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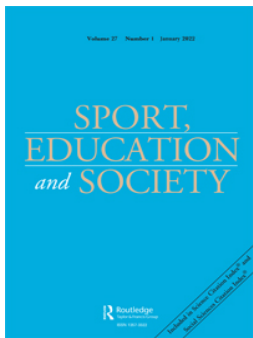
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# 'It's better than going into it blind': reflections by people with visual impairments regarding the use of simulation for pedagogical purposes

Anthony J. Maher <sup>a</sup>, Justin A. Haegele <sup>b</sup> and Andrew C. Sparkes <sup>c</sup>

<sup>a</sup>Policy, Pedagogy and Practice in Physical Education and Sport Research Group, Edge Hill University, Ormskirk, UK;

<sup>b</sup>Department of Human Movement Sciences, Old Dominion University, Norfolk, VA, USA; <sup>c</sup>Institute for Sport, Physical Activity and Leisure, Leeds Beckett University, Leeds, UK

## ABSTRACT

Disability simulations have been advocated as a tool to facilitate pedagogical learning among prospective physical education (PE) teachers. However, much of the research currently available neglect the views of people with disabilities about the development and use of such simulations. To address this omission, this study used vignettes and telephone interviews to elicit the views of nine people with visual impairments (VI) regarding the value (or not) of simulating this impairment with prospective PE teachers. Data were analysed thematically and the following themes were constructed in the process: (1) Involving people with VI in simulations; (2) Diversity and complexity of VI; (3) Adapting learning activities; (4) Grouping pupils in relation to 'ability'; and (5) Seeking the senses and touch as a pedagogical tool. Our findings suggest that simulating VI can (a) facilitate learning about how to plan and teach activities that are tailored to the needs and capabilities of pupils with VI thereby responding creatively to the challenges of inclusion in PE lessons, (b) broaden prospective teachers' beliefs about ability beyond the physical to include the social, affective and cognitive domains, (c) act as a potential avenue for prospective PE teachers to develop more complex and nuanced views about VI and their own sightedness, and (d) contribute towards disrupting ocular centric, ableist notions of pedagogy in PE as a way of enhancing the meaningful experiences of pupils with VI in lessons. In closing, we reflect on the need for research into the ethics of constructing and delivering VI simulations without involvement from people living with this impairment.

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## Introduction

When adults with visual impairments (VI) talk about their experiences of mainstream physical education (PE) lessons, they highlight exclusionary practices, particularly in relation to a lack of support from teachers (Haegele et al., 2020). When the focus turns to the embodiment of 'ability' in PE, teachers often consider the bodies of pupils with VI as 'unable' and 'flawed' (Haegele et al., 2018), mostly because they do not conform to normative notions of how bodies should look and move. Unfortunately, when PE teachers unconsciously communicate ideals of inability about the bodies of pupils with VI, they may unknowingly exacerbate other challenges in PE, such as influencing social

**CONTACT** Anthony J. Maher  [Mahera@edgehill.ac.uk](mailto:Mahera@edgehill.ac.uk)

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dynamics between those with VI and their peers and contributing to instances of bullying or ostracisation in PE spaces (Haegele et al., 2019). Thus, calls have been made to increase the emphasis placed on issues relating to inclusion and disability, with a specific focus on disrupting such normative and harmful ideas about corporeality, in PE teacher education and pedagogy (Vickerman & Maher, 2018).

Simulations have been used as pedagogical tools in an attempt to authentically replicate embodied experiences of disability (Flower et al., 2007). Typically, this involves people without disabilities using wheelchairs to simulate a physical disability (Leo & Goodwin, 2013), wearing ear defenders to simulate hearing impairment (Maher, 2020), or blindfolds to simulate VI (Reina et al., 2011). Such simulated experiences are said to (a) improve attitudes towards people with disabilities (Patrick, 1987; Sparkes et al., 2019), (b) increase feelings of empathy among people without disabilities vis-à-vis disability (Pentland et al., 2003; Williams & Dattilo, 2005), and (c) increase knowledge of and commitment to issues relating to inclusion (Delamere, 2007; Maher, 2020). Importantly, not all university students, whether they are prospective PE teachers or not, reflect so positively on their experiences of simulating disability. University students in research conducted by Armstrong (2003), for example, found disability simulations: 'difficult, stressful, frustrating (due to lack of time), tedious, loathsome, anxiety causing, pressured, unpredictable and confusing' (p. 11). In this respect, it is worth noting that some preservice PE teachers in research by Sparkes et al. (2019) made negative judgements about the bodies and abilities of people with physical disabilities when reflecting on their experiences of simulating the condition of osteogenesis imperfecta (OI) which is commonly known as 'brittle bone disease'. These findings are indicative of the potential negative and unintended outcomes of simulating disabilities as suggested by Burgstahler and Doe (2004) and Moizer et al. (2009).

