

**Students' preferences for setting and/or mixed-ability grouping in secondary school
physical education in England**

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Abstract:

There is an extensive international literature on different forms of ability grouping in schools, much of which describes their impact on students' academic achievement, motivation, self-concept, and/or attitudes towards learning. Comparatively little research has focused on students' perspectives of these practices, while the research that has been conducted has primarily focused on mathematics, English, and science. There is a conspicuous and arguably significant absence of research that explores students' perspectives on different forms of ability grouping in other areas of the school curriculum, including physical education (PE). In contrast to the relative privacy of classroom-based subjects, students' bodies, physical competencies, and performances are very openly on display in PE, which potentially accentuates the importance of grouping strategies from students' perspectives. This study sought to extend current grouping and ability research by generating large-scale data relating to students' preferences for setting, mixed-ability grouping, or a combination of these approaches in secondary school PE. Data were collected through an online survey administered to 4,908 students in 48 mainstream state-funded secondary schools located in all nine regions in England. The responses showed that overall, most students preferred setting to mixed-ability grouping or a combination of these approaches. Variations in preferences are discussed in relation to demographic and situational factors, including gender, self-identified ability, school year group, previous experiences, and the nature of the learning environment. Implications of the findings for policy, practice, and future research are discussed and the need for ability to be problematised and further explored in PE research and practice is highlighted.

Keywords: ability grouping; setting; mixed-ability grouping; physical education

Key insights

What is the main issue that the paper addresses?

This paper addresses students' preferences for setting, mixed-ability grouping, or a combination of these approaches in PE in secondary schools in England and considers the reasons why students have these preferences.

What are the main insights that the paper provides?

Drawing on a survey administered to students from secondary schools across England, the paper provides unique empirical insights into students' ability grouping preferences in PE and ways in which these preferences are influenced by students' gender, self-identified ability, school year group, previous experiences, and/or the nature of the learning environment.

Background

Ability grouping practices have a long and contentious history in educational policy, practice, and research internationally, with little consensus on the best or most effective way of grouping students in schools. Previous research has documented sustained debate in England particularly as to whether primary and secondary schools should use streaming¹, setting², or mixed-ability grouping³ to organise students into classes (Sukhnandan & Lee, 1998; Ireson & Hallam, 2001; Francis et al., 2020). Over several decades, these debates have reflected changing political and educational ideologies, and/or more pragmatic considerations related to feasibility and

¹ Streaming is a practice of assigning students to classes based on an overall assessment of their general ability, with students remaining in these classes for all or most subjects (Sukhnandan & Lee, 1998; Wilkinson & Penney, 2023a).

² Setting describes the practice of grouping students into classes based on their ability and/or attainment in an individual subject area (Francis et al., 2020; Wilkinson & Penney, 2023a).

³ Mixed-ability grouping differs from streaming and setting insofar as no attempt is made to group students of similar ability and/or prior attainment together in classes (Ireson & Hallam, 2001; Wilkinson & Penney, 2023a). Instead, classes are formed (either randomly or purposefully) to include students with a broad range of ability and/or prior attainment (Francis et al., 2020; Wilkinson & Penney, 2023a).

resources, and at times have foregrounded interests in equal opportunity and access, and efficiency and standards discourses, in advocating for particular grouping approaches (Department of Education and Science [DES], 1967; Labour Party, 1997; Conservative Party, 2007, 2010). In the 1960s, for example, concerns to advance equality underpinned the merits of streaming (the dominant practice in primary and secondary schools in England at the time) being questioned, with research highlighting the disadvantages of the practice (e.g., low expectations, low quality instruction, lack of mobility), particularly for students in lower streams who were frequently from low socioeconomic backgrounds (Willig, 1963; Jackson, 1964; Hargreaves, 1967). Seminal reports commissioned by the United Kingdom (UK) government called for schools, and primary schools particularly, to abolish all forms of ability grouping in favour of mixed-ability grouping to ensure that all students received equal access to teachers, curriculum materials, and resources (DES, 1967; Ministry of Education, 1963). By the mid-to-late 1990s, research showed that mixed-ability grouping was widespread in primary schools and was also increasingly featuring in the early years of many secondary schools in England (Lee & Croll, 1995). In the period since, a prominent and sustained feature of government policy on education has been an expectation that primary, and secondary schools particularly, move away from mixed-ability grouping in favour of setting to raise standards of attainment (Labour Party, 1997; Department for Education and Skills [DfES], 2005; Conservative Party, 2007, 2010). Setting has variously been claimed to be the more effective and efficient method of grouping because the reduced range of ability encompassed in a teaching group enables teachers to target curriculum and pedagogy more closely to the needs of students (DfES, 2005; Conservative Party, 2007 2010). The White Paper, Higher Standards, Better Schools for All, for example, propounded the view that setting ‘can help to build motivation, social skills, and independence; and most importantly can raise standards because students are better engaged in their own learning’ (DfES, 2005, p. 58).

Amidst political shifts over time, research has repeatedly shown that setting is the predominant approach to grouping students in mathematics and English in secondary schools in England (Office for Standards in Education [Ofsted], 2002, 2013; Taylor et al., 2022), while students are often divided onto tables with others at a similar level of ability and/or attainment within mathematics and literacy lessons in primary schools (Hallam & Parsons, 2013; Bradbury & Roberts-Holmes, 2017; Towers et al., 2020). By contrast, mixed-ability grouping has frequently been reported as the most common grouping practice in primary schools (Ofsted, 2002; Hallam & Parsons, 2013) and in subject areas other than mathematics and English in secondary schools, including physical education (PE) (Hallam et al., 2008; Taylor et al., 2022; Wilkinson & Penney, 2023a). Research evidence regarding the respective merits of different practices has however repeatedly failed to point to any one practice as offering unequivocal benefits. Meta-analyses, literature reviews, and research studies have shown, for example, that ability grouping (setting and streaming) has no overall positive effect on student attainment in mathematics, English, or Science (Slavin, 1987, 1990; Sukhnandan & Lee, 1998; Wiliam & Bartholomew, 2004), while mixed-ability grouping has been found to have positive effects on the attainment of lower attaining students and neutral to positive effects on the attainment of higher attaining students in mathematics, English, or Science (Slavin, 1990; Sukhnandan & Lee, 1998; Ireson & Hallam, 2001). Both setting and mixed-ability grouping have also been critiqued in relation to their impact on students' self-confidence and attitudes towards learning. Setting has consistently been shown to have a positive effect on the self-confidence of higher attaining students, often at the expense of lower attaining students (Kulik & Kulik, 1982; Sukhnandan & Lee, 1998; Ireson & Hallam, 2001), whereas mixed-ability grouping has been shown to foster greater self-confidence and attitudes towards learning, particularly among

lower attaining students (Sukhnandan & Lee, 1998; Ireson & Hallam, 2001; Francis et al., 2020).

Grouping practices and ability/ies in PE

In PE specifically, recent national research involving over 900 secondary schools in England revealed that while mixed-ability grouping remains overall the most common grouping practice in the subject, there is more extensive use of setting than has previously been reported, particularly in Year 8 (aged 12-13) and Year 9 (aged 13-14) (Wilkinson & Penney, 2023a). Wilkinson and Penney (2023a) found a notable rise in the use of setting and a decrease in the use of mixed-ability grouping as students moved through PE in Key Stage 3 (Years 7-9), most notably to allow teachers a period of assessment to determine the allocation of students to sets in Year 8 or Year 9. Mixed-ability grouping was reported as dominant in General Certificate of Secondary Education (GCSE) and/or Business and Technology Education Council (BTEC) PE in (Years 10-11), often because there were only enough students to form a single teaching group (Wilkinson & Penney, 2023a). Previous research also demonstrates that schools use a variety of approaches and criteria to allocate students to mixed-ability groups and sets in PE. In contrast to research in mathematics, English, and science, Wilkinson and Penney (2023a) found that most schools adopting mixed-ability grouping in PE were using students' attainment and subsequent set placement in other subjects (particularly the core subjects) to create groups for PE (Wilkinson & Penney, 2022b, 2023a). By comparison, most schools adopting setting in PE were using judgements of student performance across a range of PE curriculum activities and/or performance in baseline tests as the prime point of reference to allocate students to sets (Wilkinson et al., 2021; Wilkinson & Penney, 2021, 2023a). The activities and tests described by teachers point towards a tendency to privilege movement skills and values associated with

games-based sports in ability grouping practices (Wilkinson & Penney, 2023a). Research spanning several decades has also shown that PE is also the subject most likely to involve sex-segregated provision in secondary schools in England, with students routinely organised into single-sex groups for core (compulsory, non-examined) PE and taught gender differentiated curriculum activities by a teacher of the same sex (Bayliss, 1984; Scraton, 1992; Wilkinson & Penney, 2023b). Research continues to indicate that in many instances, ability and grouping discourses in PE are inherently gendered (Wilkinson & Penney, 2022a, 2023a, 2023b; Clark et al., 2023) and affirms the need to extend insights into students' experiences of and perspectives on grouping practices in a subject whereby ability/ies are very publicly on display.

