Original article (full paper)

# Teachers' perceptions of physical education content and influences on gender differences

Francisco Javier Castejón University Autónoma of Madrid, Madrid, Spain

> Francisco Javier Giménez University of Huelva, Huelva, Spain

**Abstract**—Boys and girls do not show the same interest in physical education classes. Teachers are the architect so that such participation can achieve the educational and social benefits purported by physical education. The aim of this study was to analyze whether teachers perceive that some contents are more appropriate for boys, excluding girls' participation. The methodology combines two instruments: a questionnaire and a semistructured interview. Participants were 18 Spanish secondary education teachers (14 males and 4 females) of physical education. Teachers think there is still a masculine approach to physical education classes. The boys prefer sports and physical fitness contents, whereas the girls prefer expressive contents, especially dancing. Teachers' suggestions to improve girls' participation are provided that most girls usually grant less importance to the more competitive physical education contents, whereas the majority of boys are more participative and they hardly help the girls. This means that teachers should present the benefits of physical activity in such a way that fulfills their educational purpose.

Keywords: teachers, perceptions, physical education, gender differences

Resumo—"Percepção de professores sobre o conteúdo de educação física e sua influência sobre as diferenças de gênero." Os rapazes e as moças não mostram o mesmo interesse pelas classes de educação física. O professor é o responsável por desenhar as atividades para conseguir a participação e os benefícios da atividade física. O professor é o responsável por desenhar as atividades para conseguir a participação e os benefícios da atividade física. O professor deste trabalho é analisar se os professores percebem que os conteúdos são mais apropriados para os rapazes e que excluem as moças da participação. A metodologia utilizada combina os seguintes instrumentos: questionário e entrevista semiestruturada. Participaram 18 professores espanhóis de educação física de ensino secundário (14 homens e 4 mulheres). O professor ainda pensa que existe uma maior presença masculina nas aulas de educação física. Os rapazes preferem os desportos e a condição física, contudo as raparigas preferem os conteúdos expressivos, principalmente a dança. A sugestão dos professores para que as moças melhorem a sua participação é dar menos importância à competição e que os rapazes procurem ajudar a participação das moças. Desta forma, os professores poderão conseguir os objetivos educativos pretendidos da atividade física.

Palavras-chave: professores, percepções, educação física, diferenças de gênero

Resumen—"Percepción del profesorado sobre los contenidos de educación física y su influencia en las diferencias de género." Los chicos y las chicas no muestran el mismo interés por las clases de educación física. El profesorado es el encargado de diseñar las actividades para conseguir la participación y los beneficios de la educación física. El profesorado de este estudio ha sido analizar si el profesorado percibe que los contenidos son más apropiados para los chicos, y que excluyen a las chicas en la participación. La metodología utilizada combina dos instrumentos: un cuestionario y una entrevista semiestructurada. Han participado 18 profesores españoles de educación física en educación secundaria (14 hombres y 4 mujeres). El profesorado piensa que todavía hay una presencia más masculina de las clases de educación física. Los chicos prefieren deportes y condición física, mientras que las chicas prefieren contenidos expresivos, principalmente danza. La sugerencia del profesorado para que las chicas mejoren la participación es dar menos importancia a la competición, y que los chicos procuren ayudar a la participación de las chicas. Con ello, el profesorado podrá conseguir los objetivos educativos de actividad física pretendidos.

Palabras claves: profesorado, percepciones, educación física, diferencias de género

# Introduction

Physical activity taught at school age has the goal of providing many later opportunities, leading to physical, psychological, and social benefits. But such participation is different for boys and girls, with the consequent impact on health and on remaining physically active (Bailey, Wellard, & Dismore, 2005; Fairclough, Stratton, & Baldwin, 2002; Jose, Blizzard, Dwyer, McKercher, & Venn, 2011).

In physical education classes, students learn what physical activities to do and how to perform them in order to achieve benefits throughout their lives (Bocarro & Forrester, 2008; Garn,

Cothran, & Jenkins, 2011). There is evidence that boys and girls do not display the same interest in participating in physical education classes, especially in secondary education (Brooks & Magnusson, 2006; Olafson, 2002; Osborne, Bauer, & Sutliff, 2002). For example, in the work of Bailey *et al.* (2005), it was shown that female participation in physical activities decreases with age, as has been reported in other studies (Trost *et al.*, 2002; Vilhjalmsson & Kristjansdottir, 2003; Wilkinson & Bretzing, 2011). Summing up, the results show that girls' participation in physical education declines from elementary school until the university, and it is influenced by factors such as family, friends, teachers, and social perceptions, among others (Wellard, 2011).

Perceived self-efficacy and fun are aspects that girls associate with better and greater participation in physical education, but they say they feel excluded by the masculine hegemony (Barr-Anderson et al., 2008; Cairney et al., 2012; Colwell, 1999; Fisette, 2013; Flintoff, Fitzgerald, & Scraton, 2008; Klomsten, Skaalvik, & Espnes, 2004; Trost et al., 1997). The theoretical rationale is that boys and girls do not have equal opportunities to participate in the physical activities of physical education classes, and therefore, the benefits are greater for boys than for girls. In other words, teachers direct these activities with a 'masculine' approach (Azzarito, 2009; Dowling & Kårhus, 2011; Verscheure & Amade-Escot, 2007), in the same way that boys understand that certain activities are 'for girls' (Gard, 2008). For example, some sports are considered to be excessively competitive (Dwyer et al., 2006), although it has been shown that differences in competitiveness should not involve sex differences in sport participation (Gill, 1986). As stated by Whitehead and Biddle (2008), girls perceive a loss of femininity in sport activities (see also Oliver, Hamzeh, & McCaughtry, 2009), or they must participate in sports that seem to be organized more for boys than for girls (Skelton, 2000; Vilhjalmsson & Kristjansdottir, 2003). The content is organized by physical education teachers, and therefore, teachers should encourage and negotiate the activities in order to achieve equal participation.