Following Leo and Goodwin's (2013) critique of disability simulations, Maher et al. (2020) suggested that attempts to embody disabilities through simulations may be of pedagogical use as part of a strategy to try and prepare prospective teachers for working with pupils with disabilities. Drawing on the notion of embodied pedagogy, which centres body-active, relational and reflective approaches to learning and teaching (Dixon & Senior, 2011), their work examined what prospective PE teachers learned through simulating VI. They reported notable improvements in the clarity and precision of verbal instructions; the use of pedagogical touch such as tactile modelling; increased knowledge of how to adapt learning activities; and enhanced critical thought about the concept of educational inclusion. Maher and colleagues, however, raised questions about the ethics and authenticity of the simulated experiences of prospective PE teachers, especially given the notable *absence* of people with disabilities<sup>1</sup> in the pedagogical situation. Indeed, most of the research currently available about disability simulations centre on the reflections and experiences of people without disabilities (e.g. Leo & Goodwin, 2013, 2014; Maher, 2020). In this respect, it is noteworthy that Sparkes et al. (2019) worked closely with a preservice teacher who lived with OI to develop a curriculum that entailed body-active, relational and reflective tasks and activities (Dixon & Senior, 2011). This included the simulation of OI to facilitate pedagogical learning among trainee teachers.

What the extant research has not done, however, is explore what people with disabilities actually think about what prospective PE teachers without disabilities do and say during these simulated experiences, and what value, if any, simulated experiences might have in assisting these prospective PE teachers to better understand the lived realities of inhabiting a body that is disabled for pedagogical purposes. For us, this lack of input from people with disabilities into pedagogical situations that purport to be about representing their experiences to people without disabilities is problematic. It may constitute a form of what Bourdieu (1991) describes as 'symbolic violence' by claiming the final words about who people with disabilities are, what they feel and thus what they 'need', in myriad contexts and situations.

To the best of our knowledge, only Leo and Goodwin (2016) have explored disability simulations from the perspective of people with disabilities when they elicited the views of wheelchair users. For their study, the authenticity and ethics of using wheelchairs as cultural artifacts to simulate the experiences of wheelchair users was critically considered (Leo & Goodwin, 2016). In particular, it

was emphasised that ‘life is not a simulation’, while contrasting the use of fun as a strategy to engage students against the risk of distracting them from deeper pedagogical reflection (Leo & Goodwin, 2016). Accordingly, our study builds on this work and makes an original contribution to the field by focusing on the views of people with VI about simulating this impairment with prospective PE teachers for pedagogical purposes.

The starting point for this exploration was an article previously published in *Sport, Education and Society* (Maher et al., 2020) that focused on the teaching of non-normative bodies via the simulation of VI as a form of embodied pedagogy in action. In this article, two vignettes, constructed from the reflective diaries of two authors in their role as teacher educators in the United Kingdom (UK) were provided. These encapsulated their thoughts and experiences regarding their delivery of learning activities that endeavoured to enable 90 prospective PE teachers<sup>2</sup> to (1) simulate VI and then (2) plan and deliver learning activities to peers who were simulating VI. These vignettes also included the stories of the prospective PE teachers about their simulated experiences. The current article focuses directly on the reflections by a sample of people with VI on the two vignettes.

## Theoretical framework

Our study is informed by the principles of social constructionism that, according to Sparkes and Smith (2014), accept that material and biological entities exist beyond the person regardless of whether they are aware of them or not but that these entities are not simply ‘there’ in an unmediated form for actors in the world. Rather, these entities are given meaning by actors as they actively construct their everyday worlds in ways that have consequences for self and others. Therefore, while VI is brought about due to material changes in the biological body that impose themselves on the person, just how this change is given meaning by self and others, along with the consequences that go with this, depends on how the person is positioned in society and the stories made available to them about VI (Whitburn & Michalko, 2020).

With regard to the socially constructed category of VI, multiple realities exist in relation to each other regarding how VI is experienced and given meaning by the person with this impairment and others they are involved within their social world either directly (e.g. family members) or indirectly (e.g. government legislation). Thus, we aimed to explore how adults who lived with various embodied experiences of VI interpreted and gave meaning to the vignettes they read about prospective PE teachers simulating VI in order to gain a deeper and more rounded understanding of the pedagogical possibilities of such simulation.

## Positionality

We, the authors, are white, heterosexual, cisgender men. None of us currently self-identify as disabled. Furthermore, even though all three of us require glasses to go about our daily lives, none of us has a VI as defined in the UK by National Health Service (2018) criteria. Thus, it was crucial that we followed the guidance offered by Callus (2019) about people without disabilities researching disability. First, throughout the entire research process, we self-reflexively considered the ways and extent to which our positionality, embodied experiences and our associated beliefs about VI, might shape our methodological decisions, our interactions with participants, and our analysis of the data. Such self-reflexivity, according to Richardson (2000), is a key criterion for judging the goodness of qualitative research and it is also an essential feature for achieving the criterion of ‘sincerity’ as advocated by Tracy (2010).