Following Evans (2004), this research recognised ability as socially constructed in and through the practices of PE (which include grouping practices) and a construct that is pivotal for prospects of advancing equity in PE. Research internationally has affirmed that ability in PE is frequently framed in terms of competence in a relatively narrow range of sports that PE curricula have historically privileged, and that performance in those activities is central to students' perceptions of their ability/ies and positioning as learners in PE (Hay & Lisahunter, 2006; Hay & Macdonald, 2010; Wilkinson et al., 2013; Croston & Hills, 2017). PE curriculum, pedagogy, and assessment are recognised as inter-related message systems via which dominant discourses of ability are enacted, legitimised, and reproduced, and via which PE consequently continues to marginalise or exclude many students from developing identities as able in PE (Penney et al., 2018; Nyberg et al., 2020; O'Connor et al., 2022). Grouping practices represent a potent mechanism integral to PE pedagogy that overtly, subtly, and inadvertently express and communicate the social and educational value of particular abilities.

This research reflects that while the literature on ability grouping practices is abundant with studies on student outcomes, it is relatively ‘sparse in student voices’ (Tereshchenko et al., 2019, p. 425), and particularly so in subjects other than mathematics, English, and science. A small body of emerging research has begun to explore students’ perspectives and experiences of different forms of ability grouping in PE in England (Wilkinson & Penney, 2021, 2022b, 2022b) and the United States (US) (Hastie et al., 2022), although the scope of this research is limited to a small number of students from a few schools. In focusing particularly on grouping practices in PE, the study sought to generate large-scale data that would complement existing work centring on the core academic subjects (and emerging work in PE), and at the same time also extend debates about grouping practices beyond dominant binary discourses and thereby acknowledge the prospective appeal and merits of combining elements of different grouping practices. This research therefore represented an important and timely investigation of student perspectives on grouping that are pertinent for educators and researchers nationally and internationally to consider. Further, as indicated above, the research sought to add to research that prompts critical engagement with the notion of ability in PE and the ways in which particular discourses of ability invariably inform the positioning of students as able or not in PE.

Student perspectives on setting and mixed-ability grouping

A small body of research that has primarily focused on mathematics, English, and/or science in secondary schools has shown that most students prefer setting to other forms of ability grouping, although this is often mediated by their level of attainment, gender, socio-economic status, and the type of grouping practices adopted in their school (Kulik & Kulik, 1982; Ireson & Hallam, 2001; Hallam et al., 2004; Hallam & Ireson, 2006; Archer et al., 2018; Francis et

al., 2020). In a large-scale survey of over 6000 Year 9 students from 45 secondary schools in England, for example, Hallam and Ireson (2006) found that 62% of students expressed a preference for setting and 24% expressed a preference for mixed-ability grouping in mathematics, English, and science. The remaining students reported a preference for streaming (2%), banding⁴ (2%), an unspecified other (2%), or did not indicate a preference (8%). Hallam and Ireson (2006) also noted a gendered dimension to ability grouping preferences, with girls showing a slightly greater preference for setting (65%) than boys (61%), and boys showing a slightly greater preference for mixed-ability grouping (26%) than girls (21%). Further, Hallam and Ireson (2006) reported a stronger preference for setting amongst students in top sets in mathematics (79%), English (83%), and/or science (82%), and those in schools where setting was the predominant mode of grouping (71%). Pertinently though, even in schools primarily using mixed-ability grouping for all subjects, most students preferred setting (47%) to mixed-ability grouping (38%) (Hallam & Ireson, 2006). Students in bottom sets in mathematics (38%), English (29%), and/or science (31%), and those taking free school meals (FSM) (32%) were more likely to express a preference for mixed-ability grouping than those who were not, although overall their preference was for setting (Hallam & Ireson, 2006). More recently, in Archer et al.'s (2018) survey of over 12,000 Year 7 (aged 11-12) students from 94 secondary schools in England, students in bottom sets in mathematics and/or English and those in receipt of FSM were most likely to express negative views of setting.

Tereshchenko et al.'s (2019) study of 89 Year 7 students from 8 secondary schools in England provides a more nuanced understanding of students' ability grouping preferences by their level of prior attainment. While Tereshchenko et al.'s (2019) findings reaffirmed that lower attaining

⁴ Banding is a less restrictive and differentiated form of streaming, in which students are allocated to broader ability bands, rather than to single classes (Ireson & Hallam, 2001; Wilkinson & Penney, 2023a).

students were more likely to favour mixed-ability grouping than setting in mathematics and English, they also suggested that many higher and average attaining students appreciated aspects of mixed-ability grouping because they were committed to the values of communitarianism and social justice. Wilkinson and Penney's (2022b) research focusing on mixed-ability grouping in PE in a secondary school in England highlighted similar findings but noted that the attitudes of higher attaining students also varied with age. Wilkinson and Penney (2022b) found that although most higher attaining students were open to providing encouragement and support to lower attaining students in mixed-ability PE in Key Stage 3, those who had opted to study PE courses in Key Stage 4 (Year 10-11) tended to adopt a more individualistic orientation to learning and in doing so wanted to be challenged in a group that consisted of other students at their ability level (Wilkinson & Penney, 2022b).

Internationally, Hastie et al.'s (2022) research focusing on teachers' and students' perceptions of within-class ability grouping in PE in a primary school in the US found that most students were effusive about the practice. A range of reasons were offered for this enthusiasm, including the creation of more equitable learning opportunities in PE (e.g. by being able to compete against other students with similar skills) and/or more frequent contact and positive interactions with PE teachers (Hastie et al., 2022).

Research frequently indicates that in mathematics, English, and/or science, students perceive the main advantage of setting to be that it enables teachers to pitch their lessons at an appropriate level and so ensure that they are adequately supported and/or challenged in their learning (Hallam et al., 2004; Hallam & Ireson, 2006; Francis et al., 2020). Perceived disadvantages of setting in these subjects include the stigmatisation and labelling of students

in lower sets, the pressures of consistently having to work at a fast pace in higher sets, and the depriving of lower attaining students of access to academic role models and peer support to enhance their learning (Boaler, 1997a, 1997b; Boaler et al., 2000; Hallam et al., 2004; Hallam & Ireson, 2006; Tereshchenko et al., 2019). By contrast, students tend to perceive the advantages of mixed-ability grouping in mathematics, English, and/or science in terms of social benefits, such as encouraging cooperation and collaboration between one another and facilitating opportunities to get to know others from a range of backgrounds (Sukhnandan & Lee, 1998; Hallam et al., 2004; Hallam & Ireson, 2006; Tereshchenko et al., 2019). The use of inappropriate teaching methods and materials are the main perceived disadvantages of mixed-ability grouping in these subjects (Boaler et al., 2000; Hallam et al., 2004; Hallam & Ireson, 2006). Students frequently report that teachers pitch resources and teaching strategies at the middle of the group, with this tendency resulting in some being unable to cope with the pace and level of work and others being insufficiently challenged (Boaler et al., 2000; Hallam & Ireson, 2006; Francis et al., 2020).

As noted, in studying students' preferences for different forms of ability grouping in schools, researchers have tended to limit their inquiry to mathematics, English, and/or science (Hallam & Ireson, 2006; Archer et al., 2018; Tereshchenko et al., 2019). There is a conspicuous and arguably significant absence of research that explores students' preferences in other curriculum subjects, including PE. PE stands out as a particularly important context for exploring students' preferences for different forms of ability grouping because of the practical dimension to knowledge and learning that is central to the subject and the very public nature of learning and ability in PE. In contrast to the relative privacy of classroom-based subjects, students' bodies, physical competencies, and performances are very publicly on display in PE, and thus feelings of scrutiny, success, and/or failure are all potentially magnified (Fisette, 2011; Wilkinson &

Penney, 2023a). Further, the perspectives of students are essential to determine the effectiveness and impact of ability grouping practices in PE, and in so doing critically review how ability is being understood and enacted in grouping practices.

This research therefore sought to extend research on grouping practices and student preferences by generating large-scale data relating to students' preferences for setting, mixed-ability grouping, or a combination of these approaches in PE. In pursuing this intent, we also aimed to extend empirical insights into the abilities that are privileged in and through the enactment of setting and mixed-ability grouping practices in PE. The study addressed the following two research questions:

- To what extent do students in secondary schools in England express a preference for setting, mixed-ability grouping, or a combination of these approaches in PE? and
- How do students explain their preferences?

Research context and methodology

Ethical approval to conduct the study was obtained from the Ethics Committee of Anonymous University. The study employed survey method with the intent of achieving national reach in data collection from secondary school students in England. Data were collected through an online survey using the platform Jisc Online Surveys (<https://www.onlinesurveys.ac.uk/>). The survey included a combination of multiple-choice and free-text questions, with multiple-choice questions designed to elicit information on the extent to which students preferred setting, mixed-ability grouping, or a combination of these approaches in PE, and free-text questions providing space to explore why students had these preferences, as well as their understandings

and assumptions about ability in PE. The questions asked and the response options provided are summarised in Table 1. While we recognise that students may experience other forms of ability grouping in PE, the scope and focus of the survey were limited to setting and mixed-ability grouping for two reasons. First, our recent national survey of over 900 secondary schools in England showed that the overwhelming majority of schools used setting, mixed-ability grouping, and/or variants of these practices (e.g., mixed-ability grouping with a separate top and/or bottom set) in PE (Wilkinson & Penney, 2023a), and second, we did not want to overwhelm or confuse students by providing too many options for their preferred ability grouping approach in PE.