Adequate teaching in physical education classes affects students so they master and consolidate skills that will be useful in the future (Fairclough *et al.*, 2002; Shepherd & Trudeau, 2000). The perception of the levels of skill achieved will lead to higher participation, both in boys and girls (Cairney *et al.*, 2012; Thomas & Thomas, 1988; Trost *et al.*, 1997). These levels are associated with differences in motor skills, identity, or expectations (Fagrell, Larsson, & Redelius, 2012; Osborne *et al.*, 2002). Precisely, the architect of this change should be the teaching staff and the way teachers present the contents.

The teachers' influence is very important and has been documented in different studies presenting more evidence of teachers' behaviors favoring the boys rather than facilitating a shared education (Davis, 2003). When teachers implement the educational curriculum, differences emerge in language, in the questions and the type of questions, and particularly, in the type of contents because the curriculum usually favors those with greater mastery of skills (Ennis, 1999; Kirk, 2004), which are normally the boys more often than the girls. Independently of whether the teacher is male or female, they attend to boys and girls differently in common classes (Koca, 2009). In fact,

separate teaching is sometimes implemented: boys with male teachers and girls with female teachers (Berg & Lahelma, 2010). This ultimately leads to different contents in which masculine aspects predominate in physical education, which the liberal discourse tries to conceal (Rich, 2001). In view of the predominance of certain contents over others, Wilkinson and Bretzing (2011) showed that 74% of the girls prefer fitness units to sports units, and would prefer sport skills to be simpler and non-competitive. That is, 'men appreciate the importance of sport, fighting, competition, emotional control, and so forth, in a way women cannot' (Connell, 2008, p. 132).

McKenzie, Prochaska, Sallis, and LaMaster (2004, p. 448), in their study on the type of physical education contents, found that "girls-only classes had more time for skill drill and less time for game play [...] However, there is a trade-off in that more time in skill drills can reduce physical activity during lessons." In short, girls have less time to learn sport. The studies show that, in general, girls seek better grades and wish to be more attractive, whereas boys try to be good at sports and be healthy (Chase & Machida, 2011; Klomsten, Marsh, & Skaalvik, 2005). Therefore, "It is about providing opportunities for young people to experience activities and make assessments about when, where and how an activity is pleasurable (...) and recognize the range of pleasures available in sport and physical activity in order to be able to promote positive (pleasurable) experiences for young people" (Wellard, 2012, pp. 31–32). This may mean that unpleasant experiences in physical education classes can lead to a lack of positive benefits in these physical education classes and to abandoning the practice of physical activity in the future.

Hence, it seems that boys and girls do not have equal opportunities in their access to contents that are considered important and necessary (Wright, 1999), particularly regarding girls' adherence to physical activity, which would provide them with future benefits (Allender, Cowburn, & Foster, 2006; Coleman, Cox, & Roker, 2008; Flintoff & Scraton, 2001; Hall, 2007). Teachers should reach out to the students, so the students themselves would grant meaning to the physical activity, and their participation would relate to their gender identity (Fisette & Walton, 2014; Oliver *et al.*, 2009), and this means connecting with their lifestyles to make relevant proposals (Enright & O'Sullivan, 2012; Kirk & Oliver, 2014).

As in the curriculums of other countries, in the Spanish primary and secondary educational system (compulsory education), the curriculum is not segregated as a function of gender, and, in the case of physical education, it is suggested that shared physical activity is beneficial for all students at the physical, psychological, and social levels. However, one thing is what the curriculum says (explicit curriculum) but what goes on in physical education classes is quite another (hidden curriculum) (see for example, Verscheure & Amade-Escot, 2007). But the fact is that, as in other studies, in the students' opinion (González, Ruiz, & Carrasco, 2007; Gutiérrez & Pilsa, 2006; Gutiérrez, Ruiz, & López, 2011) as in the teachers' view (Díaz & Aguado, 2012; Hernández & Velázquez, 2010), treatment in class differs. This leads us to conclude that, among other aspects, physical education contents should encourage egalitarian participation for boys and girls. It therefore is necessary to verify the different perceptions of the diverse actors involved in physical education, especially the teachers and the students.

As seen from the results, the teachers still have much say in the pedagogic triangle (curriculum, teachers, and students, see Kirk, 2010). It is necessary to expand research of teachers and their teaching, particularly how they negotiate the curriculum so that girls can participate in the social construction of gender through physical education and physical activity (Enright & O'Sullivan, 2012; Fisette, 2011; Kirk, 2010; Kirk & Oliver, 2014). The goal of the present study is to determine whether teachers think that some contents are more masculine and more appropriate for boys, and other contents are more feminine and more appropriate for girls, and whether this teacher perception affects students' participation in physical education classes, in order to achieve educational benefits in this area.

# Method

An exploratory study was carried out, using a combination of two instruments: a questionnaire and a semistructured individual interview. In this type of design, it is common to use a mixture of instruments (Bogdan & Biklen, 1998), thereby allowing one to study information obtained in greater depth, and serving as a contrast to analyze the data.

# Participants

A sample of 18 teachers (14 males and 4 females) participated in the study. They are teachers of secondary education in an urban area of a Spanish capital, with a population of 150,000 inhabitants, which can be considered an average urban population. This city has a total of 13 public secondary education schools with 25 physical education teachers. The mean age of the group of teachers is 42.5 years, ranging between 29 and 59 years. Mean teaching tenure in secondary education is 15 years, ranging between 2 and 30 years. The body of teachers completed their studies of physical education between the years 1975 and 2005 (57% completed their studies before the year 2000, and 43% as of 2000).

These teachers participated voluntarily, in accordance with the goal presented in this investigation, and they were informed they could leave the investigation at any time. The researchers guaranteed confidentiality of participants' responses in order to protect their identity (Comité de Bioética de la Universidad de Huelva; N° 2015000100001019; 08-05-2015).

Four teachers (two men and two women) were selected to be interviewed because their responses to the questionnaire were more extreme (the teachers who think that the contents are the same for all versus the teachers who think that the contents favor boys). We wished to contrast these responses, and qualify and study them in more depth, as explained in the results section. These four teachers were selected so they could contribute gender viewpoints about the physical education classes. For the qualitative results, they are identified as Anna, Helen, Mark and Phil (fictitious names to protect their anonymity).