Second, our study is located within a critical disability studies framework (Goodley, 2011), and underpinned by the principle of ‘nothing about us without us’ (Charlton, 2000). It was vital, therefore, that people with VI were an integral part of our research in that we were committed to listening and learning across difference regarding attempts to simulate VI for pedagogical purposes, and being constantly aware of Goggin’s (2009) view regarding the systematic ways in which people with

disabilities have previously not been listened to, not heard, and not heeded. In addition, by contributing to the future construction of disability simulations informed by the perspectives of people with VI with a view to better preparing prospective PE teachers as inclusive educators, we aspire to contribute to enhancing the quality of experience in PE lessons for pupils with VI. This is part of a wider attempt to empower and emancipate our participants, as advocated by Callus (2019), who encourages us to ensure that people with disabilities take an active, rather than passive, role in research and practice.

## Methodology

### *Participants and recruitment strategy*

Following university ethical approval, and using opportunistic sampling, Justin emailed a sample ( $N = 9$ ) of people with VI he had access to due to their involvement in a previous study. This email described the nature and purpose of the study along with its ethical principles (e.g. anonymity) and what it required them to do should they agree to participate. All responded positively and gave their informed consent to be involved. Brief biographical details of each are provided in Table 1 (all names are pseudonyms).

### *Methods*

Justin sent the participants the two vignettes described earlier to read at their leisure (for full text see, Maher et al., 2020). Participants were given the choice of the vignettes being sent as written texts or audio files. All chose the former as they had computer software packages that either enabled them to 'read' text or 'read' text to them (text-to-audio). A semi-structured interview was conducted by Justin with each participant in which they were invited to share their views of what they had read in the vignettes about the utilisation of simulations as instructional tools for prospective PE teachers. Questions ranged from asking participants to broadly describe their perspectives on the vignettes (e.g. *What are your thoughts about the story you read?*) to those asking about their views on specific elements of the story (e.g. *What are your thoughts about prospective teachers removing blindfolds when they felt 'scared' and/or 'uncertain'?*). Given the geographic spread of the participants, telephone interviews were used that lasted between 45 and 86 min. The interviews were digitally recorded and transcribed verbatim.

### *Data analysis*

The interview data were subjected to thematic analysis by Anthony. This approach was used to identify patterns of meaning across our qualitative data set as advocated by Braun et al. (2016). Accordingly, he went through the transcripts and tagged with a code each piece of text that had relevance to the research questions informing the study. He then moved to identify the key themes that various codes clustered around in terms of being a central organising concept in explaining how the participants perceived the possibilities and problems of simulating VI for pedagogical purposes with prospective PE teachers who did not have a VI. Once done, this thematic analysis along with the interview transcripts were sent to Justin, who had expertise in the field of disability studies, as part of a process of peer debriefing that involved him reviewing and assessing the transcripts in relation to the key themes identified by Anthony and the data used to support these. Following this, Anthony and Justin reflected upon the process involved and confirmed the key themes identified in the data. Finally, the key themes and supporting data along with interpretations of them were sent to Andrew in the role of a critical friend as described by Sparkes and Smith (2014). Here, he acted as a theoretical sounding board to encourage reflection upon, and exploration of, alternative explanations and interpretations of the data. In this role, Andrew was also able to

**Table 1.** Participant demographic information.

Name	Gender	Age	Race/ Ethnicity	Description of VI
Alison	Female	33	Caucasian	Complete blindness from birth.
Isabel	Female	28	Caucasian	Complete blindness from birth.
Tori	Female	34	Caucasian	Low vision in one eye with 20/200–20/400 visual acuity.
Calum	Male	25	Caucasian	Complete blindness in the other eye.
				Low vision with 20/150–20/400 visual acuity caused by macular hypoplasia.
Jade	Female	30	Caucasian	Complete blindness from birth.
Kerri	Female	25	Caucasian	Complete blindness from birth.
Lauren	Female	34	Caucasian	Low vision with a reduced field of vision.
Ismail	Male	21	Asian	Complete blindness in one eye, some usable vision in the other eye.
Nancy	Female	26	American	Low vision with a 20/200 visual acuity indoors,
			Asian	nearly complete blindness in sunlight.

Note: Participants were asked to self-identify gender and race/ethnicity using an open-ended question. It is important to note that while female/male are generally associated with sex rather than gender, the responses presented here are consistent with those provided by participants. Participants were also asked to describe their VI via an open-ended question. Responses were discussed with participants and reconstructed by Justin to ensure that descriptions captured particularities of the participants' VI while removing medical jargon for readability.

generate the self-reflexivity required of his colleagues during the analysis of the data to further enhance the quality of the study in relation to the goodness criteria advocated by Richardson (2000) and Tracy (2010).

