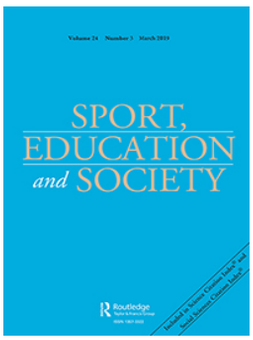

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Students' perceived learning in physical education: variations across students' gender and migration background in Sweden

Alexander Jansson[a], Gunilla Brun Sundblad[b], Suzanne Lundvall[b]*, Daniel Bjärsholm[c] and Johan R. Norberg[a]

[a]Department of Sport Sciences, Malmö University, Malmö, Sweden; [b]Department of Sport and Health Science, The Swedish School of Sport and Health Sciences, Stockholm, Sweden; [c]Department of Sport Science, Linnaeus University, Växjö, Sweden

ABSTRACT

Students' perceived learning in physical education (PE) is an important yet neglected area of research. Increased knowledge about students' perceived learning can provide teachers with useful information to promote meaningful learning experiences in PE. Moreover, perceived learning can potentially be an alternative measurement to school grades when analyzing equality of outcome. Given that gender and migration background are associated with equality issues in PE, these groups are of particular focus in this study. With this background, the aim of this paper is threefold: (a) to explore students' perceived learning in PE in Sweden, (b) to analyze what perceptions of PE are most prominent, and (c) present a way to quantitatively illustrate how perceptions about PE vary across gender and migration background. The analysis was based on a question about students' perceived learning and was conducted in two steps. First, the students' answers were categorized using qualitative content analysis. The analysis shows that the perceived learning in PE can be categorized into the following categories: 'Physical doing', 'Emotional experiences', 'Health', 'Do not learn', 'Outdoor Education' and 'Social interaction'. Second, by quantitatively illustrate all answers in relation to the six categories, the result showed that the category of 'Physical doing' (36%) was the most prominent, and thereafter, in descending order are the categories of 'Emotional experiences' (22%), 'Health' (18%), 'Do not learn' (10%), 'Outdoor Education' (10%) and 'Social interaction' (4%). The results also showed that regardless of gender and migration background, students have somewhat similar perceptions of what they learn in PE. In this study we: (i) present a categorization of students' perceived learning in PE, (ii) show that physical doing is a prominent aspect in students answers, lastly (iii) by quantitatively illustrate students' perceived learning in PE, this study also suggest an alternative measurement to analyze equality in PE.

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CONTACT Alexander Jansson alexander.jansson@mau.se Department of Sport Sciences, Malmö University, Nordenskiöldsgatan 10, Orkanen, E436, Sweden
*Suzanne Lundvall, Department of Food, Nutrition and Sport Science, Gothenburg University, from the 1st of September, 2020.

Introduction

School grades are by far the most common measurement when it comes to analyzing equality of outcome in education. When there are large 'gaps' in school grades between equality relevant groups, this is considered a strong indicator of inequality (see Gustafsson et al., 2016; SOU, 2019, p. 40; The National Agency for Education [NAE], 2010; OECD, 2015, 2017). Although that there are several equality relevant groups, both the Swedish Educational Act (see SOU, 2019, p. 40) and previous research (see Barker et al., 2014) state that groups based on gender and migration background are two groups of particular importance. Studies have shown that both gender and students' migration background, and the intersection of these groups, are closely associated with unequal school grades in Physical Education (PE[1]) (Svennberg & Högberg, 2018). Although school grades are important when analyzing equality of outcome in PE, there is a great need to explore additional measurements that acknowledge the 'student voice' (see Dyson, 2006; López-Pastor et al., 2013). Therefore, instead of using school grades in PE, this study focus on an alternative measurement to gain the student perspective on learning in PE – that is students' perceived learning in PE.

The main reason for focusing on students' perceived learning in PE is that it can uncover elements in PE practice that students experience as being meaningful. Research suggests that meaningful experiences in PE should be promoted because such experiences have the potential to positively affect students' quality of life and well-being. It can also promote lifelong learning (Beni et al., 2017; Beni et al., 2019; Kretchmar, 2007; Ní Chróinín et al., 2018; Ní Chróinín et al., 2019). To gain insight on this, it is important to listen to what the students have to say, particularly because only the students themselves can provide teachers with relevant information about what they experience as being meaningful.