Anna has been a physical education teacher since 1998. She has taught in four different centers of secondary education, and now she has a permanent contract. The main feature of her current school is that the classes are bilingual (some subjects are taught in Spanish and others in English), and therefore, it receives preferential economic and administrative support from the Ministry of Education. The students are from the medium and low socioeconomic levels. There is a relatively low percentage of immigrant students (10%).

Helen has been a physical education teacher since 1979 and has always taught in the same school. Her institute is in the center of the city and attends to students from medium-high, medium, and medium-low socioeconomic levels. There are hardly any immigrant students.

Mark has been a physical education teacher since 1999. This is the second school where he has worked. Before, he taught primary education for three years. His current school is on the outskirts of the city and attends predominantly to students from a medium socioeconomic level and, to a lesser degree, to students from a low socioeconomic level. There is a relatively low percentage of immigrant students (9%).

Phil has been a teacher since 2007. He has been teaching at his current school for one year, and this is his fifth school. His school is in the inner city and the students are from medium and low socioeconomic levels. There are hardly any immigrant students.

In all cases, the physical education classes are held twice a week, all the courses are mixed (boys and girls), and all the students are in secondary education and are aged between 13 and 17 years.

### Instruments

We used a questionnaire that was designed ad hoc for this study. It comprises eight questions, five about the contents that the teachers consider are the most attractive or preferred by the students in physical education classes (seeking gender differences). These items were rated on a Likert-type scale ranging from 1 (not at all) to 4 (very much) with an option for don't know/no reply. The rest of the questions asked about the possibility of improving the learnings if the boys and girls were segregated in physical education classes. An example of an item is: Do you agree that in the physical education classes, girls usually prefer some contents to others?

The interview contained a series of questions derived from the reviewed literature on the research topic, as well as drawn from teachers' responses to the questionnaire, in order to qualify them. These questions dealt with the teachers' interest in deepening their knowledge of contents that would be more appropriate for boys or for girls—always in the opinion of these physical education teachers—and about the need (or its lack) for physical education classes to be segregated. The interviews were analyzed by categories, which are presented in Table 1, with their dimensions and description.

Table 1. Dimensions and description of each dimension for analysis of the interviews.

Dimensions	Description			
Curriculum	Physical education is a subject that is more typical of one sex			
	Masculinization or feminization of the physical education curriculum			
	Students' benefits from physical education			
	Students' preference for contents			
Girls' participation	Girls' participation in physical education classes			
	Girls' reasons for participating in physical education classes			
	Influence of teacher's gender			
	Contents preferred by teachers			
Proposals to improve girls' participation	Segregation in physical education class			
	Include more appropriate contents for girls			

#### **Procedure**

All the physical education teachers (n = 25) of the city were invited to participate. Out of all the possible participants, 18 teachers (14 males and 4 females) agreed to participate. These 18 teachers completed a questionnaire in presence of the researchers, after being informed about how the research would be used, the steps to be followed, and the confidentiality of their responses.

Two weeks after analyzing the data of the questionnaire, the four selected teachers were summoned to be individually interviewed in order to contrast their interviews with the data from their questionnaires. All the interviews were recorded and, after their transcription, they were given to the teachers to ratify the transcription. After receiving their consent, the data were analyzed with the MAXQDA 2007 program, using a series of dimensions (see Table 1).

# Analysis of results and discussion

We decided to present the analysis and discussion simultaneously with the quantitative and qualitative data as a contrast and to better understand the results. Firstly, we present the tables with the quantitative results, whereas the qualitative results, which qualify the former, are presented in the comments about the dimensions employed.

# The curriculum of physical education

The first two questions of the questionnaire (Table 2) refer to the teachers' degree of agreement with the preferences of boys and girls concerning the contents to be taught, and to whether the teachers think that some contents are more feminine or more masculine.

Table 2. Teachers' degree of agreement (in percentages) concerning girls' preference for a certain type of content and regarding its femininity or masculinity (n = 18).

Do you agree that		
	in physical education class, girls usu-	in physical education, we could say that some con-
	ally prefer some contents to others?	tents are 'feminine' and other contents are 'masculine'?
Strongly agree	-	22.2
Agree	11.1	61.1
Disagree	61.1	16.7
Strongly disagree	27.8	-

A high percentage of the teachers (88.9%) perceived that the girls did not show any preference for certain contents over others. In contrast, when the teachers were asked whether certain contents were more feminine or more masculine than others, 83.3% agreed that this was so. In the interviews, Anna, Helen, and Phil thought that the subject of physical education in general is more typical of boys, but Mark thought that this used to be the case but that currently, this aspect has evolved considerably.

In this sense, you could say that physical education is more oriented to the male gender in this case, and I think that this tendency cannot be changed, even if I talk to them and ask them what they think of what we do in class (Phil).

Women are less attracted to movement, and men are more attracted to movement. Hence, in a class where half of the students are boys and half are girls, 95% of the boys are naturally active, but only 60 or 50% of the girls are active. I tell them to participate, but they

don't understand me, or they don't want to understand (Helen).

In general, boys are usually more interested in physical education than girls; it's difficult to find a group of girls who are interested in sports. Girls are interested in their bodies, in being fit, but, in general, they are not interested in the sport culture. I ask them what they think is best for them, but all they say is that they don't want to see muscles on their legs and arms. I tell them, that's not possible in physical education (Anna).

These results coincide with those of Wellard (2011), and it can be stated that teachers generally observe a masculine

approach to physical education, leading to girls' lower participation in the classes (Azzarito, 2009; Dowling & Kårhus, 2011; Gard, 2008; Verscheure & Amade-Escot, 2007). The curriculum has certain contents, but the teachers can encourage some preferences that offer possibilities to all the students, and this affects the activities that could be performed out of school.

This teacher perception may depend on the type of contents dealt with in physical education classes. In the next question (Table 3), teachers explain which sports are the boys' and the girls' preferred sports. We only present the most important sports, because a small group of marginal sports was not taken into account.