The following five themes that were constructed from the analysis will now be considered in detail: Involving people with visual impairments in simulations; Diversity and complexity of visual impairment; Adapting learning activities; Grouping people in relation to 'ability'; Seeking the senses and touch as a pedagogical tool. In this consideration, we provide multiple and detailed quotations from the participants in our study. This strategy was chosen as it meets the authenticity criterion of 'fairness' articulated by Lincon and Guba (2000) that requires participant views, perspectives and voices to be apparent in the text. Likewise, this strategy also provides the 'polyvocality' and 'thick description' required by Tracy (2010) to enhance the credibility of our findings.

## Findings and discussion

### *Involving people with visual impairments in simulations*

All the participants confirmed the importance of people with VI being involved in the simulations. As Alison stated:

I would think of talking with someone with visual impairment, asking them about their experience living with it. Ask if they want to volunteer to help teach those student teachers who are learning how to interact with people with vision loss. Just getting them a deeper perspective.

Here, the emphasis is placed on learning about the lived, embodied experiences of the visually impaired 'Other' in order to deepen pedagogical learning among prospective PE teachers. The comment by Alison also links to the 'nothing about us without us' call from Charlton (2000) that forms a cornerstone of critical disabilities studies, something clearly absent from the simulations that were featured in the vignettes. Similarly, Jade asserted that pedagogical learning should be facilitated through a conversation between prospective PE teachers simulating VI and a person who has a VI as this may help to manage the emotions experienced during simulations:

If the person who is conducting the simulation explained that there was going to be people with visual impairments, I think that would be very beneficial because then the people who are actually having the simulation can ask questions beforehand instead of just automatically jumping to conclusions, 'Oh God, I can't do this.' Or 'Oh, I'm so scared I have to lift up the blindfold.' I think that if they're able to ask the questions at the beginning then those fears can be dissipated.

For Jade, the use of simulations has the potential to address one of the three emotions (fear, pity and disgust) that Hughes (2020) believes are the major building blocks of the emotional infrastructure of ableism. Speaking of fear in relation to how people with disabilities are perceived by others, Hughes notes that 'a negative and aversive reaction to the presence of disability is, in part, fear about the precariousness of one's own being and the vulnerabilities of our ephemeral flesh' (p. 91). He says that faced with such a fear that challenges the stable view of the embodied self that is characteristic of the 'non-disabled identity', people without disabilities are most likely to attempt to resolve this element of fear manifest in the challenge of difference by 'erasure, by putting clear emotional and physical distance between themselves and the source of this kind of viscera identity shock' (p. 92). Thus, in Jade's view, simulating VI with sighted prospective PE teachers can begin to 'dissipate' the fear of the negative 'Other' with VI and reduce the emotional and physical distance between them as embodied beings.

Other participants, such as Ismail, advocated for more body-active approaches by suggesting that those simulating VI should participate with and against people with VI in a game situation:

If we had some people with visual impairments come in with the simulation and if the teachers and the students played a game together. Like maybe if they played goalball together because then you'd get to know what it's like to play against someone with a visual impairment.



In this respect, Leo and Goodwin (2013) and Sparkes et al. (2019) argue for more body-active approaches to simulating disability, which tie into embodied learning wherein knowledge about disability is encoded in the bodies of people without disabilities. For us, experiences such as these are perceived in, on and through the body. Ismail extended this line of thinking by calling for prospective PE teachers to gain experience interacting with and supporting pupils with VI in a school setting:

What would it be like if these [prospective] teachers went into an actual classroom or a gym where these activities are occurring, and maybe they hopped in. I don't know if this is possible, but if they hopped in and tried to be the student and tried to learn from someone who's a PE teacher.

This view is supported by Jade:

I think that they should be around kids who are blind ... so that they can see what our daily life is like ... more interaction because probably a lot of kids would be happy if someone asked them 'What would make it easier for your day?' Like 'What would make it easier for you to participate in PE?' You know, if you just ask a child, the kids are really honest, sometimes brutally, so.

Such comments suggest there is a need in PE teacher education courses for a more structured and transitional pedagogical approach that, from a critical perspective similar to that advocated by Lynch et al. (2020), centres the embodied experiences of people with VI, sees people with VI as possessing expert knowledge, and advocates for prospective teachers discussing and critically reflecting on their simulated experiences together with people with VI in order to co-construct knowledge and deepen learning. This can be done through people with VI being involved in the construction and delivery of simulations before prospective PE teachers gain more body-active experiences participating with and against people with VI in learning activities.

### ***Diversity and complexity of visual impairment***

A prominent issue raised by participants was the diversity and complexity of VI and the experiences associated with it. They deemed it important, therefore, that prospective PE teachers learn about this through the use of simulation glasses so they can teach pupils with different forms of VI. As Kerri stated:

I think it's [simulating VI] a great idea because there's all different levels of visual impairment. There's not just one type. There are all these different types of visual impairment, so to wear those glasses to see, 'Oh this is what this is like', or 'Oh this is what this type of visual impairment is.' I think that's important for PE teachers and teachers in general to do.