Given the importance of gaining the students' experiences in PE, there is nonetheless limited knowledge about, (i) what students perceive they learn in PE, (ii) what aspects of learning in PE that are prominent in students' answers, and (iii) alternative measurements to school grades that could be used when analyzing equality of outcome. Therefore, this study intends to address this knowledge gap. The aim of this paper is threefold: (a) to explore students' perceived learning in PE in Sweden, (b) to analyze what perceptions of PE are most prominent, and (c) to present a way to quantitatively illustrate how perceptions about PE vary across gender and migration background. To summarize, this paper will make three contributions to existing research. First, it sheds new light on students' perceived learning in PE. Second, it highlights that increased knowledge about students' perceived learning in PE can help teachers create meaningful learning experiences in PE. And third, instead of using school grades as a measurement to analyze equality of outcome, this paper demonstrates an alternative measurement, that is, students' perceived learning in PE.

Learning in physical education

Although 'the goal of physical education is student learning' (Ennis, 2014, p. 9), studies indicate that students do not articulate well both what they *perceive* they learn in PE (Larsson, 2008) and what they are *supposed* to learn according to curricula (Lundvall, 2004; Nyberg & Larsson, 2014; Redelius et al., 2015). What was found was that instead of articulating what they learn or what they are supposed to learn, students more often describe what they do during PE. This 'doing' is often associated with some sort of non-competence-based physical activity, sport, or game (Nyberg & Larsson, 2014). Consequently, when students describe their learning in PE, they often tend to focus on what they do rather than on what they perceive they learn (Larsson & Redelius, 2008; Lundvall, 2004; Lundvall & Meckbach, 2008; Nyberg & Larsson, 2014; Redelius et al., 2015).

The focus on 'doing' activities rather than learning in PE is not new. Nearly four decades ago, Placek (1983) described that successful learning in PE was often defined by the extent to which the students were 'busy, happy, and good' (p. 49), meaning, *busy* with physical activities, *happy* while doing them, and feeling *good* as a result of doing them. While the *busy* aspect corresponds

well with the 'doing' aspect, the 'happy' and 'good' aspects are consistent with research showing that students often associate learning with personal and emotive experiences in PE. A palpable example of this is that students often associate learning in PE with their personal experience of having fun (Annerstedt, 1991; Barr-Anderson et al., 2008; Kretschmann, 2015; Larsson & Redelius, 2008; Nyberg & Larsson, 2014; Whitehead, 2005). According to some research, the 'fun' aspect is actually one of the most prominent aspects of learning when students describe what they learn in PE (see Annerstedt, 1991; Lundvall, 2004; Quennerstedt et al., 2008; Swedish Schools Inspectorate, 2018). Despite that, the 'fun' aspect seems to be important for students in relation to learning, studies show that it is difficult for students to describe *why* and *how* this is important (see Nyberg & Larsson, 2014).

As described, research has shown that students often have difficulties describing what they perceive they learn in PE. However, when they do, they often tend to focus on 'doing' physical activities and describe learning in terms of personal and emotive experiences, such as having 'fun'. Considering that the aim of PE is student learning, this can be problematic in terms of the curriculum. Nonetheless, from a teacher's perspective, it can be important to know which elements of learning students find important and meaningful. Without this knowledge, it is difficult or even impossible to create and promote a stimulating and inclusive learning environment (see Dyson, 2006; Ennis, 2014).