Table 3. Teachers' opinions about boys' (B) and girls' (G) interest (in percentages) in the sports habitually played in their classes. BK = basketball, THB = team handball, SOC = soccer, VB = volleyball, HCK = hockey, BD = badminton, AT = athletics, GM = gymnastics (n = 18).

Student's								SPO	RTS							
degree of	В	K	TI	НB	SC	OC	V	В	Н	CK	В	D	A	Т	G	M
interest in sports	В	G	В	G	В	G	В	G	В	G	В	G	В	G	В	G
Very much	-	-	11.1	-	22.2	5.6	5.5	11.1	-	-	-	-	-	-	5.5	-
Somewhat	38.8	5.6	50.0	16.7	50.0	-	16.7	66.7	44.4	27.8	16.7	22.2	55.7	44.4	33.3	38.9
Not very much	61.1	77.8	38.8	66.7	27.8	22.2	61.1	16.7	50.0	44.4	55.7	33.3	38.8	33.3	38.8	33.3
Not at all	-	16.7	-	22.3	-	72.3	16.6	5.6	5.5	27.8	27.6	44.5	5.5	22.2	22.2	27.8

According to the teachers, soccer is the boys' preferred sport (and it receives the girls' lowest rating), besides handball; the girls rate volleyball the highest. It is also noteworthy that neither the boys nor the girls prefer sports like basketball. There is a clear loss of boys' and girls' interest in less well-known

sports, probably due to the fact that they practice them less in their leisure time.

However, the 'physical fitness' content, which is relevant in secondary education, received different ratings from boys and girls, according to their teachers (Table 4).

Table 4. Teachers' opinions about boys' (B) and girls' (G) interest (in percentages) in physical fitness. STR = strength, RE = resistance, SPD = speed, FL = flexibility (n = 18).

		Physical Fitness Dimensions							
	S	ΓR	F	RE	SI	PD	FL		
	В	G	В	G	В	G	В	G	
Very much	5.6	-	5.6	-	11.1	11.1	5.6	16.7	
Pretty much	-	83.3	61.1	44.4	50.0	16.7	55.6	22.2	
Not very much	66.4	11.1	33.3	38.9	33.3	50.0	33.3	44.4	
Not at all	27.8	5.6	-	16.7	5.6	22.3	5.6	16.7	

The teachers state that boys display more interest than girls, especially in resistance and somewhat less so in speed; whereas girls show greater preference than boys for strength. Girls' much higher percentage in flexibility is noteworthy. In general, in this content (physical fitness), boy's mean scores are higher than those of the girls, except for strength and flexibility.

The last content refers to body expression and includes dancing, mime, and dramatization. Table 5 presents the information provided by the teachers concerning the students' interest.

Table 5. Teachers' opinions concerning boys' (B) and girls' (G) interest (in percentages) in body expression. DC = dancing, MM = mime, DR = dramatization (*n*=18).

		<b>Body Expression</b>						
	D	C	M	M	DR			
	В	G	В	G	В	G		
Very much	-	27.8	11.1	16.7	5.6	16.7		
Pretty much	11.1	61.1	38.9	50.0	33.3	33.3		
Not very much	50.0	11.2	38.9	22.2	44.4	38.9		
Not at all	38.9	-	11.1	11.1	16.7	11.1		

In this content, according to the teachers' perception, girls prefer dancing to the remaining contents of body expression, and clearly more so than the boys. In the other contents, girls prefer mime and dramatization more so than the boys, although to a lesser degree.

In the interviews, Phil and Helen stated that some contents are more favorable for boys (sports and physical fitness), whereas the contents of expressiveness are more appropriate for girls. They also admitted that some class contents are more masculine and others are more feminine. Sports and physical fitness have a high incidence in the curriculum:

The contents of physical fitness and sports are masculine and are much more clearly defined in the curriculum than the contents of body expression, which are feminine; rather, we, as teachers, direct them towards the girls. In fact, in the general objectives, two or three of them refer to physical fitness, two or three to sports, and only one to body expression (Phil).

About 70% of the curriculum consists of more masculine contents, and 30% are feminine, and I cannot negotiate very much with the girls so they will participate if their percentage is lower, when the boys are clearly favored (Helen).

However, the other teachers (Mark and Anna) stated that the contents are neither masculine nor feminine, but instead depend on the teacher's orientation of them:

It depends on the teacher, that is, for me, the blocks are neither masculine nor feminine, and it all depends on how they are applied, on how I negotiate, because I ask the students what they prefer, and their preferences usually coincide (Anna).

These results are similar to those reported in the works of Ennis (1999) and Kirk (2004), which underline boy's preference for sports and physical fitness contents, and also the work of Wilkinson and Bretzing (2011), and results showing that boys prefer physical education contents more than girls, as noted by González et al. (2007), Gutiérrez et al. (2011), or Osborne et al. (2002). This produces a social construction of gender through physical activity, so that society establishes that some sports tend to be masculine, whereas others are for females because, among other things, the teachers do not take into account the students' preferences and their future impact on adherence to physical activity.

The teachers unanimously stated that, if a subject is in the curriculum, it is because it is considered to provide the same benefit to everyone, and this is summarized in Phil's comments:

Yes, there are some benefits, in the sense that there are more activities that the boys like, and fewer activities that end up engaging the girls. I think all this derives from a social order; I'm not saying this is the way it should be, I wish it weren't so, but I think it's the way things are (Phil).

The teachers assume that the curriculum is acceptable just as it is; there is no critical judgment, and this is a way of maintaining the status quo, the social order. Other authors who deal with this topic (see for example, Connell, 2008) have expressed this aspect in their works. In a similar vein, this is also reported by McKenzie *et al.* (2004), when stating that boys have more activities and practice time, and therefore, more opportunities to learn. Poor learning leads to greater subsequent difficulty to engage in physical activities.