Similarly, Nancy explained:

I think a lot of people that don't have any visual impairment kind of assume, if you have any type of blindness that just means you can't see anything and it's just dark. And, that's mostly not the case. Even people that are completely blind still often have light sensitivity and can see shadows and figures based off the light. So I think the manipulations of different visual impairments is important because it puts it into perspective a little bit more. Just give them a little bit more education on the spectrum of visual impairment.

Attempting to disrupt a commonly held assumption that equates VI to absolute blindness is important because it may help prospective PE teachers to appreciate the ways and extent to which the diversity of VI shapes how people with VI experience and construct meaning about PE. For Ismail, the use of glasses that simulate different types of VI may lead to teachers being better able to respond to learners' needs:

I also admit to not knowing how PE teachers are developed, what training they go through. But I thought it was unique that your research was trying to showcase the different levels of visual impairments. So that goes back to my steps of knowing your students because everyone has a different type of visual impairment ... When you can do something with multiple lenses or use technology in new creative ways, then you can simulate different types of visual impairment. And then the phys ed teacher can know, 'Oh, that's how student A with this type of VI is different from student B. And that's why they learn differently'.

Understanding the ways in which different types and degrees of VI shape experiences in PE is an important part of being able to plan and deliver learning activities that meet the needs and capitalise on the capabilities of learners (Vickerman & Maher, 2018). It is also vital for attempting to challenge the traditional, teacher-centred, autocratic pedagogies that can subordinate marginalised groups (Friere, 1993), such as pupils with VI, by advocating a child-centred pedagogical approach. Interestingly, when reflecting on her own PE experiences, Nancy discussed how a lack of understanding regarding her VI meant that her PE teacher made unnecessary and unwanted adaptations to learning activities:

I do have some sight. For me, sometimes people try to give me accommodations that I don't need. So if they understood more of that, like there is a spectrum and it's not just complete blindness for everyone, I think that that could be helpful for all the people that are on the spectrum.

The situation Nancy describes seems an unintended consequence of what may have been a well-intentioned action when a teacher assumes that they are the 'expert' in the setting and not the person with VI. Such episodes suggest there is a need for teachers to reflect on their perceptions of disability and what constitutes inclusive PE and to understand that one size does not fit all when it comes to the pedagogical adjustments they make for different learners.

### ***Adapting learning activities***

The vignettes sent to participants explained how prospective PE teachers learned how to adapt activities based on the needs and capabilities of those simulating VI. For Lauren, this was an example of the prospective PE teachers being 'creative' in their practices:

They [prospective PE teachers] were getting very creative in how they could provide situational awareness. That might not work for everybody, but I just like how creative they were getting in what could be done in PE ... dealing with any disability is getting creative on how are you going to adapt and figure things out? I liked that they were getting in that mode of how can we make it work?

In supporting the use of simulating VI as a form of creative and experimental pedagogy, Lauren's comment and those of other participants, appear to challenge the dominance of traditional ways of teaching pupils with disabilities. However, it could be that, based on the details provided in the vignettes, our participants may have over-estimated the level of 'creativity' demonstrated. The prospective PE teachers, who were not trained teachers, in many instances made what would be considered basic modifications to learning activities through, for instance, changing the space used, task performed, equipment utilised and the roles of people involved in the activity (Stephenson & Black, 2011). That these basic modifications were deemed creative by the participants with VI may be linked to the low expectations they had about PE teachers, given the mostly negative experiences of this subject they reported to us in this study and as evidenced by the views of others with VI regarding their experiences in PE (e.g. Haegele et al., 2020). Nonetheless, what is clear is that our participants supported prospective PE teachers attempting to be creative and actively involved in joint knowledge construction through an embodied form of pedagogy.

For Tori, learning about adapting activities was important because it is tied to principles of fairness and inclusion:

It shows that an activity can be adapted and, second, it creates a more meaningful, fair and inclusive experience. It gives them knowledge about what types of equipment are out there to modify these activities. It teaches them to come up with different ideas of what works and what doesn't. And, excuse the pun, it's better than going into it blind, not knowing what to do with a student with VI.

Tori's comment suggests that her understanding of inclusion is predominantly determined by pedagogical practices. The concept of inclusion, however, is complex, nuanced and contested. Some still believe that inclusion is achieved once children with disabilities are given access to mainstream schools. This assumes that those children would assimilate into the established cultural

arrangements of mainstream schools, rather than changes being made to school policies, resourcing, staff training, curriculums or established pedagogical practices (Maher, 2018). While teacher pedagogies play an important part in ensuring that inclusion aims are achieved (Overton et al., 2017), greater emphasis has been placed more recently on the importance of pupils with disabilities feeling valued and a strong sense of belonging in the educational contexts they find themselves (Haegele, 2019; Haegele et al., 2020; Spencer-Cavaliere & Watkinson, 2010).