Perceived learning and meaningfulness

Meaning in PE has for long been of interest for researchers (Arnold, 1979; Hawkins, 2008; Metheny, 1968; Quennerstedt et al., 2011). Kretchmar (2007) explains that meaning 'includes all emotions, perceptions, hopes, dreams, and other cognitions – in short, the full range of human experience' (p. 382). Moreover, Kretchmar (2007) distinguishes between meaning and meaningful(ness), with the latter reflecting experiences in PE that have a 'personal significance' to the student (p. 382). Many studies on meaningful experiences in PE have been conducted (see Beni et al., 2017; Kretchmar, 2000, 2001, 2006, 2007, 2008); according to Kretchmar (2006), several aspects can represent qualities of meaningful experience: social interaction, fun, a challenge, increased motor competence and delight. In a review, Beni et al. (2017) conclude that another aspect should be included – personally relevant learning. Several studies propose that teachers should strive to design PE so that learning becomes meaningful for students. Those studies highlight that meaningful experiences in PE have the potential to positively influence students' quality of life. Furthermore, a strong focus on meaningful experiences can contribute to the students' attention being directed towards the quality of physical movement and how such experiences contribute to feelings of well-being and joy (see Beni et al., 2017; Beni et al., 2019; Chróinín et al., 2019; Ní Chróinín et al., 2018). Based on our understanding of the concept of meaningful experiences in PE, it is possible to gain new information about what aspects of learning students experience as meaningful, by exploring what students perceive they learn. In addition to the importance of exploring students' perceived learning, there is also a great need to explore measurements that are meaningful from the students' perspective. Such measurements can be alternatives to school grades when analyzing equality of outcome in PE.

Perceived learning and (in)equality

Although the concept of equality is complex, it can be understood as based on two key components. The first component decide the *principle* of equality (for example, strict equality, adequate equality and equality based on prioritarianism). The various principles of equality are based on different assumptions about what is to be considered as fair. For example, if students should have the same amount of what is valuable, or if the most disadvantaged students should be as well off as possible. Although equality is a goal in school systems around the world, it can mean different

things depending on which principle of equality that is used (Gustafsson et al., 2016). The second component decides what *values* that should be equal based on the first component. *Values* are by definition something that are *valuable* in relation to a specific context and could both be understood as *opportunities* and *outcomes* (see Evans, 1993; Phillips, 2004). In this study, we focus on equality of *outcome* and one particular *value* – students' perceived learning in PE.

Studies on equality in PE have a rich tradition (Evans, 1993; Griffin, 1984; see also Evans & Davies, 2008, 2015, 2017). During the last 30 years, a vast amount of literature has been published. This includes, but are not limited to, studies that focus on: school reforms, privatization and neoliberalism (Evans & Davies, 2008, 2015, 2017), the significance of socially just guidelines in curriculums and policies (Gerdin et al., 2019; Walton-Fisette & Sutherland, 2020), race and ethnicity (Blackshear, 2020; Dagkas & Hunter, 2015; Safron, 2020) and norms, objectification and sexuality (Larsson et al., 2011). There is also a large amount of literature that in various ways focus, explores and highlights the importance of social justice in PE (Enright et al., 2018; Hill et al., 2018), transformative PE education (Lynch & Curtner-Smith, 2019), critical PE education (Fitzpatrick & Russell, 2015; Shelley & Mccuaig, 2018; Sicilia-Camacho & Brown, 2008) and how to change the traditional PE practice using an activist approach (Luguetti et al., 2019; Oliver et al., 2018).

Many studies show that students' *opportunities* to succeed in PE differ, among others, as a result of gender and migration background. However, there is clearly a lack of studies that focus on equality of *outcome* and the use of an alternative outcome to school grades. Therefore, in this study we focus on one alternative outcome to school grades, that is, students' perceived learning PE. Although we use an alternative outcome (students' perceived learning) it is possible to draw conclusions about equality based on a principle proposed in previous research that uses school grades (SOU, 2019, p. 40). That principle states, were there are *considerable* differences in school grades 'between girls and boys, […] and between students with different migration backgrounds – then there is reason to suspect that equality is not sufficient' (NAE, 2010, p. 60). In this study, the aforementioned principle is used in the interpretation of the results, more precisely; considerable differences in students' perceived learning in PE between groups based on gender and migration background, may be a strong indicator of inequality (see SOU, 2019, p. 40).

Method

This study is based on data from the School–Sport–Health (SSH) project. SSH is an interdisciplinary and longitudinal Swedish research project focusing on students' perceptions of PE and schoolchildren's physiological and medical health. The empirical material used in this study derives from a questionnaire collected in 2016. All data was used in line with the approved ethical application (ref. no. 2019-00172) and handled in accordance with rules and prevailing ethical practice.