Insert Table 1 here

Multiple-choice questions were used to collect demographic information from students, including their gender, school year group, and self-identified ability level. This was to contextualise students' responses and explore factors prospectively reflected in their preferences. As explained below, response rates at the school level and acknowledged limitations of the data set meant that it was not appropriate to explore statistical significance in relation to preferences relative to specific factors. Demographic data, nevertheless, represents an important point of reference in engaging with findings and is presented as such in sections that follow.

The survey was distributed by email to 48 mainstream state-funded secondary schools in England. These schools were known to the researchers having previously participated in a nationwide survey of grouping practices in PE (Wilkinson & Penney, 2023a). At the end of

that study, all participating schools (n=903) were contacted by email and invited to participate in this follow-up study. A total of 52 schools initially agreed to participate, but four schools withdrew prior to the commencement of data collection. While our sampling approach potentially introduces some selection bias, participating schools were distributed across all nine regions in England and were broadly representative of secondary schools nationally, particularly in terms of the number of students on roll, admission policy, Ofsted inspection rating, and the proportion of students eligible for FSM. There was however some imbalance in school type, with an overrepresentation of academy converter schools compared to the national level. The sample also included a greater proportion of schools in the North-East and a smaller proportion of schools in the North-West and London than in the national population. The overall characteristics of participating schools are summarised in Table 2.

Insert Table 2 here

Two emails were sent one month apart to Subject Leaders of PE in participating schools. The first email provided an explanation of the study, explained how the survey would be administered, provided assurances of confidentiality, and included participant information sheets and consent forms to be shared with parents or guardians of students in Key Stage 3 and Key Stage 4. The second email provided a hyperlink to the online survey, which was to be forwarded to students who had received permission to participate in the study. The Subject Leader of PE in each school assisted in obtaining the necessary consent for the study (e.g., from the Head Teacher and parents or guardians) and in facilitating the administration of the survey to students. We acknowledge that the opt-in method of obtaining consent is a contributing factor in overall lower response rates to student surveys than when opt-out methods are

employed. It is also recognised that in this study the opt-in method may have resulted in the recruitment of students who were more motivated or willing to discuss their perspectives and experiences of grouping practices in PE than those who were not. The first page of the survey explained the purpose of the study, informed students that their participation was voluntary, and assured them that their responses would be confidential. Students provided electronic assent (by ticking a box) before they could proceed to access the survey questions.

The survey was opened from May 4th, 2022, to July 25th, 2022 (the end of the school year) and a total of 4,908 surveys were completed, giving a response rate of approximately 9.7%.⁵ While this return rate is relatively low for a school-administered survey, there were several factors that contributed to this, including the opt-in method referred to above. The practical nature of core PE lessons also created notable logistical issues for Subject Leaders of PE in administering the electronic survey to students. Although some Subject Leaders of PE reported that students completed the survey on portable tablet devices during core PE lessons, others were only able to administer the survey to students if they taught them in classrooms with access to computers (e.g., during examination and/or vocational PE classes and/or registration time). Year 11 students were also notably underrepresented in the sample because most were at home on study leave during the period of data collection. During study leave, students revise and do not need to attend school unless they have a GCSE examination.

Table 3 provides a summary of the demographic characteristics of the student sample. While the survey method enabled responses to be identified with individual schools, it was never the

⁵ The response rate was calculated using school information from the Get Information about Schools website. The response rate is an approximation as the website reports the total number of students in a school, whereas the survey was only administered to students in Key Stage 3 and Key Stage 4.

intention of this study to generate school-level comparisons. Rather, the interest was in gaining data to enable broader description of the sample and exploration of similarities and/or variations in grouping experiences and preferences relating to factors identified in previous research as important to engage with – including students’ year group, gender, and ability in PE.

Insert Table 3 here

Analysis of survey responses

Frequencies and percentages for responses to multiple-choice questions were calculated by Jisc Online Surveys. This analysis was performed on the entire dataset, and subsequently by demographic characteristics (e.g., gender, self-identified ability level) to capture any variability in students’ responses. As explained above, the overall low response rate to the survey and associated acknowledged limitations of the data set (relating particularly to the study not achieving whole cohort representation of students), meant that further quantitative analysis, employing inferential statistical methods to explore size and significance of sub-set differences, was not undertaken. The quantitative data arising from this study and presented below therefore provides an important initial national overview of grouping practices in secondary PE from students’ perspectives and a foundation for future research to pursue characteristics emerging from this study. As indicated, demographic data was also important in the contextualisation of qualitative data.

Qualitative data from free-text questions were analysed using content analysis (Bardin, 2011). This included 4,320 responses to the question which asked students about how they were judging their ability in PE and 4,390 responses to the question which asked students to explain the reasons for their grouping preference in PE. The process of analysis involved careful reading and re-reading of free-text responses to identify common patterns in the data, which were then assigned a provisional descriptive label. Free-text responses were further assessed to determine the comprehensiveness of these descriptive labels. This involved several re-readings of the free-text responses, forming new descriptive labels when they did not fit with the initial labels, identifying linkages between descriptive labels, and assigning these to overall category labels. This process was performed separately for each of the two free-text survey questions and continued until no new labels were identified. Frequency counts were then calculated based on the total number of times a category label appeared in the data to determine the level of agreement in responses between students. The findings from the analysis of the survey data are presented in the following section.

Results

In concordance with previous research in mathematics, English, and/or science (Hallam, et al., 2004; Hallam & Ireson, 2006; Archer et al., 2018; Francis et al., 2020), the data showed that overall, more students preferred setting (46.7%/n=2,292) to mixed-ability grouping (33.5%/n=1,645) in PE. The data also revealed a more nuanced picture of preferences, with 19.8% (n=971) of students expressing preferences for a combination of setting and mixed-ability grouping arrangements in PE.

Insert Table 4 here

Gendered grouping preferences

As shown in Table 4, the data also pointed to the persistence of a gendered dimension to students' ability grouping preferences in PE. This again aligned with research focusing on other curriculum areas (e.g., Hallam & Ireson, 2006; Tereshchenko et al., 2019). A greater percentage of boys (55.6%) than girls (40.1%) expressed a preference for setting, whereas girls in our sample were more likely to prefer mixed-ability grouping (37.6%) than boys (28.3%). A smaller proportion of boys (16.1%) and girls (22.3%) indicated a preference for a combination of these approaches in PE. Similar patterns were identified for students identifying as other than male or female, with 39.7% reporting a preference for setting, 34.6% for mixed-ability grouping, and 25.7% for a combination of these approaches in PE.

Ability differences and grouping preferences

As reported in previous research (Hallam & Ireson, 2006; Archer et al., 2018; Tereshchenko et al., 2019), students' grouping preferences may be further influenced by differences in their perceived ability level. This study revealed that while students across the range of ability expressed preferences for setting in PE, this preference was most prominent amongst those students who identified as high ability (60.6%), in comparison to those who identified as low ability (47.3%) in the subject. A relatively low proportion of students who identified as high ability reported a preference for mixed-ability grouping (22.1%), or a combination of approaches (17.3%), while 36.1% of students who identified as low ability indicated a preference for mixed-ability grouping and 16.6% for a combination of approaches. Students who identified as average ability were much more divided in their opinions, with 39.5% expressing a preference for setting, 38.8% for mixed-ability grouping, and 21.7% for a

combination of these approaches. This variation in preferences amongst ‘average’ students prospectively reflects the considerable range in student abilities that this self-categorisation may encompass, with many students (56.7%) identifying themselves in this way in PE. It further points to the need for teachers and researchers to pursue students’ understandings of ‘average ability/ies’ in PE and critically examine what notions of ability grouping practices are legitimating.

Analysis of open-ended responses (n=4,320) clarified that most students (n=1,604) were judging their abilities in PE in relation to specialised movement skills and values associated with games-based sports or ‘sport’ more broadly, including competitiveness, speed, coordination, strength, and/or physical fitness. The prominence of these skills, capabilities, and contexts as students’ prime point of reference for ability in PE affirms the dominance of relatively narrow, sport and performance discourses in many articulations of ability in PE (Hay & Macdonald, 2010; Wilkinson & Penney, 2022a, 2022b). At the same time, this data points to the distinctiveness of PE in considering the ways in which judgements of ability are made by students and the ways in which they therefore position themselves as learners. We reflect, for example, what comparable context-specific and performance-oriented points of reference might be voiced by students in commentary on their ability/ies in the subjects (mathematics, English and science) that have dominated grouping research.

The following comments were typical of how many students were conceptualising ability in PE:

Ability in PE is about being physically fit, having good coordination, and being competitive when it comes to sports that you enjoy (Female, Year 9, Average ability).

I'm high ability because I'm very fit and my stamina, speed, and coordination are all very good (Male, Year 8, High ability).

I don't have very good physical fitness and/or sports ability (Other, Year 9, Low ability).

A smaller but nevertheless substantial number of students (n=1,385) cited effort, attitude, attendance at extra-curricular clubs, and/or involvement in sports outside of school (sometimes in conjunction with their movement skills) as factors taken into consideration when determining their ability level in PE. Two respondents explained:

I'm high ability because I give full effort in all lessons. I also do lots of extra-curricular clubs and play sports outside of school to a high standard (Female, Year 8, High ability).