The teachers responded in a similar vein about the contents that the students like the most, because they distinguish obvious differences between boys' preferences (especially sports) and girls' preferences (expressive contents):

Boys prefer ball sports...and girls prefer everything that involves expression, rhythm, dancing (Helen). In general, boys prefer sports, and girls prefer dancing and choreographed activities. I know it sounds topical but, at least in my experience, this is the reality (Phil).

The data confirm the results obtained in other studies (Chase & Machida, 2011; González *et al.*, 2007) that consider collective sports and physical fitness to be 'masculine' contents, whereas expressiveness belongs more to the feminine sphere. Hence, boys seek pleasant experiences in certain contents, and girls in others, as shown in other investigations (Wellard, 2012).

According to our results, the possibilities of changing and encouraging girls' greater and better participation would require a critical analysis of the curriculum and an offer of egalitarian participation for boys and girls.

# Male and female students' shared participation in physical education class

Till now, in our study, we observed that the teachers believe that certain contents favor the boys and others favor the girls. This led us to wonder whether the genders should be separated in physical education classes. Table 6 presents the questions about these aspects and the teachers' (male and female) responses.

Table 6. Percentage of teacher's degree of agreement with statements about the improvement of students' learning in physical education classes if they were separated by gender (n=18).

Do you agree that in physical education classes								
	girls and boys should be separated?	the girls would learn more if they were separated from the boys?	the boys would learn more if they were separated from the girls?					
Strongly	83.3	61.1	66.7					
agree								
Agree	-	11.1	5.6					
Disagree	11.1	16.7	16.7					
Strongly	5.6	11.1	11.1					
disagree								

It is significant that a high percentage of the teachers (83.3%) thought that boys and girls should be separated in physical education class (they prefer separate to negotiate, as said Fisette, 2013). Their rationale for this is that, if genders were separated, the learnings would improve very much or completely for both sexes (boys 72.2%, girls 72.3%). According to these results, the teachers of our study defended instruction and teaching ease instead of influencing their students and causing a social impact, by which boys and girls could enjoy the benefits of physical activity.

The same opinion emerged in the interviews, but somewhat qualified. Thus, among the male teachers, Mark was the one who least favored this idea. He thought that girls' participation is lower, but it is not as significant as reported:

Most of the children participate and are involved practically equally; boys and girls both put 100% of the class to good use. A lower percentage may be seen in the girls, but it is not so significant (Mark).

It is relevant that girls' non-participation is taken into account, but what are needed are solutions. The other male teacher and the female teachers, however, note that this is because the material is not so attractive to the girls and, moreover, they point to some social determinants:

No, that is, I always start from the notion that the girls don't like what they're doing, so they won't benefit from it the same as the boys (Phil).

The girls move around less. I think that, to a great measure, this comes from the education they receive at home (Helen).

They lead a fairly sedentary life and they are becoming increasingly lazy; any activity that requires the slightest effort seems like a gigantic task to them (Anna).

That is, the teachers have a prior idea, and what they are doing is maintaining the status quo. The female teachers remarked that the contents influence the learning, and that girls are disadvantaged due to tradition and the way they interpret physical activity and sports:

Girls were educated through certain contents and boys through others; so evidently, you tend to do what you do well, because you feel more secure (Anna).

This teacher perception becomes a barrier. We have seen teachers' difficulty making a critical judgment of the curriculum, to which must be added their ideas about the contents they use, the boys' greater effort, or their labeling the girls as lazy when they have not taken their preferences into account. This inequality implies girls' access to certain learning but not to others, which creates a vicious circle: fewer learning possibilities lead to fewer participation possibilities, which again lead to fewer learning possibilities:

The girls see that their motor level is poorer than that of the boys, and the boy's contempt or disparaging remarks provoke girls' lack of motivation and participation (Mark).

The analysis of these results is similar to that of other investigations (Connell, 2008; Hernández & Velázquez, 2010), revealing the influence of sports, and particularly, girls' and boys' conception of physical education class being like competition sport, when it is actually completely different (its ends, the time dedicated to it, the methodology, etc.), as reported in other studies (Kirk, 2004).

In the interviews, the teachers were asked whether their ideas about themselves and their preferences benefit male and female students differently. For instance, Phil stated that being a male instead of a female teacher does not have any impact on the way he works with the contents:

Yes, it's true, there is no relationship, and it would be the same if I were a woman instead of a man. In my opinion, the teacher's gender has little influence (Phil).

Nevertheless, if certain contents are preferred to others, this partially favors the boys, even if only implicitly. When the teachers were asked to report the types of contents they prefer, it was clear that Mark, Phil, and Helen preferred sports:

Well, in my case, what I like best are sports because it's what I master; I am comfortable with any sport... But I must prepare body expression exercise, this is harder for me because I have not practiced it (Phil).

Anna reported that she tries to present contents with which the students are not familiar, and she tries to avoid inequality; that is, she avoids favoring the boys over the girls:

My main motto is to teach contents that neither sex is familiar with, because my starting point is more egalitarian (Anna).

This proposal of adapting the contents to the teacher's comfort and the students' needs and motivations has been reported in other works (Gutiérrez et al., 2011; Osborne et al., 2002). It is justified because the goal is to achieve higher participation, as shown in other investigations (Cairney et al., 2012; Hernández & Velázquez, 2010; Trost et al., 1997). Teachers perceive that they master some sports more than others (Díaz & Aguado, 2012) and therefore, as commented by the teachers of our investigation, they think that they can provide their students with greater learnings. However, if they do not deal with male domination in sports, they are actually promoting inequality, as mentioned in the studies carried out along the same lines (Fagrell et al., 2012; Koca, 2009; Osborne et al., 2002).

In the interviews, we requested the teachers to give us their opinion about segregation in physical education classes. As seen in Table 6, most of the teachers thought they would achieve better learnings in separate physical education classes. Thus, whereas Mark and Phil proposed that, by separating the sexes, an essential educational part of the physical education class would be lost, Anna and Helen stated that it is necessary to separate boys and girls; it is the best way to encourage the girls to be more active:

When you are seeking another kind of goals—more attitudinal goals—it is necessary to work with both sexes (Mark).