Participants

The participants were a national sample of students ($N = 1{,}203$, girls $n = 598$, boys $n = 594$, and 11 students who did not report gender) from Grade 6 ($n = 562$) and Grade 9 ($n = 641$). The students in Grade 6 were aged 12–13 years, and the students in Grade 9 were aged 15–16 years. The students were from the same schools ($N = 24$) or the same geographical areas as the randomly selected schools in the first SSH study (see Sundblad et al., 2005 for more information).

As described above, we use the same indicator of inequality as in studies that use school grades. In this study, the interpretation of the results is bound to quantitatively illustrate perceived learning in PE across groups based on gender and migration background. To categorize migration background, we use the same definition as in previous research and the national classification from Statistics Sweden (SCB) (Gustafsson et al., 2016; SCB, 2002; SOU, 2019, p. 40). Accordingly, the students migration backgrounds were dichotomously categorized: (a) Swedish background

– students born in Sweden having at least one parent born in Sweden ($n = 1{,}037$), or (b) foreign background – students born in Sweden and whose parents were both born abroad or students born abroad no matter where the parents were born ($n = 163$). Only three students did not report migration background.

Procedure

We analyzed students' answers from one question with an open response alternative and a statement with one response alternative. The question with an open response alternative was, *What do you think you learn during physical education classes and during sports-/outdoor days*? The statement with one response alternative was, *I do not learn anything*.

Content analysis

First, the students' answers were categorized using a qualitative content analysis. Second, based on the categories, a quantitative content analysis was conducted in which the students' gender and migration backgrounds were taken into account.

Qualitative content analysis. The analysis was based on *manifest* content and *inductively* driven. This means that the analysis was data-driven and the categories identified were strongly linked to the students' answers (see Braun & Clarke, 2006). The analysis was based on the guidelines of previous research (see Graneheim & Lundman, 2004) and conducted in five steps: (1) the empirical material was read several times so that the content would be recognized and to create an awareness of the extent of answers. After that, (2) the students' answers were condensed/shortened, without losing the original meaning. Thereafter, (3) the condensed answers were abstracted to codes. (4) The codes were then further categorized into a subcategory. For example, in the meaning-carrying unit, *Learning how to move in order to get the most out of my training*, both 'move', 'training' and the entire meaning-carrying unit indicated that learning to move was described as a way to benefit most from physical training. 'Move' and 'training' are clearly related to each other and therefore suitable to include in the same category. In the last step, (5) the themes under 'Subcategory' formed the final categories. To promote trustworthiness and suitable names for the final categories, the process was presented and discussed during seminars with PETE researchers – which have proven successful in earlier studies (see, e.g. Haraldsson et al., 2010). See Table 1 for an example of the analysis.

Quantitative content analysis. Guided by the work of Rourke and Anderson (2004), the quantitative content analysis was conducted by: (1) summarizing the number of meaning-carrying units for each category; (2) dividing the number of meaning-carrying units for the specific category with the total number of meaning-carrying units ($\sum = 1{,}530$), such as specified in the following formula

$$\frac{\sum \text{ units(one category)}}{\sum = 1530 \text{ (units all categorys)}}.$$

Based on the empirical material from this study, the meaning-carrying unit are as follows: 'Physical doing' (548), 'Emotional experiences' (341), 'Health' (282), 'Do not learn' (148), 'Outdoor Education', (149) and 'Social interaction' (62). An example for all students and the category 'Physical doing' is

Table 1. Example of the analysis with the responses (R) from two students (R^1 and R^2).

Meaning-carrying unit	Condensed meaning-carrying unit	Code	Subcategory	Category
R^1: Learn how to move to get the most out of my training.	R^1: Move to gain the most.	R^1: Move/ movement.	R^1: Movements.	R^1: Physical doing.
R^2: I think I learn about different training forms.	R^2: Different training forms.	R^2: Train/training.	R^2: Training.	R^2: Physical doing.

presented in the formula

$$\frac{\sum = 548}{\sum = 1530} = 36\%.$$

Thereafter, to enable a quantitative illustration with regards to equality relevant student groups, the analysis was conducted separately for (a) girls with a Swedish background, (b) girls with a foreign background, (c) boys with a Swedish background and (d) boys with a foreign background.