I'm not particularly good at PE and don't put much effort in to changing that. I also don't do any sports outside of school (Male, Year 7, Low ability).

Again, we suggest that students' data provides insight into important and distinctive reference points for understandings of ability in PE, in comparison to many other subjects. Students' reference to participation in extra-curricular clubs and sport outside of school is telling in relation to the extent that specialised sport discourses and contexts frame (and narrow) understandings of ability in PE.

There were far fewer (n=65) references to academic, creative, and/or social skills in students' conceptions of ability in PE, although as we explain later, students who were taught in mixed-ability groups were more likely to refer to these skills (particularly social skills, such as teamwork, leadership, and communication) than those taught in sets.

Several students (n=393) also referred to their set placement and/or their 'scores' on assessment tasks as indicators of their ability level in PE. These quotations affirm the ways in which for some students, set placement comes to constitute a distinct learner identity in PE:

I'm high ability because I'm in set 1 and get good scores on assessments (Male, Year 8, High ability).

I'm not very good at PE because I'm in the bottom set (Female, Year 10, Low ability).

However, while students identified with their current ability level in PE, only a few students (n=17) stated that they were 'naturally good at sports' or that they tried hard but lacked 'in natural ability to improve' in PE. Perhaps somewhat telling was the number of students who were unsure why they identified their ability at a particular level (n=334) or did not provide a meaningful response, stating for example 'because I am', or 'I'm just good' or 'average' (n=385). We suggest that this points to an absence of well-articulated and educationally oriented discourses of ability being communicated and expressed in PE (see Penney, 2000; Evans, 2004). Several responses (n=88) indicated that students felt that they could improve their ability if they 'tried harder', 'practiced more', and/or 'attended after-school clubs'. Ability for these students was thus recognised as fluid, although still framed in relation to those activities and/or movement contexts that featured in their PE curriculum and/or extra-curricular opportunities.

Gender and ability differences

Slightly different patterns emerged when the data were broken down by gender and ability. 68% of boys who identified as high ability preferred setting in PE, with the percentage falling to 46.5% for boys who identified as average ability, and 50.3% for boys who identified as low ability. Boys who identified as high ability were significantly more likely to express

preferences for setting in PE than girls who identified as high ability, while girls who identified as average ability were the only group to express overall preferences for mixed-ability grouping in PE. 50.2% of girls who identified as high ability preferred setting compared with 37% of girls who identified as average ability (43.7% expressed a preference for mixed-ability grouping) and 46.8% of girls who identified as low ability.

Year group differences

Mixed-ability grouping was the most preferred approach amongst Year 7 students, with a general increase in preference for setting and a decrease in preference for mixed-ability grouping as students moved through Key Stage 3. 36.2% of Year 7 students reported a preference for setting, rising to 48.3% of Year 8 students, and 53.4% of Year 9 students, whereas 42.3% of Year 7 students expressed a preference for mixed-ability grouping, falling to 32.2% of Year 8 students, and 27.2% of Year 9 students. Setting was also the preferred approach of students in PE in Key Stage 4, with 50% of Year 10 (aged 14-15) students and 47.7% of Year 11 (aged 15-16) students expressing this preference. By comparison, 34.7% of Year 10 students and 32.3% of Year 11 students indicated a preference for mixed-ability grouping. A smaller proportion of students across all year groups reported a preference for a combination of these approaches in PE (See Table 3).

The influence of current grouping practices in PE

Students were asked to self-report how they were grouped in PE in their school. While it was beyond the scope of this study to compare student perceptions with school reported grouping practices, it is important to note that previous research has found that students are not always aware of the grouping practices used in their school (Hallam & Ireson, 2006; Francis et al.,

2020) or that they may have different perspectives of these grouping practices to teachers (Wilkinson & Penney, 2022b). The following results should be viewed in the light of these considerations.

Students expressed stronger preferences for the grouping arrangement that they identified as being adopted in PE in their school, suggesting that to some extent familiarity was an important factor (see also Hallam et al., 2004; Hallam & Ireson, 2006; Tereshchenko et al., 2019). In schools reported by students as using setting in PE, 68.3% of students expressed a preference for the practice, with significantly fewer indicating a preference for mixed-ability grouping (18.9%), or a combination of these approaches (12.8%). By contrast, in schools reported by students as using mixed-ability grouping in PE, 29.6% of students expressed a preference for setting, 53.8% for mixed-ability grouping, and 16.6% for a combination of these approaches.

Before we turn to consider the reasons students provided for preferring setting, mixed-ability grouping, or a combination of approaches in PE, it is important to note limitations inherent in the responses generated from the survey. In total, 4,390 students provided a response to the question which asked them to explain the reasons for their grouping preference in PE. Many (n=312) stated that they were 'unsure' or 'did not know' why they had a particular preference, and several others (n=486) did not provide a meaningful response. In the discussion below, actual numbers of student responses and percentage figures are used to provide greater clarity about the extent to which particular themes were evidenced in qualitative comments. The percentages reported were calculated as a proportion of those students who provided insight into their preferences for setting (n=2,092), mixed-ability grouping (n=1,527), or a combination of these approaches (n=771) in PE.

Reasons for preferring setting in PE

In keeping with previous research in mathematics, English, and/or science (Hallam et al., 2004; Hallam & Ireson 2006), the most frequently reported reasons for preferring setting in PE was that it enabled students to learn with others of a similar level of ability (24.4% (n=257) of boys, 22.4% (n=208) of girls, and 13.9% (n=15) of students who identified as other and/or preferred not to say). Students explained that the reduced range of ability better enabled teachers to tailor their pace and level of instruction to their individual needs, thus enhancing their learning and understanding in PE. Similar views were expressed by PE teachers in our recent research (Wilkinson & Penney, 2023a) and have been used to justify setting at a policy level in England (Labour Party, 1997; DfES, 2005; Conservative Party, 2007, 2010). The following comments were typical:

It [setting] just makes sense because we all have different ability levels. Some people are good at sports, and some are bad. It's [setting] a better way of grouping because we get lessons tailored to our needs (Male, Year 9, High ability).

It's [setting] a better learning environment because teachers have a better understanding of your needs. So, you do activities that are more suited to your ability. You also learn at the right pace because you're with people at a similar level (Female, Year 8, High ability).

Students perceived that working at their pace or ability level in PE had a range of benefits. Several students who identified as high ability (48.3% (n=262) of boys, 48.4% (n=123) of girls, and 32% (n=8) of students who identified as other and/or preferred not to say) suggested that setting provided a greater level of challenge and/or increased the competitive element of team and partner sports (e.g., football and tennis) because they were not 'held back' or 'slowed

down' by less able, non-engaging, and/or disruptive students. Relatedly, some of those students who identified as high ability (20.6% (n=112) of boys, 22% (n=56) of girls, and 20% (n=5) of students who identified as other and/or preferred not to say) perceived that they experienced faster paced, more demanding work when they were taught in sets rather than mixed-ability groups in PE. Two students commented:

It's [setting] a good strategy for learning because it gives people who are better more of a challenge without being held back by people who need help or don't try (Male, Year 10, High ability).

It [setting] creates a more competitive environment because you're not up against someone who's bad at PE. You can't compete with someone who can't return the ball in tennis (Female, Year 7, High ability).

The latter response brings to the fore an interesting discourse of competition as an integral aspect of many learning activities in PE from students' perspective. The comments prompt reflection that learning opportunities in PE are in many instances heavily reliant upon interactions with and abilities of other students (partners, team-mates, and opponents). At the same time, it is notable that the discourse here is 'competing against' as compared to 'learning with' peers in PE. As illustrated further below, other data pointed towards competition discourses being associated with setting and cooperation discourses being linked with mixed-ability grouping in PE.

The preferences of students who identified as low or average ability were particularly related to the public and highly visible nature of the PE environment, where feelings of vulnerability and anxiety were exacerbated by the presence of more able students in mixed-ability classes.

A considerable number of these students (34.8% (n=176) of boys, 32.4% (n=214) of girls, and 11.1% (n=8) of students who identified as other and/or preferred not to say) reported that setting made them feel more comfortable and/or confident in PE because it created a less competitive, stressful, and/or physically threatening learning environment. Setting also alleviated some of the pressures and anxieties students experienced in mixed-ability PE because it created a situation where they were less exposed to judgement, criticism, and/or surveillance by more able peers. This point was particularly emphasised in relation to team sports, where displays of incompetence were felt to be more public and/or important in relation to winning or losing. The following comments capture such sentiments:

You don't feel like you're dragging the team down based on messing up a ball throw or whatever and you don't get teased or picked on by those of higher ability (Female, Year 8, Low ability).

I'm less self-conscious and anxious in PE because I'm not judged, pressured, or looked down on by the higher ability [students]. You don't feel terrible/useless because you don't feel like everyone is better than you (Male, Year 9, Average ability)

In Wilkinson and Penney's (2022b) recent case study of mixed-ability PE in a secondary school in England, several students who identified as low or average ability similarly expressed concerns about publicly displaying their abilities to more able peers for fear of stigma and ridicule. These perspectives contrast markedly with those of low- and mid-attaining students in mathematics, English, and/or science, who often report positive experiences of mixed-ability grouping (Hallam, et al., 2004; Hallam & Ireson, 2006; Tereshchenko et al., 2019), and point to the importance of context in shaping students' perspectives and experiences of setting and mixed-ability grouping in schools.