Another kind of values—I don't know—of pedagogical results—would be lost; I don't know how to express it. I don't think it is the solution; what you might gain on the one hand would be lost in coexistence on the other, and... I don't think it's a good solution, but... (Phil).

These comments reflect a greater interest in achieving learnings that are not exclusively based on motor skills, but that include other areas (psychological, social) that should be taken into account. The teachers face a crossroads, because separate classes do not solve the possible problem. The teachers would find solutions if they attended to the students' needs, if they negotiated and encouraged a participation that reached all the students (Fisette, 2011). In contrast, the comments of the female teachers are focused on motor aspects:

Both sexes would work much harder. We would achieve more. The problem is that we have to mix these two groups that are completely different (Helen). Yes, they would work more. If you work on the contents only with the girls, the contents that motivate them and that they enjoy, I think you would find greater participation, yes, I think so (Anna).

This impression of the female teachers seems to be coherent with the works pointing to male hegemony in sports, which prevents the girls from achieving more and better learnings (Flintoff *et al.*, 2008). In all these cases, organization of the physical education class activities should allow equal access by boys and girls, as underlined in other studies (Vilhjalmsson & Kristjansdottir, 2003).

# Improving girls' participation in physical education

We must find some kind of solution to the problem of girls' lower participation in physical education. If both male and female students go to school, it is because they need to integrate within society, and they need to achieve the necessary learnings for such integration. Such learnings should be within reach of both sexes; nobody should be excluded for any reason (or rather, lack of a reason). If segregation improves motor levels in exchange for social "disintegration," we cannot say we are educating. That is, if we want good physical activity to reach everyone (boys and girls), we must seek solutions, and this is what we are requesting from the teachers of our study.

Could the solution be to orient the curriculum towards activities preferred by the female students but not rejected by the males? Mark said that he did not think this would be appropriate; what the physical education teacher should do is to work daily to promote a more coeducational physical education:

No, it isn't fair or appropriate. There should not be typically male or female games or activities, we should inculcate that really both sexes participate the same way, and the contents should be dealt with in the same way for both sexes at once (Mark).

In contrast, Phil and Anna thought that if the curriculum were orientated towards activities preferred by the girls, their participation would improve substantially, although Anna added more information, and emphasized "social motivation."

Yes, I think that if the contents followed more feminine criteria—I know I shouldn't say this—but if the girls liked it more a priori or if these activities were socially approved for girls, both sexes would tend to participate the same (Phil).

Yes, especially the girls would participate a little more if the classes were exclusively oriented to losing weight and getting fit, that is, caring a bit for one's body (Anna).

Helen's idea was more closely related to the teacher figure; for her, the best solution is for the female teacher to teach the girls and the male teacher to teach the boys:

Taking advantage of the fact that John [the other physical education teacher at her school] is a man, as we have two groups each of 1<sup>st</sup> graders, 2<sup>nd</sup> graders, 3<sup>rd</sup> graders and 4<sup>th</sup> graders, the solution I suggested at my school was for him to teach all the boys of these groups and I would teach all the girls (Helen).

Whereas Mark's discourse was along the lines of the works that underline coeducation, egalitarian educational activities for boys and girls, commitment to achieving useful lifetime educational goals, as some studies are demanding (Fairclough *et al.*, 2002; Shepherd & Trudeau, 2000), the other teachers' discourse was focused more on the influence of students' particular motivations or on social factors, which other investigations have also reported (Kirk & Oliver, 2014; Williams & Bedward, 2001). Helen's comment was clearly a segregated solution that has been criticized in different studies (Berg & Lahelma, 2010; Koca, 2009).

Lastly, with regard to how the teachers would approach their own physical education classes from now on in order to achieve higher and better adherence to physical activity, we asked all of them what they could put into practice in their physical education classes. Mark emphasized the use of a different methodology:

A playful environment, everything should contribute to creating a pleasant environment, the leaders should encourage and motivate the rest of the classmates (Mark).

Phil underlined the need to combat sexist stereotypes from the physical education class, and this means that the sports contents should not be so outstanding:

> Balancing the activities, so there will be equality in all the contents, and the sports contents should not stand out so much over the others (Phil).

Helen continued to insist on the need to separate the sexes in class in order to work independently:

I think we should separate them in a lot of the contents, for instance, the more serious ones. When we practice team handball, a lot of the times they don't even touch the ball, but if I say: "girls, let's go to the gymnasium." The girls want to do sit-ups, and the boys want to play (Helen).

Anna underscored the fact that girls do not like contact sports or very competitive activities, so she felt they should be avoided:

They just don't like contact activities or any of the competition activities; they feel uncomfortable...it is simply physical; they don't like them and don't feel like doing these activities. For some of them, it feels like torture (Anna).

These proposals affect the way teachers address girls' motivation, decreasing competitive activities or activities with more physical contact, as different studies have reported (Bailey *et al.*, 2005; Dwyer *et al.*, 2006; Gutiérrez & Pilsa, 2006). But they also have an impact on any physical activity that is not conditioned by stereotypes and on the social influence that deprives women of the benefits of physical activity, health, and maintaining an active lifestyle (Garn *et al.*, 2011; Jose *et al.*, 2011). It does not seem that critical judgment of the curriculum and negotiation with the students will be taken into account, which may mean we will find the same difficulties to achieve educational goals for all the boys and girls.

### Conclusions

Students who access obligatory education have a series of subjects that help them integrate adequately in society. However, these subjects also exert diverse types of influence and do not achieve the proposed goals. Physical education is just another subject in the educational system, and in the case of the Spanish curriculum, it is as important as the rest of the subjects. The results presented herein correspond to the teachers' viewpoint, which is an important part required in the investigations. But, as perceived and practiced by the teachers, it does not always meet the educational goals. Physical activity as expressed in the curriculum is good for boys and girls, but it is not always perceived in this way.