Results

Firstly, based on the qualitative content analysis, we can answer the first aim of the study. The result is presented in Table 2. The category 'Do not learn' is not included as a result. Secondly, based on the quantitative content analysis, we can answer the second and third aims. The result is presented in Figure 1 under the heading, 'Quantitative content analysis'.

Physical doing

This category shows that students describe learning in relation to the following subcategories: *Training*, *Sports*, *Movements*, *Techniques* or *Games*. As such, students' perceived learning in the category 'Physical doing' was, in a broad sense, associated or equated with 'doing' physical activities. The category illustrates that students' perceptions of learning was closely related with being physically active and understanding why physical activity is important (often in terms of the 'right' or 'best' way to be physically active). In all the subcategories, students described learning both in terms of how the physical activity is done, or should be done, and why the physical activity is important. Common examples in each subcategory follow: *Training*: 'I think that you learn to train in the right way and that training is important' and 'how I should train, training techniques'. *Sports*: 'I'm learning how to perform sport activities in the right way'. *Movements*: 'I learn how I can train in the best way, so that I move in the right way when I should lift something or breathe with regular intervals when I run'. *Techniques*: 'I learn a lot about technique, for example, if it is basketball I learn how to throw' and 'The technique on different things, how to do and how not to do'. *Games*: 'I learn about different sports and games' and 'I have learned to play some new games'.

Emotional experiences

This overarching category involves students' descriptions of their learning in relation to other related aspects, which are placed into three subcategories: *Emotive*, *Expected* or *Learning related to personal experience*. In the first subcategory, *Emotive*, students typically described learning as closely related to emotional experiences, such as fun and hate, for example, 'It is fun' and 'When I had PE? Nothing but hating myself more'. In the subcategory, *Expected*, the students answers were typically related to the notion that there was something 'tacit' (cf. Gourlay, 2002) that they were supposed to learn or do. For example, 'I learn what I am supposed to learn'. Typical answers also include students describing

Table 2. Result from the qualitative content analysis – categories and subcategories of students' perceived learning in PE.

Categories	Physical doing	Emotional experiences	Health	Outdoor Education	Social interaction
Subcategories	Training	Emotive	Health prevention	Outdoor Education techniques	Collaboration
	Sports Movements Techniques Games	Expected Personal experiences	Health promotion	To take care of nature Rules	Consideration

how learning is expected to take place during certain types of lessons, for example, 'I learn most during theory' and 'I think it is fun to move; of course, I have learned from the theory lessons too'. In the subcategory, *Personal experiences*, students typically described learning in relation to self-confidence and self-belief. For example, 'I have learned to believe in myself,' 'You learn to compete against yourself,' '[I] take myself seriously,' and 'Be committed, fight.' Other typical answers in the subcategory, *Personal experiences*, were related to students experiencing that they learn 'a lot'; however, they do not mention what they have learned 'a lot' about. For example, 'I think I have learned a lot,' 'Very much,' 'Most things, you get to learn most,' and '[I] don't know, but I've learned things.'

Health

In this category, students describe learning as closely related to the *Health promotion* and *Health prevention*. In both subcategories, the aspect of the body featured prominently. In the subcategory, *Health promotion*, the students described that they need to learn about and (learn to) take care of the body. For example, 'How to take care of your body' and 'I learn a lot about the body and what is good and bad for it. Even how to take care of it the best way'. In general, the students typically described that they learn *about* the body rather than *through* or *with* the body. One example is that students describe that they learned *about* diet, 'You learn more about health and diet' and 'I learn a lot about diet and how to take care of the body'. Furthermore, learning related to achieving and maintaining a healthy body was prominent in the students' answers, for example, 'I have also learned how to live a healthy life with a balance between diet and exercise. How to get a healthier life' and 'I think we learn [that it's] important to feel good and get through life in a good way'. In the subcategory, *Health prevention*, students typically associated learning with injury prevention, cardiopulmonary resuscitation, and emergencies. For example, 'I learn how to prevent injuries', 'I think I learn most about how to take care of your own body and also be able to save the others', 'I learn about how I should work with my body better and get stronger without injuring myself', and 'First aid'.