Calum acknowledged that adapting activities is no easy task but that the challenges that prospective PE teachers experienced would help to deepen their learning:

They struggled to consider how space, task, equipment and role of participants can be modified. I'm like, yeah, me too. I struggled to figure out how this can be modified. I think that's something that pre-service teachers should be thinking about. They are learning.

This is another example of the connection between challenge, thinking and doing, which are key features of embodied learning and knowledge construction (MacLachlan, 2004). While Isobel was also supportive of adapting activities, she shared a concern expressed by prospective PE teachers in the vignettes that changing an activity 'too much' may impact negatively on the learning and development of other pupils:

You have to be really careful how far you want to take that adaptation. Somebody said in the narrative 'you cannot adapt to the point to cater to the needs of the blind kid while impacting the rest of the class'. I mean how would you adapt basketball? It's so visual. There are some things that blind kids just can't do. I'm sorry it's just the way it is.

This comment is anchored within wider discussions about the concept of inclusion and the value of mainstreaming education, particularly from a critical pedagogical perspective. It is well established that PE teachers are concerned that educating pupils with disabilities in their lessons may impact negative on the (physical) learning and development of other learners (Morley et al., 2005; Morley et al., 2020). Given the dominance of the physical domain of learning in PE in the UK (Bailey, 2018), it is unsurprising that some propagate, rather than challenges, this ideological viewpoint. Others, though, have explored the social construction of 'ability' in PE as it relates to performative cultures and normative practices, in an attempt to disrupt established perceptions of physicality (Evans & Penney, 2008), which often contribute to the subordination of non-normative bodies such as those of pupils with disabilities. We would also, in this respect, champion the social and affective domains of learning, for all learners, both of which are admittedly on the periphery of PE curriculums in the UK, but may contribute to the holistic development of all pupils, including those with disabilities (Bailey, 2018). Regarding Isobel's comment, we would also query a PE teacher's decision to use an activity such as basketball, or any activity, if it was inappropriate for any learners. PE teachers should facilitate learning, not teach (inaccessible) sports.

### ***Grouping people in relation to 'ability'***

During interviews the issue of activity modification developed into discussions regarding grouping pupils in relation to perceived ability in PE to overcome the supposed negative consequences of non-normative and non-normative bodies working with, and against, each other during learning activities. Calum was very supportive of this pedagogical approach because, for him, it eased the pressure placed on pupils with VI:

I love it [ability grouping]. The reason I say that is more toward my experience because if you put me in a group, which is exactly what would happen in my PE classes, they put me in a group with a lot of elite athletes because they knew that they won't balance each other out like that's exactly what they were thinking in retrospect. Of course, they never told me that but if I had been grouped in a group of kids that were all at my ability level, I would feel much less pressure.

Interestingly, Calum drew on his own embodied experiences of integrated PE to justify this pedagogical strategy. The 'pressure' he mentioned related to the feelings he experienced trying

to assimilate into dominant cultural expectations in PE, which is indicative of a medical understanding of disability in that the child is cast as the ‘problem’ (Oliver, 2013) rather than pedagogical arrangements. Of course, we should not assume that all pupils with disabilities will experience the same pressures. This said, it is crucial that all PE teachers endeavour to empower pupils with disabilities by involving them in decisions that shape their PE experiences, such as those relating to grouping.

Jade and Lauren, on the other hand, suggested that grouping pupils in this way may mean that some missed out on important learning:

I think there might be an advantage to do it and sometimes a disadvantage ... I might be thinking about this the wrong way, but I just think that it's important for kids of all abilities. It's kind of like a team. Nobody has the same ability. I mean, yes, everyone on a team might be able to see, but you know, it's important for kids of all abilities to be grouped so that you learn how to deal with all abilities. You learn that some people can't run so fast so they're spot on the team would be better in a different position. As children we learn how to adapt very quickly (Jade)

I feel like PE should be more about just doing physical things and building skills and building teamwork and building health and it not needing to be like, who's good and who's bad and trying to get to a certain level as much as the process of doing it. That's kind of how I view PE, so I don't see a need for that [ability grouping] (Lauren)

This is a prime example of how pupils can learn about, and from, difference. Moreover, it ties to wider debates about the nature, purpose and value of PE in that our participants cast light on the development of social, cognitive and affective skills through more ‘inclusive’ forms of PE (Bailey, 2018). For this to play out in practice, though, prospective PE teachers would have to be committed to challenging the hegemony of competitive games and skill-based pedagogies as these often contribute to the subordination of pupils with disabilities (Maher, 2018).

### ***Seeking the senses and touch as a pedagogical tool***

With regard to embodied forms of pedagogy, Calum, a teacher of children with VI, was particularly interested in how prospective PE teachers explained the ways in which the simulations resulted in them having to consider PE as a multi-sensory experience:

They said they would have to drastically consider the things that they were teaching which I thought was awesome because that's moving in the right direction. They're talking about what other senses they could use. They were talking and really thinking through. It was good that they were coming up with all these things.