Relatedly, a smaller number of students who identified as low or average ability (19% (n=96) of boys, 12.1% (n=80) of girls, and 5.6% (n=4) of students who identified as other and/or preferred not to say) perceived that setting created 'fairer' and/or more 'balanced' competition because they were not in direct competition with those 'playing at a higher level in PE' This is well illustrated in the following comment:

I prefer setting because you're put with people at the same level and so you're not over-challenged. It means that the competition levels are even and not unfair too because you don't have to compete against someone who's miles better than you (Male, Year 11, Average ability).

Some of those students who identified as low or average ability (6.7% (n=34) of boys, 6.7% (n=44) of girls, and 6.9% (n=5) of students who identified as other and/or preferred not to say) also identified several pedagogical strategies, including a slower pace of delivery and a reduced class size, that made them feel more supported in their learning when setting was used in PE.

Two students explained:

It's [setting] easier for the teachers to teach. They don't have to explain things multiple times for different abilities. So, it's easier to get the help that you need (Male, Year 8, Average ability).

There's less of us in the bottom set and it means that we get more help from the teachers (Female, Year 7, Low ability).

Other less frequently reported reasons for preferring setting in PE included the opportunity to work together with friends (n=32), familiarity with the approach (n=28), behaviour is more

disruptive in mixed-ability groups (n=19), the possibility of moving to a higher set was motivating (n=15), concerns for the physical safety of less able students, particularly in competitive team-based sports with direct physical contact (n=10), and the opportunity to gain status and a feeling of superiority by being placed in the high set (n=10).

Reasons for preferring mixed-ability grouping in PE

Previous research in mathematics, English, and/or science (Hallam et al., 2004; Hallam & Ireson, 2006; Tereshchenko et al., 2019) has shown that students' preferences for mixed-ability grouping are mostly based on social considerations, such as a sense of connection, support, inclusion, and/or friendship. This was confirmed by students in this study (24.1% (n=134) of boys, 21.3% (n=191) of girls, and 15.8% (n=12) of students who identified as other and/or preferred not to say) who felt that their learning experiences were enhanced by the opportunity to work with and learn from others with different levels of ability in mixed-ability PE. This was particularly the case for students who identified as low or average ability, with several (17.3% (n=68) of boys, 13.7% (n=100) of girls, 8.5% (n=5) of students who identified as other and/or preferred not to say) highlighting the importance of more able peers in stimulating their learning and providing them with a greater level of challenge in PE. This is exemplified by the following comment:

If you're constantly grouped with people of the same ability, then you're not going to improve. You need to be grouped with people of the highest ability to learn and be challenged (Female, Average ability, Year 9).

A smaller number of students who identified as high ability (13.2% (n=20) of boys and 18.7% (n=26) of girls) valued the inclusive and collaborative nature of mixed-ability grouping in PE and noted the benefits of assisting and supporting others in their learning. As can be seen in the

following comments, peer tutoring was often framed as creating a mutual benefit for all students in PE, and was also noted as being beneficial for PE teachers:

I like helping people and mixed-ability grouping gives me the opportunity to be a role model. It's [mixed-ability grouping] good for other people's learning because I can motivate them to try harder but it's also good for my learning because I'm working on simplifying and explaining things to others (Male, Year 10, High ability).

If people are struggling, then they'll have people to ask besides the teacher who might be busy with other people (Male, Year 9, High ability).

Some students who identified as low or average ability (13% (n=51) of boys, 12.1% (n=88) of girls, and 8.5% (n=5) of students who identified as other and/or preferred not to say) suggested that mixed-ability grouping created a more cooperative learning environment in PE, which resulted in them feeling less pressured and/or judged by more able peers. Slightly fewer students who identified as low or average ability (8.7% (n=34) of boys, 8.9% (n=65) of girls, and 5.1% (n=3) of students who identified as other and/or preferred not to say) noted that mixed-ability grouping meant that they avoided being allocated to a low ability group and consequently reduced the chances of them being labelled and stigmatised by others in PE. The following quotes reflect these beliefs:

It [mixed-ability grouping] makes me feel better about myself and my abilities because we're all together so no one's singled out as the worst (Male, Year 7, Low ability).

You don't feel like you're in a critical environment because everyone's working together to help each other. It feels less competitive and more friendly. You're also not told if you're better or worse. So, nobody feels insulted by what group they're in (Female, Year 8, Average ability).

Mixed-ability grouping was also viewed positively for the opportunities it provided students to ‘get to know’ and make friends with others from different backgrounds and ability levels (7% (n=39) of boys, 8.8% (n=79) girls), and 3.9% (n=3) of students who identified as other and/or preferred not to say). For example, one student explained:

You can mix with and meet different people in mixed-ability groups. You also get to be with your friends. Even if they’re better than you, you still do PE together (Other, Year 8, Average ability).

A smaller number of students (n=86) expressed concerns that setting could split friendship groups and in doing so reduce the social support that they received in PE, although this view was more prominent among girls (n=71) than boys (n=15), and as noted below, was also a particular concern for students who identified as ‘other than male or female’ and/or preferred not to say. These differences appeared to be mostly tied to their learning preferences, with girls particularly effusive about the social and emotional advantages of learning alongside their friends in mixed-ability PE lessons. In the following comments, two girls draw on gender-related discourses to justify their preferences for mixed-ability grouping in PE:

I like having mixed-ability classes because some of my friends would not be in the same class as me if we were in sets and they help encourage me and make me feel more comfortable in PE (Female, Year 8, Average ability).

I would be separated from some of my friends if we were put into sets, which I don’t want as it would make me feel more anxious (Female, Year 9, High ability).

Previous research has highlighted that supportive peer relationships are particularly important in enabling some girls to feel comfortable and confident participating in mixed-ability PE classes (Wilkinson & Penney, 2022b).

The significance of friendship groups also came through in the responses of students who identified as ‘other than male or female’ and/or preferred not to say (n=10). While these students did not elaborate on why this was the case, emerging research has shown that acceptance and social support from friends are essential in helping gender diverse students explore and affirm their gender identity, and in challenging misgendering and/or transphobic bullying in PE (Kettley-Linsell, 2022; Ferguson & Russell, 2023).

Attention was also drawn to equitable student access to teachers, resources, and/or the curriculum in PE (5.8% (n=32) of boys, 4.5% (n=40) of girls, and 2.6% (n=2) of students who identified as other and/or preferred not to say), which has been a concern raised in previous research (Wilkinson & Penney, 2023a). One of the Year 11 students commented:

It’s [mixed-ability grouping] fairer than setting because everyone’s treated equally. You get the same access to the curriculum and teachers (Male, Year 11, Low ability).

Students also saw mixed-ability grouping as avoiding the problems and ambiguities associated with allocating students to sets in PE. A small number of students who identified as low or average ability (4.6% (n=18) of boys and 3.3% (n=24) of girls) raised questions about the legitimacy of setting decisions in PE, notably highlighting the difficulty of ‘accurately’ and ‘fairly’ placing students into sets in a subject that contained a range of activities. The notion of

ability as multifaceted and contextually specific was crucial to this reflection, with these students suggesting that different activities in the curriculum required different abilities to be successful. The following quotes reflect the concerns that some students expressed:

Different people are good at different sports. So, I'm not sure how teachers would be able to set accurately and fairly unless they changed them around for every sport (Male, Year 9, Average ability).

It's [mixed-ability grouping] fairer and less inconsistent because you might get put in the wrong set if setting is used (Female, Year 10, Average ability).

Previous research in other subjects has shown that students are frequently allocated to inappropriate groups where setting is used (often based on arbitrary criteria, including behaviour), and that setting decisions can often reflect inferences based on students' gender, socio-economic status background, and/or ethnicity (Gillborn & Youdell, 2000; Davies et al., 2003; Muijs & Dunne, 2010; Taylor et al., 2019). Our recent research in PE highlighted that the abilities being recognised and used as the basis for setting decisions are invariably narrow, centring on discourses of motor-skill proficiency, sport performance, and/or physical fitness (Wilkinson & Penney, 2023a). Research has also repeatedly indicated that there is relatively little movement between groups because the allocation is rarely reviewed (Hallam & Ireson, 2006; Muijs & Dunne, 2010; Taylor et al., 2019; Wilkinson & Penney, 2023a).

More positively, a small number of students (2.5% (n=14) of boys and 2.5% (n=22) of girls) suggested that mixed-ability grouping supported somewhat broader notions of ability being recognised and valued in PE, with greater emphasis on cooperation, mentoring, leadership, and/or social skills. This emphasis led some of these students to problematise and question

dominant discourses of ability in PE, including how they were differently positioned in relation to these discourses:

I'm a good leader. So, I'm high ability in mixed [-ability] PE because I get the chance to teach others. I'm probably seen as less able when it comes to setting though as it's more about competition and less about working together (Male, Year 8, High Ability).

