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Teachers' perceptions of the effects of single-sex and coeducational classroom settings on the participation and performance of students in practical physical education

Scott Best

Philip J. Pearson

University of Wollongong, pearson@uow.edu.au

Paul I. Webb

University of Wollongong, paul_webb@uow.edu.au

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**TEACHERS' PERCEPTIONS OF THE EFFECTS OF SINGLE-SEX AND
COEDUCATIONAL CLASSROOM SETTINGS ON THE PARTICIPATION
AND PERFORMANCE OF STUDENTS IN PRACTICAL PHYSICAL
EDUCATION**

Scott Best, Dr. Phil Pearson and Dr. Paul Webb

- 1) *Scott Best*: University of Wollongong, Australia, scb934@uow.edu.au
- 2) Dr. Phil Pearson, University of Wollongong, Australia, pearson@uow.edu.au
- 3) Dr. Paul Webb, University of Wollongong, Australia, pwebb@uow.edu.au

ABSTRACT

Within Australian secondary schools, debate often associates the utilisation of either single-sex or coeducational classroom settings for Physical Education (PE), as the learning experienced by students in PE can differ greatly between the two settings. Thirty-nine PDHPE teachers were selected as participants, and data was gathered through questionnaire and focus group interview processes, to enable participants to convey their views regarding how students' participation and performance in practical PE may be influenced by single-sex and coeducational classroom settings. The majority of participants believed that single-sex PE classroom settings allowed students to achieve higher levels of both participation and performance. Factors such as distractions, uneven skill levels, uneven strength levels, harassment, self-consciousness, embarrassment, competitiveness, peer pressure, gaining respect and intimidation were identified to potentially negatively influence students' participation and performance in PE, and most commonly have a greater negative effect on students' participation and performance in PE within coeducational settings. Furthermore, the suitability of PE classroom settings was identified to be dependent on contextual factors pertaining to the school and class, Stage of students and activities being taught. This study therefore gives an insight into how students' participation and performance in PE may be influenced by single-sex and coeducational classroom settings.

Keywords: Coeducational Physical Education

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INTRODUCTION

Personal Development, Health and Physical Education, more commonly referred to as PDHPE, is currently a mandatory subject in the NSW (Australia) Years 7-10 syllabus. According to the NSW Board of Studies (2007), PDHPE aims to develop the capacity of students to enhance personal health and wellbeing. Furthermore, PDHPE may promote students' "enjoyment of and commitment to an active lifestyle and [achievement of] confidence and competence in a wide range of physical activities" (NSW Board of Studies, 2007, p.28). Ultimately, PDHPE seeks to position students to develop knowledge, understanding, skills, values and attitudes that may assist them to advocate lifelong physical activity and health (NSW Board of Studies, 2007). The NSW Years 7-10 PDHPE syllabus is divided into four Strands, which set a foundation for the content that must be covered within the Years 7-10 Curriculum, and the knowledge and understanding that should be resultantly achieved by students (NSW Board of Studies, 2007). In respect to PDHPE, Strands 2 and 4 encompass the topics of 'Movement Skill and Performance' and 'Lifelong Physical Activity', respectively. These two strands more specifically focus on the Physical Education (PE) aspects of PDHPE, and mostly encompass practical involvement in physical skills and movement activities. Strand 2 allows students to "explore the elements of composition as they develop and refine movement skills in a variety of contexts" (NSW Board of Studies, 2007, p.28). Similarly, Strand 4 enables students to "consider lifestyle balance and the importance of physical activity and its physical benefits, [whilst learning to] participate successfully in a wide range of activities and adopt roles that promote a more active community" (NSW Board of Studies, 2007, p.28).

For some time, and particularly within the last 40 years according to Wright (1999), debate has regarded the implementation of single-sex and coeducational classroom environments in PDHPE, and the effect each of these environments may have on achieving the PDHPE subject aims. Pre-19th Century, women's participation in sport in Australia was almost non-existent. However, with a rise in feminism during the 19th Century, and a strengthening of feminism in the mid 1900s, strong advocating for the equal opportunities of women in sports and physical activities saw the increased acceptance and inclusion of females in school PDHPE. 'Equal access' within schools was often interpreted as requiring coeducational settings, hence, coeducational PE classes were largely used in Australia (Wright, 1999). After some time though, it became evident that girls and boys faced different experiences in PE, and may require different PE settings in order to experience the most effective learning. Hence, many Australian schools resultantly began structuring single-sex PE classes (Wright, 1999).