Outdoor education

This category shows that students describe learning in relation to the following caregorys: *Outdoor Education techniques*, *To take care of nature* or *Rules*. Students' perceived learning in the subcategory, *Outdoor Education techniques*, shows that learning was typically associated with nature and 'doing' activities that usually take place in nature, such as orienteering, hiking, cooking, and making a fire. For example, 'To read a map, outdoor life', and 'How one should be dressed/pack a backpack' for an outdoor day in winter, 'We got to learn to navigate in nature and read maps and compasses. That is something I learned', 'I think you learn to handle the wilderness', and 'I learned that you do not need to have a regular stove to cook good food'. In some cases, students also described what they perceive they learn with just the word, *friluftsliv*, which is a Swedish word that translates to 'outdoor life'. In the subcategory, *To take care of nature*, learning was typically associated with how to behave/act and how (not) to use nature's resources. For example, 'I learn to use nature's resources' and 'To appreciate our beautiful nature and take care of it'. In the subcategory, *Rules*, students typically describe learning as closely associated with different 'do's and don'ts', such as, right of public access (*allemansrätten*). For example, 'We got to learn about the right of public access' and 'I learn about the right of public access and about the rules of nature'.

Social interaction

This category shows that students describe learning in relation to social interaction, which in this study, includes the subcategories *Collaboration* and *Consideration*. Taken together, in the category

'Social interaction', students often associated learning with specific activities, such as ball games. An example from the subcategory, *Collaboration*, is 'cooperation in the ball game, ball game communication'. In addition, in the subcategory, *Collaboration*, students often describe learning as closely relating to classmates or groups, for example, 'Collaborate, work in groups during the physical conditions' and 'I learn to collaborate with my peers'. In the subcategory, *Consideration*, students' perceived learning was typically associated with how to support others, behave correctly, and be fair, for example, 'I have learned how to behave in class' and 'I learn how to behave with others'.

Quantitative content analysis

Based on the results from the qualitative content analysis, we were able to achieve the second and third aims. Regarding the second aim of this study, Figure 1 shows that the most prominent category was 'Physical doing' (36%) and thereafter in descending order, 'Emotional experiences' (22%), 'Health' (18%), 'Do not learn' (10%), 'Outdoor Education' (10%) and 'Social interaction' (4%). As shown in Figure 1, there are considerable variations, with certain categories clearly more prominent than others, for example, 'Physical doing' (36%) versus 'Social interaction' (4%).

Regarding the third part of this study, the result presented in Figure 1 shows *small* variations in relation to students' gender and migration backgrounds. This is particularly visible in the four categories 'Physical doing', 'Health', 'Outdoor Education' and 'Social interaction'. However, there are also some noteworthy variations; the most marked observations to emerge from the quantitative illustration are the variation within the category 'Do not learn', in which girls with a foreign background had a higher value (14%) compared to girls with a Swedish background (7%).

To summarize, the quantitative illustration of students' perceived learning in PE showed which category is the most prominent ('Physical doing'). The results also showed that regardless of gender and migration background, students have somewhat similar perceptions of what they learn in PE.

Discussion

This study contributes to existing research in three ways: (1) it contributes with new knowledge about students' perceived learning in PE, (2) it highlights that knowledge about students' perceived learning can provide information to teachers about elements in PE practice that can promote meaningful learning experiences and (3) by quantitatively illustrate students' perceived learning in PE, this study also suggest an alternative measurement to analyze equality of outcome in PE.