In raising the possibility of those involved in the simulations using their ‘other senses’, Calum offers a challenge to the ocular centric bias in western cultures and traditional forms of pedagogy that, according to Sparkes (2017), relegates the senses of sound, touch, taste, smell and many others (e.g. kinaesthesia) below that of the visual and also denies how we come to understand ourselves, and others, via an intersensorial process in which the senses work in combination with each other. This process has political dimensions, that as Howes and Classen (2014, p. 6) point out, affects ‘not only how we experience and engage with our environment, but also how we experience and engage with each other’. Thus, we learn about VI and sightedness and the distinctions between them through the senses.

Regarding the sensorium, Sparkes (2017) notes that academics have long neglected the sense of touch. It is significant, therefore, that in their consideration of the use of simulating VI as part of an embodied pedagogy, our participants drew attention to touch and its use in PE for people with VI. As Isobel and Kerri stated:

I think it is very important (touch), especially if you work with blind kids. If it's with schools who have teaching purposes then how else would you learn? Sometimes verbal descriptions are not enough. I watch some videos on YouTube trying to see how to do some exercises and no matter how descriptive they are, sometimes I just don't get it (Isobel)

I really liked that they use the touch as a guiding tool for PE, for visually impaired children. I think that's really helpful. One specific example that I did like was in basketball they would touch the shoulder. Left shoulder, you know, move to your left, the balls to your left or touch your right shoulder, move to the right to get the ball (Kerri)

Interestingly, Isobel appears to suggest that learning in PE for pupils with VI cannot happen without the use of touch for pedagogical purposes. Likewise, for Kerri, touch was identified as a useful instructional tool. Lauren also discussed the possible transferability of what prospective PE teachers learned as they experimented with different touch techniques not just for pupils with VI but for other pupils with different disabilities:

They were thinking creatively. I thought they were having more ideas of what they could do to make sure that they [person simulating VI] were able to participate. I really liked the connection of that touching on the back, like for what's happening left and right of you and that that could be good for other disabilities as well. I liked that they were making that connection that it's not just for one person or one thing. I was thinking that it also could be good for kids who are autistic or for kids that just had trouble paying attention, that the touch could be helpful.

Having acknowledged the importance of touch as part of an embodied pedagogy, a number of the participants drew attention to the ethics of using this sense in educational settings:

Consent is so important and when touch is involved with anybody, not in a legal standpoint but like, hey, would this be good for you? Does this help? Just giving room for the kid to say, 'No, that's not what I really need right now. Like you don't just take my arm.' I think it's extra for kids who can't see, because they don't see the hand coming toward them (Lauren)

I tried playing softball over the summer. And one way that the coach used touch was, we would do these little warm up runs at the beginning of her softball class. There were cones that we would run around. And whenever it came, my turn to run, she would run like right next to me and as the cone was coming up, she would just give me a little tap on my shoulder to let me know that a cone was coming ... So as long as the student is comfortable with it, I think it can be a good tool (Nancy)

The issue of consent, as noted by Lauren above, is crucial in relation to touching the body of another. To avoid enacting what Bourdieu (1991) calls 'symbolic violence' teachers should never initiate touch, especially when working with pupils with VI who may not expect nor consent to it. Rather, whether PE teachers use touch as a pedagogical tool, and how touch should be used, must be part of initial and ongoing discussions with pupils with VI. Indeed, there is inherent power permeating the act of touching and being touched, and teachers should ensure that their actions contribute to the power to decide residing with the pupil, not the teacher.

Of course, the importance of pedagogical touch raised by our participants needs to be located within the contested terrain regarding the use of this sense within educational settings as illustrated by the title of Piper's (2015) edited book: *Touch in Sports Coaching and Physical Education: Fear, Risk, and Moral Panic*. Clearly, it is beyond the scope of this current article to consider the moral panic surrounding various policies that call for 'hands-off' and 'no-touch' in PE and sport. This said, we note how such policies lead, once again, to the elevation of the ocular and auditory senses over the haptic which is problematic for the development of a multisensorial and embodied pedagogy. Furthermore, the fear of intergenerational touch and its avoidance in PE and sport settings has major pedagogical consequences for all learners (Öhman & Quennerstedt, 2017), and especially those with VI (Maher et al., 2020), in relation to the development of inclusive forms of education.

## Reflections

The views expressed by our participants generate several points for us to reflect on. First, the use of simulated VI with sighted prospective PE teachers can have numerous benefits. These include prospective PE teachers learning how to plan and teach activities that are tailored to the needs and capabilities of pupils with VI, and how to respond creatively to challenges to inclusion as and

when they manifest during a PE lesson. There is also scope, from what we found, to broaden prospective teachers' beliefs about ability in PE through simulated experiences of VI, and thinking in more complex and nuanced ways about learning as social, affective and cognitive, as well as physical (Bailey, 2018). In this respect, academics have explored the social construction of 'ability' in PE, particularly in relation to ideologies relating to 'ideal' bodies, embodied learning and the prevalence of competitive, skill-based performative cultures in PE (e.g. Evans & Penney, 2008). From what we found there is an obvious need to disrupt what Evans (2017) calls hierarchal notions of ability, which are anchored to normative, ableist perceptions of how bodies should look and move in PE as a way of enhancing the meaningful experiences of pupils with VI in PE classes in the future.