Other less frequently reported reasons for preferring mixed-ability grouping in PE included that teachers were less likely to develop limited expectations for students in lower groups (n=34), the practice was in line with experiences in primary school, where PE was predominantly taught in mixed-ability groups (n=32), work was pitched at an appropriate level and pace, particularly for 'those in the middle' (n=27), students 'were already grouped in this way in PE' (n=26), 'to experience something different' (n=16), and the practice was concordant with the ethos and philosophy of the school (n=8).

Reasons for preferring a combination of setting and mixed-ability grouping in PE

The most frequently reported reason for students preferring a combination of setting and mixed-ability grouping in PE was to provide a balance between cooperation and competition (14% (n=38) of boys, 15.6% (n=74) of girls, 8% (n=2) of students who identified as other and/or preferred not to say). Relatedly, students suggested that a combination of approaches would make PE more enjoyable (9.2% (n=25 boys), 12.8% (n=61) of girls, and 8% (n=2) of students who identified as other and/or preferred not to say) because it would 'add variety' and/or enable students to work with their friends and/or 'new people'. The following comments are indicative of the views expressed by students:

So, that we can get challenged through competition in sets, but then also help each other learn and be more relaxed in mixed. It would be a good balance of fun and learning (Male, Year 7, High ability).

It's the best of both worlds because it would vary who you learn with. I think it would be fun because you'd get to work with your friends and also have PE with people who you don't normally do it with (Female, Year 9, Average ability).

Several students perceived that setting and mixed-ability grouping were better suited to different curriculum activities and learning situations in PE. For most of these students (16.6% (n=45) of boys and 10.5% (n=50) girls) setting was seen as being necessary in activities and situations where direct competition and physical bodily contact were necessary (e.g., football and rugby). A smaller number of students felt that setting was preferable in activities and situations where individual public performance was required (5.2% (n=14) of boys and 8.6% (n=41) of girls) (e.g., swimming, dance, and athletics) and/or where they felt confident and/or competent in their abilities (5.2% (n=14) of boys and 4% (n=19) of girls). Two students commented:

I'd prefer to be to be taught in ability groups for embarrassing things like swimming and dance (Female, Year 9, Low ability).

Ability groups if I'm confident and good at something. Mixed-ability groups if I'm not as confident and good (Male Year 8, Average ability).

Mixed-ability grouping was perceived by some students to be more suited to recreational and socially oriented activities (5.5% (n=15) of boys, 5.7% (n=27) of girls, and 8% (n=2) of

students who identified as other and/or preferred not to say) (e.g., outdoor and adventurous activities), situations where competition was less pronounced and/or 'more relaxed' (3.7% (n=10) of boys and 3.4% (n=16) of girls) (e.g., learning and practicing a new skill), and activities where students were all inexperienced, such that skill imbalances were minimal (6.3% (n=17) of boys and 4.2% (n=20) of girls). This was explained as follows:

Setting for more competitive activities and mixed for less competitive activities (Male, Year 7, High ability).

You don't need to be in sets when you're introduced to a brand-new thing that no one has experienced because there wouldn't be any real differences in ability (Female, Year 9, Average ability).

Conclusion

Student perspectives are vital in extending understanding of the impacts and efficacy of different forms of ability grouping in PE (and in other subjects). Data from this study points particularly to the challenges of aligning grouping arrangements in PE with student preferences in a context in which students' understandings of ability/ies in PE remain invariably narrow. Our findings highlight a need for teachers to critically engage with the notion of ability in PE, the understandings of ability that are being communicated in and by grouping practices, and the purpose/s for adopting particular grouping practices at any point in time. As Kelly (1978) noted, 'no one form of grouping will ever be shown to be objectively better than any other [or offer the best prospect of advancing equity and inclusion], because no one form of grouping will be suitable for all purposes' (p. 24). We similarly advocate for PE teachers to adopt flexible and fluid approaches to grouping that are responsive to changes in the learning focus, environment, and/or the learning needs and preferences of students in the specific setting.

Previous research indicates that student-centred approaches to grouping practices in PE can lead to students feeling more empowered, engaged, and/or motivated to learn (Wilkinson & Penney, 2021, 2022b). This study indicates that expanding students' understandings of ability/ies in PE is a critical pre-cursor to such empowerment, engagement, and motivation. While grouping practices largely affirm performance of a relatively narrow range of physical skills in specialised sporting contexts, together with competitiveness and physical fitness for such participation, as the central reference points for/of ability in PE, they will reproduce rather than challenge longstanding inequities in learning opportunities in PE, and participation in physical activity and sport beyond schools. Only a very small number of students in this study commented on learning about how to improve their health or how to establish healthy habits (e.g., maintaining regular exercise) during adolescence and adulthood.

Encouragingly from an equity perspective, for many students mixed-ability grouping brought into focus a greater range of abilities that included cooperation, mentoring, leadership, and/or social skills in PE. Yet, findings also point to these being marginalised discourses in PE pedagogy, assessment practices, and grouping decisions specifically. Previous research has raised concerns in relation to the quality and equity of assessment practices in PE, showing that their nature, breadth, and focus frequently serve to privilege a narrow conceptualisation of ability that aligns with a traditional team sport and performance orientation (Hay & Macdonald, 2010; Hay & Penney, 2013; Wilkinson & Penney, 2023a). Student data from this study provides an important prompt for the basis of grouping decisions in PE to be interrogated and assessment practices that inform these decisions to be expanded to broaden the range of abilities that are recognised, communicated, and valued. It highlights the need for schools and teachers to critically examine the ways in which conceptions of ability are expressed in the enactment of different ability grouping practices, the opportunities that these practices present

for all students to demonstrate their abilities, the social, cultural, and economic biases that they prospectively embody and perpetuate, and whose needs and interests are at the fore of these practices. We suggest that enacted differently, grouping practices can be an important avenue via which more students can feel able and enabled as learners in PE.

Limitations and areas for future research

The research reported in this paper provides unique empirical insights into students' ability grouping preferences in PE, although some limitations of the study should be considered. While the survey approach was very valuable in generating a large data set and thereby highlighting broad patterns and general trends, it was not sufficiently nuanced to capture the individuality of students' responses or the ways in which the enactment of ability grouping practices influenced their preferences in different school contexts. Previous research has demonstrated that there is often considerable variation in grouping practices within as well as between schools, with many schools using different types or combinations of ability grouping practices in different year groups and classes (Taylor, et al., 2022; Wilkinson & Penney, 2023a). Further, in contrast to other subjects, it is not uncommon for schools to create 'de-facto' mixed-ability groups in PE based on students' set placements in mathematics, English, science, and/or student choice (Wilkinson & Penney, 2022b, 2023a). The study also only focused on two different types of ability grouping practices in PE. Further research is needed to capture in greater depth students' perceptions and preferences for different approaches to setting and mixed-ability grouping in PE, as well as other forms of ability grouping, including, streaming, banding, and within-class grouping. We also did not ask Year 10 or Year 11 students whether they were studying GCSE, BTEC, or equivalent courses in PE, and as such we were unable to

ascertain whether they answered questions in relation to examination, vocation, and/or core PE classes.

While the study gathered data from a large sample of students, it nevertheless represented a relatively small proportion of secondary school students in the schools engaged. It is acknowledged that future research needs to seek whole cohort (whole year groups and/or whole school population) samples to extend insight into the diversity in student abilities, identities, and perspectives on grouping practices in PE and to enable statistical trends in preferences to be further examined. Such research is likely to require use of opt out method and negotiation of dedicated time for student participation. Furthermore, cohort-based research will be essential for the field to gain arguably much needed empirical evidence of the impact that use of different grouping strategies has on students' learning outcomes. Such research is critical to strengthen the educational rationale for the use of different grouping practices in PE.

We also highlight that the central focus of this research was gender, ability, and their interrelationship. There is a need for future research to consider the relations between other aspects of students' identities and their perspectives on different forms of ability grouping in PE. We recognise a particular need for more in-depth research examining the perspectives and experiences of trans and gender diverse students, as their voices are notably absent in the ability grouping literature. This is especially important in PE, where grouping practices and curriculum provision are often rooted in static and binary constructions of gender. Our overriding emphasis is that the perspectives of all students are critical to ensure that in any given learning context, ability grouping practices in PE support the pursuit of greater quality and equity in learning.

Data availability statement

Research data are not shared.

Ethical statement

The study was conducted in line with BERA's Ethical Guidelines for Educational Research.

Conflict of interest

No potential conflict of interest was reported by the authors.