First, there is an ongoing discussion about how teachers can positively promote students' meaningful experiences in PE. The categorization of students' perceived learning in this study (see Table 2) can shed new light on aspects that students themselves find important and meaningful. In earlier studies, Kretchmar (2006) and Beni et al. (2017) described several aspects which are central influences on students' meaningful experiences in PE: social interaction, fun, challenge, increased motor competence, delight and personally relevant learning. Although we selected other names for most of the categories in this study compared to Beni et al. (2017), there are several similarities in regard to what the categories symbolize. Guided by the work of Kretchmar (2006), we named one of the categories in this study 'Social interaction'. On one hand, in accordance with previous research, we propose that 'Social interaction' can positively influence meaningful experiences in PE. However, on the other hand, we share the claims made by Beni et al. (2017) that 'Social interaction' not is an aspect that promotes meaningful experiences in PE for all students. The empirical findings in this study support this claim (see Figure 1). That is, compared to all the other categories, the category of 'Social interaction' is the least prominent. This indicates, although somewhat simplified, that few students experience 'Social interaction' as important in relation to perceived learning in PE. As mentioned, although we gave other names for the remaining categories in this study, the category 'Increased motor competence' corresponds well with the category 'Physical doing'. This is

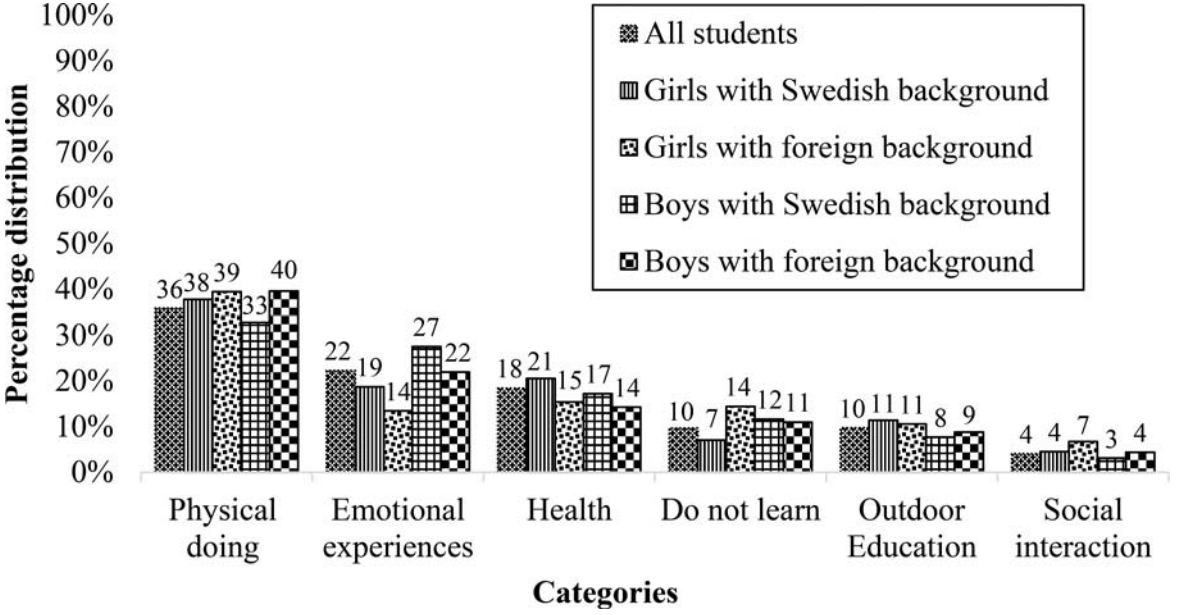

Figure 1. Results of the quantitative content analysis: a quantitative illustration of students' perceived learning in PE divided between groups based on gender and migration background.

clear because both categories have a strong focus on students' ability to perform physical activity/movements, games, and sports. Based on the results from this study, the prominent position of the category 'Physical doing' supports the claims of previous studies. That is, for several students, 'doing' physical activities are closely associated with learning in PE. Additionally, our category of 'Emotional experiences' has a number of similarities with the 'Fun', Delight' and 'Challenge' categories suggested by Kretchmar (2006). Despite that we named the category 'Emotional experiences', the category entails all the personal feelings and experiences that students attribute to learning in PE. Finally, in addition to the categories proposed by Kretchmar (2006) and Beni et al. (2017), our results show that the categories 'Health' and 'Outdoor Education' also are elements in PE practice that can positively promote meaningful learning experiences in PE.