In our study, we showed that the teachers perceive a masculine orientation in the curriculum, in the sense that it favors boys' participation and learning more than that of the girls. Nevertheless, a critical appraisal of the curriculum could help to achieve the educational goals for boys and girls. In the case of the contents included in the curriculum (sports, physical fitness and body expression), sports (boys prefer soccer) and physical fitness are considered to be more 'masculine' (boys participate more and enjoy them more), whereas in sports, girls prefer volleyball, but they are especially inclined toward body

expression, specifically, dancing, which is considered more 'for girls' (they participate more). We do not intend to say that these opinions tend to homogenize, but that from the teachers' viewpoint, the majority of boys prefer certain contents and the majority of girls prefer others.

In the case of the girls, the teachers of our study consider that, for girls, physical education is more closely related to their physical image (and demanded by social influences: beauty, thinness, feminine stereotypes) than to learning motor skills. On the other hand, the teachers think there is still a masculine approach to physical education classes, which leads to girls' lower participation in the classes. We think that the demand for research postulating a negotiation between teachers and students would benefit participation and learning.

Most of the teachers think that, if boys and girls were separated in physical education class, the girls would work and participate more. But the teachers also state that this would entail the loss of many educational nuances, which would no longer be appropriate or pertinent. The teachers propose some alternatives to improve girls' practice: teaching contents that are more attractive to them, eliminating or decreasing competitive activities, and stressing equal opportunities to maintain an active lifestyle. Again, a process of negotiation should be proposed so that everyone would feel included when practicing physical education contents. Future research should analyze the inclusion of motivation to understand the differences in the use of the contents in physical education.

#### References

Allender, S., Cowburn, G., & Foster, C. (2006). Understanding participation in sport and physical activity among children and adults: A review of qualitative studies. *Health Education Research*, 21, 826–835. doi:10.1093/her/cyl063

Azzarito, L. (2009). The Panopticon of physical education: Pretty, active and ideally white. *Physical Education & Sport Pedagogy*, 14, 19–39. doi: 10.1080/17408980701712106

Bailey, R., Wellard, I., & Dismore, H. (2005). Girls and physical activities: A summary review. *Education and Health*, 23, 3–5.

Barr-Anderson, D., Neumark-Sztainer, D., Schmitz, K.H., Ward, D.S., Conway, T.L., Pratt, C...., Pate, R.R. (2008). But I like physical education: Factors associated with enjoyment of Physical Education Class in middle school girls. Research Quarterly for Exercise and Sport, 79, 18–27. doi: 10.1080/02701367.2008.10599456

Berg, P., & Lahelma, E. (2010). Gendering processes in the field of physical education. *Gender and Education*, 22, 31–46. doi:10.1080/09540250902748184

Bocarro, J.N., & Forrester, E. (2008). School physical education, extracurricular sports, and lifelong active living. *Journal of Teaching in Physical Education*, 27, 155–166.

Bogdan, R.C., & Biklen, S.K. (1998). *Qualitative research for education to theory and methods* (3<sup>rd</sup> ed.). Boston, MA: Allyn and Bacon.

Brooks, F., & Magnusson, J. (2006). Taking part counts: Adolescents' experiences of the transition from inactivity to active participation

- in school-based physical education. *Health Education Research*, 21, 872–883. doi:10.1093/her/cyl006
- Cairney, J., Kwan, M.Y.W., Velduizen, S., Hay, J., Bray, S.R., & Faught, B.E. (2012.) Gender, perceived competence and the enjoyment of physical education in children: A longitudinal examination. *International Journal of Behavioral Nutrition and Physical Activity*, 9(26). Retrieved from http://www.ijbnpa.org/content/9/1/26. doi:10.1186/1479-5868-9-26
- Chase, M., & Machida, M. (2011). The role of sport as a social status determinant for children: Thirty years later. *Research Quarterly for Exercise and Sport*, 82, 731–739. doi:10.1080/02701367.201 1.10599810
- Coleman, L., Cox, L., & Roker, D. (2008). Girls and young women's participation in physical activity: Psychological and social influences. *Health Education Research*, 23, 633–647. doi: 10.1093/ her/cym040
- Colwell, S. (1999). Feminisms and figurational sociology: Contributions to understandings of sports, physical education and sex/gender. *European Physical Education Review*, 5, 219–240. doi: 10.1177/1356336X990053004
- Connell, R. (2008). Masculinity construction and sports in boys' education: A framework for thinking about the issue. Sport, Education and Society, 13, 131–145. doi: 10.1080/13573320801957053
- Davis, K. (2003). Teaching for gender equity in physical education: A review of the literature. Women in Sport & Physical Activity Journal, 12(2), 55–81.
- Díaz, M., & Aguado, R. (2012). Percepción de competencia del profesorado de educación física con experiencia sobre la tarea como recurso didáctico (Perceived competence of experienced physical education teachers about the task as a didactic resource). Retos. Nuevas tendencias en Educación Física, Deporte y Recreación, 22, 16–18.
- Dowling, F., & Kårhus, S. (2011). An analysis of the ideological work of the discourses of 'fair play' and moral education in perpetuating inequitable gender practices in PETE. *Physical Education & Sport Pedagogy*, 16, 197–211. doi:10.1080/17408989.2010.532781
- Dwyer, J.J., Allison, K.R., Goldenberg, E.R., Fein, A.J., Yoshida, K.K., & Boutilier, M.A. (2006). Adolescents girls' perceived barriers to participation in physical activity. *Adolescence*, 41, 75–89.
- Ennis, C.D. (1999). Creating a culturally relevant curriculum for disengaged girls. *Sport, Education and Society, 4*, 31–49. doi:10.1080/1357332990040103
- Enright, E., & O'Sullivan, M. (2012). Physical Education "in all sorts of corners:" Student activists transgressing formal Physical Education curricular boundaries. *Research Quarterly for Exercise and Sport*, 83, 255–267. doi:10.1080/02701367.2012.10599856
- Fagrell, B., Larsson, H., & Redelius, K. (2012). The game within the game: Girls' underperforming position in physical education. *Gender and Education*, 24, 101–118. doi: 10.1080/09540253.2011.582032
- Fairclough, S., Stratton, G., & Baldwin, G. (2002). The contribution of secondary school physical education to lifetime physical activity. *European Physical Education Review*, 8, 69–84. doi: 10.1177/1356336X020081005
- Fisette, J.L. (2011). Negotiating power within high school girls' exploratory projects in Physical Education. *Women in Sport and Physical Activity Journal*, 20, 73–90.