Another benefit of using simulated VI is that it can challenge the ocular centric bias in western cultures and the elevation of the visual (and auditory) over others in traditional forms of pedagogy. As Michalko (2001) noted, there was a ubiquitous, taken-for-granted and thus unnoticed 'sense of sight' in the university courses he attended. Drawing on Michalko's notion of epistemic contingency whereby the onset of VI initiates a lifetime of continual negotiation, it could be argued that the use of simulated VI by introducing, if only briefly, the feeling of this epistemic contingency to prospective PE teachers has important pedagogical functions in teaching them about both sightedness and VI. One such function is to challenge ableist notions of sightedness and VI by raising questions for the prospective teachers about their sightedness as a taken-for-granted interactional norm, and how this impacts on how they come to know and act towards VI in particular ways. Another function, suggested by the work of Whitburn and Michalko (2020), is how the use of simulated VI can emphasise the relationality of those with VI and the sighted with regard to the simultaneous implications they have for each other in everyday practices which, in turn, draws attention to the necessary co-dependency of all students as active learners in PE settings.

To accompany these benefits, we also consider issues and concerns associated with simulating VI for pedagogical purposes. While there was general agreement among participants that simulating VI could facilitate learning about touch pedagogies, which are considered by Maher, Williams, and Sparkes (2020) as crucial for teaching pupils with VI, concerns were raised about the ethics of touch and the specific touch-strategies that participants with VI read about in the vignettes. Prospective, as well as in-service, PE teachers, need to realise, acknowledge and reflect on the inherent power (im)balance between their sighted adult self and the VI child as 'Other'. In this respect, we argue from a critical pedagogical perspective (Freire, 1993) that children generally and those with VI specifically should be at the centre of discussions and decisions about what touch, if any, should be used to facilitate learning in PE. After all, touch, when used appropriately, can shape how pupils with VI come to understand and engage with the learning environment, activities and others such as teachers and peers in PE as part of what Sparkes (2017) refers to as an intersensorial process.

Whether what prospective PE teachers learned about the use of touch as part of an embodied experience would actually transfer to contextual and situational experiences in schools, and be of use when working with pupils with VI, is difficult to say based on what we found. Given that we consider VI as a socially constructed category, and that the meanings constructed about VI and how it is experienced can be contextual and situational (Whitburn & Michalko, 2020), there is a need for future research to explore the transferability of what prospective PE teachers learn to mainstream schools and/or educational settings that are specifically designed for pupils with VI.

The absence of people with VI during the construction and delivery of simulated experiences of VI has also been identified here and by Leo and Goodwin (2016) as problematic both for pedagogical and ethical reasons. An issue with the lack of input from people with VI for us is that it does not allow knowledge about the embodiment of VI to be co-constructed by people with VI and sighted prospective PE teachers. It is crucial, therefore, that people with VI are cast as having expert knowledge because of their embodied experiences of VI and future research needs to explore their involvement in the construction of simulated experiences. This said, we acknowledge that it is not feasible for people with VI to be involved in the construction and delivery of every simulated experience.



Thus, the stories that people with VI tell about their experiences of PE and their views about attempts to simulate VI are considered as having pedagogical value and can be used to supplement their absence from the setting when and where appropriate. With this point in mind, we close with the words of Lauren, one of our participants, as they speak volumes about the need to better prepare PE teachers for teaching pupils with VI:

I hated PE. All of it. I couldn't do any of it. Like dodgeball and the ball coming at me, I couldn't do it. Soccer, I definitely couldn't do that. There were a lot of sports that I couldn't do but the teacher kept teaching them. They made me do activities that were impossible for a blind person. Some of the activities were pretty dangerous for me. Even the part that was in sports that I could have done the teachers didn't seem to care enough.

## Notes

1. We use the term 'people with disabilities', rather than our preferred 'disabled people', to ensure that this article is in keeping with the language used by our participants during interview and in the vignettes they reflected on. While we acknowledge the relationship between person-first language and personhood, we, like Shildrick (2012), consider it problematic as it treats disability 'as more of a contingent add-on than a fundamental in the production of identities' (p. 40). Ultimately, though, it was more important that we respected our participants' preferred terminology.
2. A prospective PE teacher is someone studying an undergraduate degree 'relevant' to a career teaching PE with aspirations of becoming a PE teacher.

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## ORCID

Anthony J. Maher  <http://orcid.org/0000-0002-1628-0962>

Justin A. Haeghele  <http://orcid.org/0000-0002-8580-4782>

Andrew C. Sparkes  <http://orcid.org/0000-0002-7622-6570>

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