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References

- Archer, L., Francis, B., Miller, S., Taylor, B., Tereshchenko, A., Mazenod, A., Pepper, D., & Travers, M-C. (2018). The symbolic violence of setting: a Bourdieusian analysis of mixed methods data on secondary students' views about setting. *British Educational Research Journal*, 44(1), 119-140.
- Bardin L. (2011). *Content analysis*. Sao Paulo: Edicoes.
- Bayliss, T. (1984). *Providing equal opportunities for girls and boys in physical education*. London: ILEA College of Physical Education.
- Boaler, J. (1997a). Setting, social class and the survival of the quickest. *British Educational Research Journal*, 23(5), 575–595.
- Boaler, J. (1997b) When even the winners are losers: evaluating the experiences of 'top set' students. *Journal of Curriculum Studies*, 29(2), 165–182.
- Boaler, J., Wiliam, D., & Brown, M. (2000). Experiences of ability grouping - disaffection, polarisation and the construction of failure. *British Educational Research Journal*, 28(5), 631-648.
- Bradbury, A., & Roberts-Holmes, G. (2017). *Grouping in early years and Key Stage 1: 'a necessary evil'?* London: National Education Union.
- Clark, C., Penney, D., Whittle, R., & Jones, A. (2023). Gendered pedagogy in senior secondary physical education curriculum enactment. *Curriculum Studies in Health and Physical Education*, DOI: 10.1080/25742981.2023.2252798.
- Conservative Party. (2007). *Raising the bar, closing the gap*. London: Author.
- Conservative Party. (2010). *The Conservative manifesto 2010*. London: Author.
- Croston, A., & Hills, L. A. (2017). The challenges of widening 'legitimate' understandings of ability within physical education. *Sport, Education and Society*, 22(5), 618-634.

- Davies, J., Hallam, S., & Ireson, J. (2003). Ability groupings in the primary school: issues arising from practice. *Research Papers in Education*, 18(1), 45-60.
- Department for Education and Skills. (2005). *Higher standards, better schools for all*. London: Her Majesty's Stationery Office.
- Department of Education and Science. (1967). *Children and their primary schools: report of the Central Advisory Council for Education*. London: Her Majesty's Stationery Office.
- Evans, J. (2004). Making a difference? Education and 'ability' in physical education. *European Physical Education Review*, 10(1), 95-108.
- Ferguson, L., & Russell, K. (2023). Gender performance in the sporting lives of young trans* people. *Journal of Homosexuality*, 70(4), 587-611.
- Fisette, J. L. (2011). Exploring how girls navigate their embodied identities in physical education. *Physical Education and Sport Pedagogy*, 16(2), 179-196.
- Francis, B., Taylor, B., & Tereshchenko, A. (2020). *Reassessing 'ability' grouping: improving practice for equity and attainment*. London: Routledge.
- Gillborn, D., & Youdell, D. (2000). *Rationing education: policy, practice, reform and equity*. Buckingham: Open University Press.
- Hallam, S., & Ireson, J. (2006) Secondary school pupils' preferences for different types of structured grouping practices. *British Educational Research Journal*, 32(4), 583-599.
- Hallam, S., Ireson, J., & Davies, J. (2004). Primary pupils' experiences of different types of grouping in school. *British Educational Research Journal*, 30(4), 515-533.
- Hallam, S., & Parsons, S. (2013). The incidence and make up of ability grouped sets in the UK primary school. *Research Papers in Education*, 28(4), 393-420.
- Hallam, S., Rogers, L., & Ireson, J. (2008). Ability grouping in the secondary school: attitudes of teachers of practically based subjects. *International Journal of Research and Method in Education*, 31(2), 181-192.

- Hargreaves, D. H. (1967). *Social relations in a secondary school*. London: Routledge and Kegan Paul.
- Hastie, P. A., Brock, S. J., Buchanan, A. B., & Moore, M. E. (2023). Stakeholders' perceptions of within-class ability grouping in a primary school physical education unit. *Sport, Education and Society*, DOI: 10.1080/17408989.2023.2219276.
- Hay, P. J., & lisahunter. (2006). 'Please Mr Hay, what are my poss(abilities)?': legitimization of ability through physical education practices. *Sport, Education and Society*, 11(3), 293-310.
- Hay, P. J., & Macdonald, D. (2010). Evidence for the social construction of ability in physical education. *Sport, Education and Society*, 15(1), 1-18.
- Hay, P. J., & Penney, D. (2013). *Assessment in physical education. A socio-cultural perspective*. Routledge.
- Ireson, J., & Hallam, S. (2001). *Ability grouping in education*. London: SAGE Publications.
- Jackson, B. (1964). *Streaming: an education system in miniature*. London: Routledge & Kegan Paul.
- Kelly, A. V. (1978). *Mixed-ability grouping. Theory and practice*. London: Harper and Rowe.
- Kettley-Linsell, H. (2022). *Challenging the gender binary in UK physical education: student, teacher and parent perspectives* [PhD thesis., Loughborough University] https://repository.lboro.ac.uk/articles/thesis/Challenging_the_gender_binary_in_UK_Physical_Education_Student_teacher_and_parent_perspectives/20110487.
- Kulik, C.-L. C. & Kulik, J. A. (1982). Effects of ability grouping on secondary school students: a meta-analysis of evaluation findings. *American Educational Research Journal*, 19(3), 415-428.
- Labour Party. (1997). *New labour: Because Britain deserves better*. London: Author.

- Lee, J., & Croll, P. (1995). Streaming and subject specialism at Key Stage 2: a survey in two local authorities. *Educational Studies*, 21(2), 155–165
- Ministry of Education. (1963). *Half our future. a report of the Central Advisory Council for Education*. London: HMSO.
- Muijs, D., & Dunne, M. (2010). Setting by ability – or is it? A quantitative study of determinants of set placement in English secondary schools. *Educational Research*, 52(4), 391-407.
- Nyberg, G., Barker, D., & Larsson, H. (2020). Exploring the educational landscape of juggling – challenging notions of ability in physical education. *Physical Education and Sport Pedagogy*, 25(2), 201-212.
- O'Connor, J., Alfrey, L., & Penney, D. (2022). Rethinking the classification of games and sports in physical education: a response to changes in sport and participation. *Physical Education and Sport Pedagogy*, DOI: 10.1080/17408989.2022.2061938.
- Office for Standards in Education. (2002). *The annual report of Her Majesty's Chief Inspector of Schools 2001 to 2002*. London: Her Majesty's Stationery Office.
- Office for Standards in Education. (2013). *The most able students: are they doing as well as they should in our non-selective secondary schools?* London: Her Majesty's Stationery Office.
- Penney, D. (2000). Physical education, sporting excellence and educational excellence. *European Physical Education Review*, 6(2), 135-150.
- Penney, D., Jeanes, R., O'Connor, J., & Alfrey, L. (2018). Re-theorising inclusion and reframing inclusive practice in physical education. *International Journal of Inclusive Education*, 22(10), 1062-1077.
- Scruton, S. (1992). *Shaping up to womanhood: gender and girls' physical education*. Buckingham: Open University Press.

- Slavin, R. E. (1987). Ability grouping and student achievement in elementary schools: a best evidence synthesis. *Review of Educational Research* 57 (3): 293-336.
- Slavin, R. E. (1990). Achievement effects of ability grouping in secondary schools: a best evidence synthesis. *Review of Educational Research* 60 (3) 471-490.
- Sukhnandan, L., & Lee, B. (1998). *Streaming, setting and grouping by ability: a review of the literature*. Slough: National Foundation for Educational Research.
- Taylor, B., Francis, B., Craig, N., Archer, L., Hodgen, J., Mazenod, A., ... Pepper, D. (2019). Why is it difficult for schools to establish equitable practices in allocating students to attainment sets? *British Journal of Educational Studies*, 67(1), 5-24.
- Taylor, B., Hodgen, J., Tereshchenko, A., & Gutiérrez, G. (2022). Attainment grouping in English secondary schools: a national survey of current practices. *Research Papers in Education*, 37(2), 199-220.
- Tereshchenko, A., Francis, B., Archer, L., Hodgen, J., & Mazenod, A. (2019). Learners' attitudes to mixed-attainment grouping: examining the views of students of high, middle and low attainment. *Research Papers in Education*, 34(4), 435–444.
- Towers, E., Taylor, B., Tereshchenko, A., & Mazenod, A. (2020). 'The reality is complex': teachers' and school leaders' accounts and justifications of grouping practices in the English key stage 2 classroom. *Education 3-13*, 48(1), 22-36.
- Wilkinson, S. D., Littlefair, D., & Barlow-Meade, L. (2013). What is recognised as ability in physical education? A systematic appraisal of how ability and ability differences are socially constructed within mainstream secondary school physical education. *European Physical Education Review*, 19(2), 147-164.
- Wilkinson, S. D. & Penney, D. (2021). Setting policy and student agency in physical education: students as policy actors. *Sport, Education and Society*, 26(3), 267-280.

- Wilkinson, S. D. & Penney, D. (2022a). Mixed-ability grouping in physical education: investigating ability and inclusivity in pedagogic practice. *Sport, Education and Society*, 27(7), 775-788.
- Wilkinson, S. D. & Penney, D. (2022b). ‘The participation group means that I’m low ability’: students’ perspectives on the enactment of mixed-ability grouping in secondary school physical education. *British Educational Research Journal*, 48(5), 932-951.
- Wilkinson, S. D. & Penney, D. (2023a). A national survey of ability grouping practices in secondary school physical education in England, *Research Papers in Education*, DOI: 10.1080/02671522.2023.2217819.
- Wilkinson, S. D. & Penney, D. (2023b). A national survey of gendered grouping practices in secondary school physical education in England, *Physical Education and Sport Pedagogy*, DOI: 10.1080/02671522.2023.2217819.
- Wilkinson, S. D., Penney, D., Allin, L., & Potrac, P. (2021). The enactment of setting policy in secondary school physical education. *Sport, Education and Society*, 26(6), 619-633.
- William, D., & H. Bartholomew. (2004). It’s not which school but which set you’re in that matters: the influence of ability grouping practices on student progress in mathematics. *British Educational Research Journal*, 30(2), 279-295.
- Willig, C. J. (1963). Social implication of streaming in junior schools. *Educational Research*, 5(2), 151-154.

