasks that supported learning and understanding of pedagogical strategies that could be used   249

both face to face (socially distanced) and online. We examined and expanded our repertoire of   250

learning opportunities to consider additional activity options (activity learning strategy 2), such   251

as pogo jumping (see figure 8), and creative re-use of accessible affordances (e.g. natural or   252

structured settings when permitted). We increased the use and variety of relevant and engaging   253

pre learning tasks, implementing co-creation and sharing of knowledge sessions with follow   254

up continued post session discussions and tasks to ensure depth of curriculum content was   255

experienced (active learning strategy 3 - Figure 9).   256

Figure 7- Active learning strategy 1 in action – students participating both face to face and   258

actively participating online via the tablet.   259

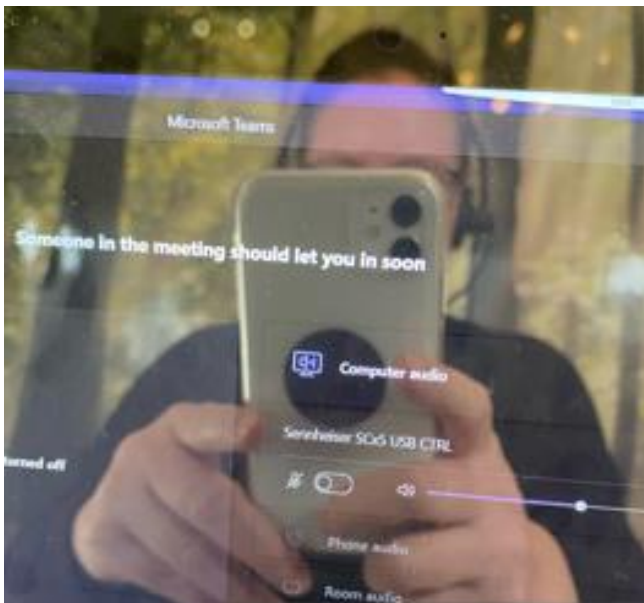260

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Figure 8- Active learning strategy 2 in action – students learning pogo jumping as socially distanced individual activity.

Figure 9- Active learning strategy 3 – using online classrooms for teaching, post session debriefs and support.

Conclusion 275

In conclusion, we have sought to share how innovative reflective PE teacher education practice 276

can draw from and through embodying the lived teaching and learning experiences as depicted 277

across the continuum of face to face, hybrid, to fully virtual mediums. Our keys to success were 278

to ensure that all our stakeholders were invested so we could develop collective agency. We 279

learnt no matter what the learning medium, the experiences needed to continue to be: student 280

centred, sense making, and collaborative. Such interactions and connections prompt us to draw 281

on Palmer's (1990: 17) words, that 'we and the world are co-created'. The notion of 282

connectedness, of authentic real-world experiences and of diversity of opportunity, may well 283

be of value for and beyond the subject of PE and for other teacher educators. 284

We acknowledge that our think piece has allowed us to recognise that the learning of PE needs 285

to be active and can be activated through planning in a variety of emergent affordances, such 286

as photography, video analysis and apps to increase social connectedness. As a group of teacher 287

educators, we will retain many of these approaches in both our online and face to face teaching 288

and this process has served as a catalyst for innovation and diversification of provision. 289

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Disclosure statement 295

No potential competing interests was reported by the authors. 296

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