Debate still exists over the advantages and disadvantages of utilising single-sex and coeducational practical PE settings, with more current studies revealing a range of perspectives on both settings. For example, in a study conducted by Kaey (2007), the existence of generally lower Physical Education participation rates within female students was identified. Kaey (2007) attributed this largely to the possible masculinisation of PE in current school contexts, which may act as a deterrent to girls and therefore resultantly lower the participation of girls in PE. Within coeducational PE contexts, Wright (1999) describes the nature of many girls to exhibit low levels of participation and performance to be highly influenced by the ridicule, subtle put downs and harassment experienced by girls from their male peers, which unconstructively influences girls' enjoyment of physical education, and can contribute to girls' higher dropout rates and greater resistance to physical education (Wright, 1999). Similarly, Tsolidis and Dobson

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(2006) state that “boys’ behaviour in the classroom, and in schools more generally, has been understood to have a deleterious affect on girls” (p.216), and suggest that the presence of boys in coeducational PE classes may adversely affect the participation and performances of girls in PE lessons.

Wright (1999) conveys that boys often dominate play in game-situations, which can negatively impact girls’ participation and performance in coeducational PE settings. In association with this, Ollis and Meldrum (2009) convey that single-sex environments commonly allow girls to better participate and perform in PE, without being exposed to boys’ sexual innuendo and frequent trivialising of girls’ health interests, issues, concerns and physical behaviours. Also, separating boys from girls in Health Education settings is often highly influential in enhancing girls’ comfort to participate in class without embarrassment; a detrimental factor in allowing students to experience optimum learning (Ollis & Meldrum, 2009). As is explored by McKenzie, Prochaska, Sallis and LaMaster (2004), boys often exhibit higher levels of skill, ability, strength, competitiveness and rate of progress of activities and skill development than girls of the same age. Therefore, for boys in coeducational PE contexts, learning may often be restricted due to these differences existing between girls and boys within the same class.

Overall, as stated by Koca (2009), “gender equality has long been an issue in the field of education, with a growing body of research pointing toward the continued prevalence of gender inequality in the classroom” (p.165), which can significantly affect the growth, development and general education of all students. With such gender-inequality associating PE, it is important for physical educators to make informed decisions regarding gender and classroom structure, so as to best create positive learning experiences for all students. Hence, this study investigates how single-sex and co-educational PE classroom settings may impact on a student’s level of participation and performance in PE, through studying the perceptions of currently practicing PDHPE teachers.

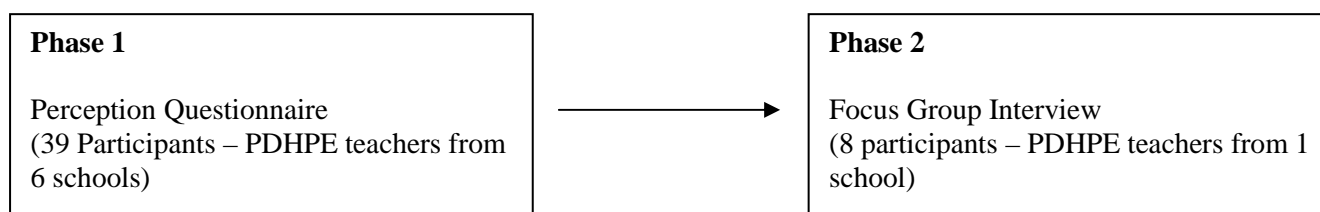
AREA OF STUDY

The purpose of this study was to investigate practising Physical Education teachers’ perceptions of the effect of single-sex and coeducational classroom structures on the participation and performance of boys and girls in practical PE. The primary research question used to guide the study was: *What are teachers’ perceptions of the effects of single-sex and coeducational classroom settings on the participation and performance of students in practical Physical Education?*

METHODOLOGY

To best investigate the research question, it was decided that aspects of a quantitative and qualitative study would be conducted. Therefore, questionnaire, interview and case study research methods were utilised, so as to allow an insight into participants’ opinions and perceptions to be achieved.