Second, based on the categorization of students' perceived learning in PE, we quantitatively illustrated which categories are most prominent. The most striking result to emerge from the data is that the category 'Physical doing' is much more prominent than the other categories. However, the strong focus on 'doing' in PE is not new. Several other studies have shown that students often strongly associate, and even equate, learning in PE with 'doing' physical activities (see Chen & Ennis, 2004; Lundvall & Meckbach, 2008; Nyberg & Larsson, 2014). Given the results of previous research, the prominent position of the category 'Physical doing' in this study is somewhat expected. However, what was surprising was that the category was so much more prominent than all the other categories.

The second most prominent category was 'Emotional experiences'. The category illustrates that learning was associated with personal experiences that students often have difficulty describing in explicit terms. For example, in the study, several students describe that they learn 'a lot' and/or to have 'fun'. However, the students' answers do not illustrate *what* they learn 'a lot' about, or *what* there is to learn when having 'fun'. The results are nonetheless somewhat expected, as several studies have shown that students often find it difficult to articulate what they learn in PE (see Larsson & Redelius, 2008; Lundvall, 2004; Nyberg & Larsson, 2014). Considering that 'Emotional experiences' is the second most prominent category in this study, it is clear that a large proportion of students find this important in relation to perceived learning. Although these findings are not new, our study provides additional support to further explore students' perceptions of learning in PE that are difficult for students to articulate.

Third, we quantitatively illustrated how the students' perceived learning in PE varied across two equality relevant groups, that is, groups based on gender and migration background. As presented in the results (see Figure 1), the results indicate that students, regardless of gender or migration background, have somewhat similar perceptions of what they learn in PE. However, there is one aspect of the results that is conspicuous, girls with a foreign background (14%) have a twice as high value compared to girls with a Swedish background (7%) with regards to express that they 'Do not learn'. Several studies that focus on equality of *outcome* state that large differences across gender or migration background can be a strong indicator of inequality (see SOU, 2019, p. 40; Svennberg & Högberg, 2018; NAE, 2010). Given that the result from this study show that girls with a foreign background express that they 'Do not learn' in PE, to a considerably higher degree, can therefore be an indicator of inequality. There is undoubtedly a vast amount of literature that show that students' *opportunities* to succeed in PE differs based on gender and migration background (see Barker et al., 2014; Svennberg & Högberg, 2018). Although it is beyond the scope of the present paper to study how students' *opportunities* in PE differ – the results from this study can provide knowledge about the potential effects on one particular *outcome*, that is, students' perceived learning. Although one aspect of the results in this study gives us reason to question the degree of equality in PE, there are in general small variations across groups based on gender and migration background with regards to perceived learning in PE. However, more work will need to be done to confirm our findings.

This study has limitations, even though we use the same definition of migration background as SCB (2002), the categorization includes a wide variation of students with different backgrounds. For example, girls with foreign background is in *no way* a homogeneous group (Barker et al., 2014;

Dagkas & Hunter, 2015). Although this is a broad categorization, by including both gender and migration background, it was possible to have an intersectional approach when analyzing the results. Moreover, given that this study use the same indicator of inequality as in studies that use school grades (see Gustafsson et al., 2016; SOU, 2019, p. 40), the interpretation of the results were bound to quantitatively illustrate perceived learning in PE across groups based on gender and migration background.

To conclude, given that meaningful experiences in PE have the potential to positively influence students' quality of life, teachers should strive to design PE so that learning becomes meaningful for students. The findings in this study sheds new light on what students learn in PE practice, and suggest that students' perceived learning in PE can uncover elements in PE that students experience as meaningful. In addition, previous research has gained considerable insight with regard to equality of outcome by analyzing how school grades vary across gender and migration background. However, there is a great need to explore additional measurements that are meaningful for students and that acknowledge the 'student voice'. Therefore, this study suggest an alternative measurement, instead of using school grades as the main measurement, we quantitatively illustrate how students' perceived learning in PE can be an alternative.

Note

1. 'Physical Education and Health' is the correct term in Sweden. However, in the article, we will use the international term 'physical education' and its abbreviation, PE.

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