Tables

Table 1. Summary of survey questions and response options

Survey questions	Response options
What is the name of your school?	Drop-down list of schools.
What year group are you currently in at school?	Year 7, year 8, year 9, year 10, year 11.
How do you identify?	Male, female, other, prefer not to say.
How would you describe your ability in PE?	High ability, average ability, low ability, prefer not to say.
Why do you describe your ability in PE as this?	Free-text response.
Have you ever experienced setting/mixed-ability grouping in PE?	Yes, no.
How are you currently grouped for PE lessons?	Setting for all PE lessons; mixed-ability grouping for all PE lessons; some lessons are in sets and others are in mixed-ability groups.
If you had a free choice, how would you prefer to be grouped for PE lessons?	Setting for all PE lessons; mixed-ability grouping for all PE lessons; a combination of setting and mixed-ability grouping for PE lessons.
Why would you prefer to be grouped in this way for PE lessons?	Free-text response.

Table 2. Characteristics of participating schools

		Survey (n=48)		National (n=3197)	
		Frequency	%	Frequency	%
Location	East	5	(10.4%)	326	(10.2%)
	East Midlands	5	(10.4%)	283	(8.9%)
	Greater London	4	(8.3%)	503	(15.7%)
	North-East	13	(27.1%)	136	(4.3%)
	North-West	3	(6.3%)	457	(14.3%)
	South-East	7	(14.6%)	496	(15.5%)
	South-West	4	(8.3%)	296	(9.2%)
	West Midlands	4	(8.3%)	384	(12%)
	Yorkshire and Humber	3	(6.3%)	316	(9.9%)
School type	Academy converter	29	(60.4%)	1412	(44.2%)
	Academy sponsor-led	9	(18.7%)	709	(22.2%)
	Community	0	(0%)	360	(11.3%)
	Voluntary	2	(4.2%)	261	(8.2%)
	Foundation	7	(14.6%)	203	(6.3%)
	Free	1	(2.1%)	187	(5.8%)
	Technical college	0	(0%)	48	(1.5%)
	Studio school	0	(0%)	17	(0.5%)
Gender of entry	Co-educational	47	(97.9%)	2857	(89.4%)
	All girls	1	(2.1%)	190	(5.9%)
	All boys	0	(0%)	150	(4.7%)
Number of students	Less than 700	8	(16.7%)	627	(19.6%)
	From 701 to 1,300	25	(52.1%)	1682	(52.6%)
	More than 1,300	15	(31.2%)	781	(24.4%)
	Not recorded	0	(0%)	107	(3.4%)
Admission policy	Selective	2	(4.2%)	163	(5.1%)
	Non-selective	46	(95.8%)	3034	(94.9%)
Ofsted rating	Outstanding	5	(10.4%)	463	(14.5%)
	Good	29	(60.4%)	1644	(51.4%)
	Requires improvement	7	(14.6%)	433	(13.5%)
	Special measures	1	(2.1%)	50	(1.6%)
	Serious weaknesses	1	(2.1%)	36	(1.1%)
	Data is not available	5	(10.4%)	571	(17.9%)
Progress 8 score	Well above average	3	(6.3%)	387	(12.1%)
	Above average	3	(6.3%)	442	(13.9%)
	Average	18	(37.4%)	1117	(34.9%)
	Below average	12	(25%)	535	(16.7%)
	Well below average	9	(18.7%)	303	(9.5%)
	Data is not available	3	(6.3%)	413	(12.9%)
FSM proportion	Less than 15%	13	(27.1%)	1139	(35.6%)
	From 15% to 30%	24	(50%)	1301	(40.7%)
	More than 30%	11	(22.9%)	652	(20.4%)
	Not recorded	0	(0%)	105	(3.3%)

Note: Where data is not available, this is because these schools recently changed their type (i.e., became an academy).

Table 3. Characteristics of participating students

		Survey (n=4908)	
		Frequency	%
Location	East	454	(9.3%)
	East Midlands	547	(11.1%)
	Greater London	194	(3.9%)
	North-East	1397	(28.6%)
	North-West	187	(3.8%)
	South-East	905	(18.4%)
	South-West	560	(11.4%)
	West Midlands	475	(9.7%)
	Yorkshire and Humber	189	(3.8%)
Current year group	Year 7	1241	(25.3%)
	Year 8	1105	(22.5%)
	Year 9	1345	(27.4%)
	Year 10	1087	(22.2%)
	Year 11	130	(2.6%)
	Self-identified gender	Male	2077
Female		2552	(52%)
Other		136	(2.8%)
Prefer not to say (Pnts)		143	(2.9%)
Self-identified ability	High ability	1476	(30.1%)
	Average ability	2783	(56.7%)
	Low ability	487	(9.9%)
	Pnts	162	(3.3%)
Self-identified gender/ability	Male/High	853	(41.1%)
	Male/Average	1006	(48.4%)
	Male/Low	175	(8.4%)
	Male/Pnts	43	(2.1%)
	Female/High	575	(22.5%)
	Female/Average	1637	(64.1%)
	Female/Low	250	(9.8%)
	Female/Pnts	90	(3.6%)
	Other/High	27	(19.9%)
	Other/Average	61	(44.9%)
	Other/Low	36	(26.5%)
	Other/Pnts	12	(8.7%)
	Pnts/High	21	(14.7%)
	Pnts/Average	79	(55.2%)
	Pnts/Low	26	(18.2%)
	Pnts/Pnts	17	(11.9%)
Current grouping in PE	Setting	2054	(41.9%)
	Mixed-ability grouping	1931	(39.3%)
	Combination	923	(18.8%)
Experienced setting in PE	Yes	3539	(72.1%)

Experienced mixed-ability in PE	No	1369	(27.9%)
	Yes	4001	(81.5%)
	No	907	(18.5%)

Table 4. Preferred grouping approaches

		Setting	Mixed-ability	Combination	
Current year group	Year 7	449 (36.2%)	525 (42.3%)	267 (21.5%)	
	Year 8	533 (48.3%)	356 (32.2%)	216 (19.5%)	
	Year 9	718 (53.4%)	366 (27.2%)	261 (19.4%)	
	Year 10	543 (50%)	377 (34.7%)	167 (15.3%)	
	Year 11	62 (47.7%)	42 (32.3%)	26 (20%)	
Self-identified gender	Male	1156 (55.6%)	587 (28.3%)	334 (16.1%)	
	Female	1024 (40.1%)	959 (37.6%)	569 (22.3%)	
	Other	54 (39.7%)	47 (34.6%)	35 (25.7%)	
	Pnts	65 (45.4%)	45 (31.5%)	33 (23.1%)	
Self-identified ability	High ability	895 (60.6%)	326 (22.1%)	255 (17.3%)	
	Average ability	1099 (39.5%)	1079 (38.8%)	605 (21.7%)	
	Low ability	230 (47.3%)	176 (36.1%)	81 (16.6%)	
	Pnts	68 (42%)	64 (39.5%)	30 (18.5%)	
Self-identified gender/ability	Male/High	580 (68%)	160 (18.8%)	113 (13.2%)	
	Male/Average	468 (46.5%)	353 (35.1%)	185 (18.4%)	
	Male/Low	88 (50.3%)	59 (33.7%)	28 (16%)	
	Male/Pnts	20 (46.5%)	15 (34.9%)	8 (18.6%)	
	Female/High	289 (50.2%)	155 (27%)	131 (22.8%)	
	Female/Average	606 (37%)	715 (43.7%)	316 (19.3%)	
	Female/Low	117 (46.8%)	95 (38%)	38 (15.2%)	
	Female/Pnts	36 (40%)	38 (42.2%)	16 (17.8%)	
	Other/High	15 (55.6%)	7 (25.9%)	5 (18.5%)	
	Other/Average	17 (27.9%)	26 (42.6%)	18 (29.5%)	
	Other/Low	10 (27.8%)	17 (47.2%)	9 (25%)	
	Other/Pnts	5 (41.7%)	5 (41.7%)	2 (16.6%)	
	Pnts/High	11 (52.4%)	5 (23.8%)	5 (23.8%)	
	Pnts/Avg	32 (40.5%)	29 (36.7%)	18 (22.8%)	
	Pnts/Low	15 (57.7%)	5 (19.2%)	6 (23.1%)	
	Pnts/Pnts	7 (41.2%)	6 (35.3%)	4 (23.5%)	
	Current grouping in PE	Setting	1402 (68.3%)	389 (18.9%)	263 (12.8%)
		Mixed-ability	571 (29.6%)	1039 (53.8%)	321 (16.6%)
		Combination	319 (34.6%)	217 (23.5%)	387 (41.9%)
Experienced setting in PE	Yes	1852 (52.3%)	961 (27.2%)	726 (20.5%)	
	No	440 (32.1%)	684 (50%)	245 (17.9%)	
Experienced mixed-ability in PE	Yes	1808 (45.2%)	1380 (34.5%)	813 (20.3%)	
	No	484 (53.4%)	265 (29.2%)	158 (17.4%)	