The figure below shows the design of the study.



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Results / Findings

Figure 1. The Research Design

A Pragmatic Sequential Mixed Methods Design (Mertens, 2010) was used to form the research design of this study, as within this design, the collection of one type of data provides the foundation for the collection of another type of data; hence addressing a research question through the collection and analysis of two related types of data. Relatively, within this study, two phases of data collection were constructed to take place. The first phase encompassed a questionnaire which gathered data from participants quantitatively through multiple choice questions, and qualitatively through extended response questions. This questionnaire was created by the researcher for the purposes of this study's data collection, and allowed the 39 selected participants to reflect on their teaching experiences in order to answer questions and convey information regarding how single-sex and coeducational class settings can effect the participation and performance of students in practical PE. The data collected in this first stage was then assessed and recorded both quantitatively and qualitatively, where respectively appropriate, and then used to formulate a guide for the questions and prompts to be used in stage two of data collection. Hence, stage two of data collection encompassed forming a focus group and carrying out an interview with this focus group, to gather qualitative data to relate to, and expand on, the data gathered in stage one. The focus group consisted of eight PDHPE teachers from one of the six participating schools.

In recording information from the Perception Questionnaire, participants' responses were quantitatively recorded into tables showing the numerical quantities of all participants' responses, and the corresponding percentage values of all participants' responses. In this way, simple descriptive numerical values and statistics were used to help better answer the research question (Lacey & Luff, 2001). Also, as this study was of a mixed method design, extended response and focus group interview data was required to be analysed qualitatively. Therefore, a considerable amount of time was spent reading and rereading the extended response answers and focus group interview transcripts, in order to establish and identify all common themes and understandings.

RESULTS

Phase 1

Phase one of the data collection process encompassed the completion of the *Perception Questionnaire* by a total of 39 participants. The results gained from this phase are detailed in section 4.2.1, following.

Table 1. Participants' perceptions of students' participation in PE.

	No. of respondents (% of respondents)			
	High participation	Average participation	Low participation	Too dependent on class context
Overall participation of students in single-sex PE settings	25 (64%)	6 (15%)	1 (3%)	6 (15%)
Overall participation of students in coeducational PE settings	6 (15%)	29 (74%)	1 (3%)	3 (8%)
	Lack of interest	Lack of challenge	Self-consciousness	Embarrassment

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Factors contributing to decreased participation in single-sex PE classes	25 (64%)	13 (33%)	18 (46%)	8 (21%)
	Distraction with students of the other sex	Uneven ability levels within the class	Embarrassment to participate in front of other sex	Other
Factors contributing to decreased participation in coed PE classes	17 (44%)	31 (79%)	29 (74%)	2 (5%)

Table 1, above, outlines that a significantly larger number of participants perceived higher participation in PE to result from students within single-sex PE classroom settings. Participants identified that within single-sex PE contexts, lack of interest, lack of challenge, self-consciousness and embarrassment may be factors that can potentially decrease students' participation in PE. Furthermore, participants identified that within coeducational PE contexts, distractions with the opposite sex, uneven ability levels and embarrassment to participate in front of the opposite sex may be factors with the potential to decrease students' participation in PE.

Table 2. Participants' perceptions of the attention of students in PE.

	No. of respondents (% of respondents)		
	Better attention exists in single-sex PE settings	Better attention exists in coeducational PE settings	No differences in attention between each PE setting
The differences in attention between single-sex and coeducational PE classes	27 (69%)	1 (3%)	9 (23%)

As detailed in Table 2, the majority of participants (69%) agreed that better attention exists for students within coeducational PE contexts

Table 3. Participants' perceptions of students' performance in PE.

	No. of respondents (% of respondents)
Single-sex PE class structures do allow students to reach their full performance potential	31 (79%)
Coed PE class structures do allow students to reach their full performance potential	20 (51%)
Comparing potential performance of students in single-sex and coed PE settings can be dependent on the types of activities being performed	34 (87%)

As shown in Table 3, 79% of participants believed that single-sex PE class settings allow students to reach their full performance potential, whereas a smaller 51% of participants believed that coeducational PE class settings allow students to reach their full potential. A majority of 87% of participants agreed that comparing potential performance of students in single-sex and coed PE settings can be dependent on the activities being performed.

Table 4. Participants' overall perceptions of students' participation and performance in PE.

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	No. of respondents (% of respondents)
Single-sex PE class structures are overall more effective in achieving higher levels of student participation and performance in PE.	32 (82%)
Coeducational PE class structures are overall more effective in achieving higher levels of student participation and performance in PE.	4 (10%)

Eighty-two percent of participants perceived single-sex contexts to be overall more effective in achieving higher student participation and performance levels in PE. Contrastingly, 10% of participants perceived coeducational contexts to be overall more effective in achieving higher levels of student participation and performance in PE.

Phase 2

In analysing the focus group interview data, a number of themes emerged. 'Peer pressure' was identified by the focus group members to highly influence students' participation and performance in both single-sex and coeducational PE settings. Participants viewed that many students feel they must maintain a particular image in front of their peers, often resulting in lower participation and performance levels of students in PE. Participants noted peer pressure to more negatively effect students' participation and performance in PE within coeducational PE contexts, and be more negatively influential to female students. 'Physical strength', 'skill and ability levels' and 'competitiveness' were factors agreed by all participants to greatly effect students' participation and performance in PE. Commonly, girls were described to experience significant declines in participation and performance in coeducational PE contexts due to the generally lower levels of physical strength, skill and ability and competitiveness often experienced by girls. Boys were described to experience declines in participation and performance in coeducational PE settings due to the restraints often placed on boys' progress due to differences between boys and girls' strength, skills and competitiveness.

In coeducational PE settings, girls often become distracted with boys, and boys can equally be distracted with girls. This distraction with members of the opposite sex, which exists more prominently within coeducational PE settings, was identified by the participants to significantly negatively impede on the participation of both boys and girls in PE, and in turn negatively affected students' achievement and levels of displayed performance. Participants identified that within coeducational PE contexts, many girls are often scared and intimidated by their male classmates, which can often be attributed to issues regarding self-consciousness, embarrassment and body-image. In relation to concepts of gender-related harassment and gender inequality, participants explained that girls often need to earn the respect of boys in coeducational PE classes, in order to be viewed and treated equally by the boys. For those girls who are respected by the boys for their ability, high levels of participation in coeducational PE classes often results. However, for those girls who do not exhibit high levels of ability and are not respected by boys as equal participants, participation in coeducational PE settings can be greatly hindered.

DISCUSSION

From the findings derived within phase one and phase two of data collection, the responses of participants have proven to largely support single-sex practical PE class settings to be overall more

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advantageous than coeducational settings, in respect to achieving higher levels of participation and performance for both boys and girls. For example, 32 out of the 39 participants (82%) considered that higher levels of student participation and performance exist in single-sex PE environments than in coeducational environments, showing a clear majority support for single-sex PE structures. Despite this strong support associating single-sex PE structures to often enable better student participation and performance to exist however, this study also gave an insight into a range of factors which are evident within both single-sex and coeducational PE settings, and which can significantly influence the levels of participation and performance achieved by students in both settings. These effects on students' participation and performance in PE, which can be related to classroom-setting, are discussed below.

Kaey (2007) and Rich's (2004) belief that there exists a 'masculinisation' of Sport and PE within Australian schools which heavily favours boys, could be used to help explain the trends found in the participation of boys and girls in single-sex and coeducational PE environments. However, the 'masculinisation of PE through the domination of males as PE teachers' is questionable within this study, as the 39 total participants of this study were composed of 20 males and 19 females, seeking to suggest otherwise. The masculinisation of PE was found to be evident within other aspects of school Physical Education though, and very influential to the participation and performance displayed by students, as is explored in the following.

Relative to concept above, and indeed contributing to decreasing the participation of girls within coeducational PE settings, is the dominance displayed by many boys within coeducational PE lessons; a concept supported by Wright (1999). Results from this study show that within coeducational PE contexts, boys tend to dominate play, which can decrease the opportunity for girls to evenly participate within lessons. This dominance of boys in coeducational PE can be linked to factors pertaining to the 'physical strength' of students, and specifically, the general differences in physical strength that exist between boys and girls. Within early Stage 4 (Year 7), girls often exhibit levels of physical strength that are equal to, if not higher than, boys of the same age, due to the earlier maturation and physical development of females. At this stage when physical strength differences are minimal between boys and girls, the ability of girls to compete evenly with boys increases, and even levels of participation between boys and girls in coeducational PE settings often results. However, as students progress through Stage 4 and Stage 5, males typically grow and develop levels of strength that are often higher than those of most girls, which can result in an increase in boys' physical dominance of play, and therefore an inability of many girls to evenly compete with boys in coeducational PE settings; as is explored by Wright (1999). Hence, it may be assumed that within early Stage 4, coeducational PE classes may allow boys and girls to achieve even levels of participation and performance, because girls and boys exhibit similar levels of physical strength, and no dominance of one gender is evident. However, due to the progressive increased physical strength and dominance of boys, single-sex PE settings are often favoured by teachers, as many girls experience decreased participation and performance levels when learning in coeducational PE environments under such conditions.

Thirty-four of the 39 total participants stated that the sport or activity being played can have a significant influence on the participation and performance displayed by a student in PE. The strength-related concepts explored above can also be linked to the effect that the activity being played can have on students' participation and performance in PE. As was supported by all members of the focus group, girls' participation and performance in PE may be best benefited through the implication of single-sex PE classes when units of work that incorporate physical strength and physical contact are being studied. Invasion-games such as soccer, hockey and basketball are activities within which contact with opponents is often made, and whereby physical strength could allow a student a performance advantage over those of less strength. Therefore, when strength-related activities are being performed in PE, it may be advantageous for implementation to occur in single-sex contexts, whereby the natural strength of boys does not hinder girls' participation and performance in PE.

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Correlatively to the implications of strength-based activities, for activities within which physical strength is not a major determinant of participation and/or performance, but rather factors of skill and ability are more influential, girls in coeducational settings may better be able to participate and perform evenly with boys. For example, 'net/court', 'striking and fielding' and 'target' games such as volleyball, cricket and golf, respectively, may encompass skill/ability factors as influences on success, and may be performed in coeducational PE settings more appropriately than strength-related activities, with respect to achieving higher participation and performance levels. In contrast, however, evidence from a number of participants suggested that students' skill/ability levels within coeducational PE contexts can also negatively affect the level of participation and performance achieved by students. As was found, the difference in skill/ability levels of students is often greater between boys and girls than between boys and boys or girls and girls. Hence, the differences in students' skills and abilities within a PE classes are often greater in coeducational PE contexts than in single-sex PE contexts, as the greatest differences in skill/ability often exist between high-skilled males and low-skilled females.

As was supported by Wright (1999), an implication that may result from the above concept is that within coeducational classes, the students of lowest skill and ability, commonly consisting of girls, often may not be able to develop their skills at the rate of the higher-skilled students, who commonly consist of boys. Correspondingly, the progression and development of higher-skilled boys in coeducational PE classes was identified to be often hindered by the slower learning pace of lower-skilled girls, and in both circumstances, the participation and performance of students in PE can be negatively impeded. McKenzie et al. (2004) state that PE teachers are often faced with the difficult task of selecting when progression in a unit should occur. As is supported in this study, this process is evident in most single-sex and coeducational PE classes, as all students exhibit different skill and ability levels, however, the process of progressing the class may be considerably more difficult in coeducational PE classes, where greater differences in students' skill and ability are often evident.

'Peer pressure' was identified by many participants to influence students' participation and performance often in a negative way in PE in both single-sex and coeducational settings. For students, the preservation of one's image appears to be of considerable importance, and there seems to be a trend existing in many schools whereby participation and success in sports and physical activities is often not socially favoured by peers. The preservation of image for girls appears to be most important when involved in coeducational PE environments, particularly due to the resulting association girls have with boys. As was shown, some girls feel the need to impress the other sex, whilst others contrastingly feel the need to protect their image in front of the other sex. Regardless of the reasoning though, the pressure from peer contexts to preserve image significantly contributes to decreasing girls' participation and performances in coeducational PE settings. Gilchrist (2004) suggests that young women's participation in physical activity can be significantly affected by concerns associating appearance and image in front of others, especially those of the other sex. From data collected in this study it appears that, generally, for girls in single-sex settings, the pressure from peers to preserve a certain image is also a contributing factor to limiting the participation and performance achieved by girls in PE; however, evidence from this study suggests that this is of lesser impact for girls in single-sex settings than coeducational settings.

Findings from this study suggest that for boys in single-sex PE settings, participation and performance in sports is often positive for boys' image. Similarly to girls however, when placed in coeducational PE environments, some boys feel the pressure to convey a favourable image to girls, which can negatively influence a student's participation and performance achievement in PE. In considering this, the common image-related factor that influences students to most significantly experience decreased participation and performance levels in PE may be the association of the opposite sex within coeducational PE contexts. Hence, by structuring single-sex PE classes, the participation and performance of boys, and most significantly girls, on the whole may better benefit.

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The nature of some students to be scared or intimidated by others within PE contexts may have a significant effect on such students' involvement and achievement in PE. Being intimidated by other students in PE may be associated with factors such as low self-esteem, low perceived physical ability, dominant personalities and a lack of social acceptance from others. As was evident in this study, and supported by Bohler (2004), in boys-only PE classes, boys of lower ability often are intimidated by those of higher ability who dominate games, and as a result may face considerable barriers to participation in PE. The same can be applied to girls within single-sex PE contexts, whereby the involvement in PE with girls of higher ability can be intimidating (Bohler, 2004). This nature of being scared or intimidated in PE, however, was displayed in this study to be more harmful to a student's experiences in PE when involved in coeducational contexts; as is supported by Gibbons (2009). For girls in coeducational PE settings, the often dominant nature of boys, along with factors such as embarrassment and self-consciousness, all can contribute to increased intimidation and therefore decreased participation in PE. Also, for lower-skilled boys, the intimidation experienced from the presence of higher skilled boys can be heightened when girls of higher ability participate in the same PE context. Relative to Wright's (1999) theory of sport and the social construction of gender, there is an existing perception that boys should be better than girls at sports; hence, those boys of lower ability than girls within coeducational PE settings resultantly can experience further declines in their desire to participate in PE lessons and activities than when in single-sex PE settings.

Contradictory to much of the data collected, a number of participants expressed their support for coeducational practical PE classroom structures within early Stage 4 contexts. As the study revealed, in early Stage 4 contexts (predominantly Year 7), many girls benefit from the increased competitiveness that can exist in coeducational PE classes. Due to the earlier maturation of girls, aspects such as the physical dominance of boys are often at their lowest within early Stage 4, which resultantly can allow girls to compete with boys in coeducational PE settings more equally. This may help to explain why many participants stated that girls' participation levels in PE are generally at their highest when in Year 7; that is, before factors associating boys' maturation begin to progressively negatively effect the participation and performance of girls in coeducational PE environments.

One factor that affects the participation and performance of both boys and girls in PE in a similar way refers to the concept of 'distractions' (Vertinsky, 1992, Wright, 1999). For both boys and girls in single-sex PE environments, same-sex peers were identified in this study as a major factor contributing to student-distraction. Same-sex peer-related factors such as poor behaviours, peer pressure and maintaining image each have the potential to negatively impact on a students' participation and performances in single-sex PE classes. For both boys and girls however, the presence of students of the opposite sex can significantly distract students in PE contexts. Whilst peers of the same-sex were conveyed to be potential distracters, peers of the opposite sex in PE settings were identified to evoke a larger range of distractions to students, and particularly girls. These distractions can encompass embarrassment, self-consciousness, self esteem issues, image preservation and trying to impress the other sex, which all can contribute to decreasing students' participation and performance in coeducational PE classes. Vertinsky (1992) strongly supported the notion that girls became distracted with boys in coeducational PE settings; however, this study reveals that so too do boys experience similar distractions with the opposite sex, and that the presence of the opposite sex in coeducational PE settings is often of concern to the participation and performance levels of both boys and girls. Hence, in considering that coeducational PE class structures encompass both same-sex peers and peers of the opposite sex, coeducational PE classes were found to often encompass more distractions than single-sex PE classes, and therefore were associated with potentially lower levels of participation and performance being achieved by students in coeducational PE contexts.

Participants used the term 'inequality' to describe the differences between the nature of boys and girls' experiences in coeducational PE settings. Factors such as intimidation, peer pressure, image, male dominance, physical strength and skill/ability level, each contribute to creating inequalities for many girls

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and their experiences in coeducational PE environments. As participants conveyed, it is possible for girls to overcome some of the inequalities experienced in coeducational PE settings through earning the respect of their male classmates, which is often achieved by displaying levels of performance that are of a standard equal to that exhibited by most boys. This study revealed however, that reality shows a significant number of girls do not, and may never, achieve the levels of performance in coeducational PE settings that may grant them respect from their male classmates. Therefore, inequalities in coeducational settings may be consistent for many girls, and may consistently negatively affect many girls' levels of participation and performance in coeducational PE.

There may be a direct relationship existing between the participation of students and the performance levels achieved by students, in all PE contexts. As was determined from this study, when a student experiences low levels of participation in PE, low levels of performance often correspondingly result. This may be because with low participation in PE, students may not have adequate opportunities to practice and develop their skills, abilities and overall performance in PE. Hence, if PE teachers have specific performance goals for activities or units of work, the factors revealed in this study to influence a student's participation in each PE settings may need to be carefully and critically considered; in doing so, the performance of students may be better achieved.

Some participants perceived that contextual differences between schools and classes made it inappropriate for them to offer definite answers relating to classroom settings and students' participation and performance in PE. However, these participants often formed a minority, and satisfactory numbers of participants offered responses to enable the findings to be accurate, valid and reliable, despite context. In considering this study's findings though, it is still necessary to consider that the context of different schools and classes may influence the effect of single-sex and coeducational class structures on the participation and performance of students in practical PE.

CONCLUSION

A larger number of participants within this study believed that when comparing single-sex and coeducational practical Physical Education environments, higher rates of student participation in PE occur in single-sex classroom structures. Similarly, a larger number of participants believed that when comparing single-sex and coeducational Physical Education environments, higher levels of performance are achieved and displayed by students within single-sex classroom structures. Hence, from the participants within this study, single-sex PE classroom structures were the preferred option for best assisting students to achieve higher levels of participation and performance in PE.

In all Physical Education contexts, there appears to be a direct link existing between the level of performance achieved by a student, and the level of participation displayed by that student, with low levels of participation displayed by a student in PE commonly accompanied with low performance achievements, and vice versa. Similarly, within PE contexts there appear to be inequalities existing between boys and girls; these inequalities, however, were found in this study to most predominantly exist within coeducational PE contexts.

The factors commonly identified by participants to lower the participation rates of both boys and girls in single-sex PE environments include distraction by peers, peer-pressure, self-consciousness, image-preservation, varying skill abilities and varying physical strengths of students. The effects of these factors to decrease students' participation and performance in PE, however, appear to be heightened within coeducational contexts, when members of the other sex are present. For boys, the main inhibitors to participation and performance in PE are commonly associated with the presence of girls within

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coeducational settings. These include being distracted by the opposite sex and experiencing hindered progression of learning due to the uneven strength and skill levels existing between boys and girls in coeducational PE environments. Similarly, girls' participation and performance in PE appears to be more negatively affected by the presence of the other sex within coeducational contexts than within single-sex contexts. Also, girls appear to experience greater declines in participation and performance than boys in coeducational PE contexts, commonly due to the increased influence of issues pertaining to girls' self-consciousness, image preservation, general lower skill and strength levels than most boys, being intimidated by boys, and being less dominant in coeducational PE settings than most boys. Finally, this study revealed that the nature of students' participation and performance in single-sex and coeducational Physical Education environments may depend significantly on the sport or activity being learnt within the PE class. That is, certain sports and activities may allow students to achieve higher levels of participation and performance when implemented in either a single-sex or coeducational PE class structure.

This study reveals that teachers exhibit a range of perceptions regarding the effects of single-sex and coeducational settings on the participation and performance of students in PE. The dominant view within this study, however, is that single-sex PE environments are, in the majority of circumstances, the most supportive classroom structure for achieving higher student participation and performance levels. Overall, there are a range of ways that single-sex and coeducational class settings effect students' participation and performance in PE, which PE educators should consider in order to achieve the most effective learning experiences for students.

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