- Fisette, J.L. (2013). 'Are you listening?' Adolescent girls voice how they negotiate self-identified barriers to their success and survival in physical education. *Physical Education & Sport Pedagogy*, 18, 184–203. doi: 10.1080/17408989.2011.649724
- Fisette, J.L., & Walton, T.A. (2014). 'If you really knew me'... I am empowered through action. *Sport, Education and Society, 19*, 131–152. doi:10.1080/13573322.2011.643297
- Flintoff, A., Fitzgerald, H., & Scraton, S. (2008). The challenges of intersectionality: Researching difference in physical education. *International Studies in Sociology of Education*, 18, 73–85. doi:10.1080/09620210802351300
- Flintoff, A., & Scraton, S. (2001). Stepping into active leisure? Young women's perceptions of active lifestyles and their experiences of school physical education. *Sport, Education and Society, 6*, 5–21. doi: 10.1080/713696043
- Gard, M. (2008). When a boy's gotta dance: New masculinities, old pleasures. Sport, Education and Society, 13, 181–193. doi: 10.1080/13573320801957087
- Garn, A.C., Cothran, D.J., & Jenkins, J.M. (2011). A qualitative analysis of individual interest in middle school physical education: Perspectives of early-adolescents. *Physical Education & Sport Pedagogy*, 16, 223–236. doi:10.1080/17408989.2010.532783
- Gill, D.L. (1986). Competitiveness among females and males in physical activity classes. Sex Roles, 15, 233–257. doi:10.1007/BF00288314
- González, J.M., Ruiz, L.M., & Carrasco, M. (2007). The social construction of gender in Spanish physical education students. Sport, Education and Society, 12, 141–158. doi: 10.1080/13573320701287460
- Gutiérrez, M., & Pilsa, C. (2006). Students' attitudes towards physical education and their teachers. *Revista Internacional de Medicina y Ciencias de la Actividad Física y el Deporte*, 6, 212–229.
- Gutiérrez, M., Ruiz, L. M., & López, E. (2011). Motivational climate in physical education: correlates between students' and their teachers' perceptions. Revista de Psicología del Deporte, 20, 321–335.
- Hall, R.L. (2007). Sweating it out. The good news and the bad news about women and sport. In J.C. Chrisler, C. Golden, & P.D. Rozee (Eds.), *Lectures on the psychology of women* (pp. 96–115). New York: McGraw-Hill.
- Hernández, J.L., & Velázquez, R. (Eds.) (2010). La educación física a estudio. El profesorado, el alumnado y los procesos de enseñanza [Physical education at a glance. Teachers, students and teaching process] Barcelona: Graó.
- Jose, K.A., Blizzard, L., Dwyer, T., McKercher, C., & Venn, A. J. (2011). Childhood and adolescent predictors of leisure time physical activity during the transition from adolescence to adulthood: A population based cohort study. *International Journal of Behavioral Nutrition and Physical Activity*, 8, 54. doi:10.1186/1479-5868-8-54
- Kirk, D. (2004). Framing quality physical education: The elite sport model or sport education? *Physical Education and Sport Pedagogy*, 9, 185–195. doi:10.1080/1740898042000294985
- Kirk, D. (2010). Why research matters: Current status and future trends in physical education pedagogy. *Movimento*, 16(2), 11–43.
- Kirk, D., & Oliver, K.L. (2014). The same old story: The reproduction and recycling of a dominant narrative in research on physical education for girls. *Apunts. Educación Física y Deportes*, 116(2), 7–22. doi:10.5672/apunts.2014-0983. es.(2014/2).116.01

- Klomsten, A.T., Marsh, H.W., & Skaalvik, E.M. (2005). Adolescents' perceptions of masculine and feminine values in sport and physical education: A study of gender differences. Sex Roles, 52(9), 625–636. doi:10.1007/s11199-005-3730-x
- Klomsten, A.T., Skaalvik, E.M., & Espnes, G.A. (2004). Physical self-concept and sports: Do gender differences still exist? *Sex Roles*, 50(1-2), 119–127. doi:10.1023/B:SERS.0000011077.10040.9a
- Koca, C. (2009). Gender interaction in coed physical education: A study in Turkey. *Adolescence*, 44, 165–185.
- McKenzie, T.L., Prochaska, J.J., Sallis, J.F., & LaMaster, K.J. (2004). Coeducational and single-sex physical education in middle schools: Impact of physical activity. *Research Quarterly for Exercise and Sport*, 75, 446–449.
- Olafson, L. (2002). 'I Hate Phys. Ed.': Adolescent girls talk about physical education. *Physical Educator*, *59*, 67–74.
- Oliver, K.L., Hamzeh, M. & McCaughtry, N. (2009). Girly girls can play games / Las niñas pueden jugar también: Co-Creating a curriculum of possibilities with fifth-grade girls. *Journal of Teaching* in Physical Education, 28, 90–110.
- Osborne, K., Bauer, A., & Sutliff, M. (2002). Middle school students' perceptions of coed versus non-coed physical education. *Physical Educator*, 59, 83–89.
- Rich, E. (2001). Gender positioning in teacher education in England: New rhetoric, old realities. *International Studies in Sociology of Education*, 11, 131–156. doi: 10.1080/09620210100200072
- Shepherd, R.J., & Trudeau, F. (2000). The legacy of physical education: Influences on adult lifestyle. *Pediatric Exercise Science*, 12, 34–50.
- Skelton, C. (2000). 'A passion for football': Dominant masculinities and primary schooling. *Sport, Education and Society, 5*, 5–18. doi:10.1080/135733200114406
- Thomas, J., & Thomas, K. (1988). Development of gender differences in physical activity. *Quest*, 40(3), 219–229. doi: 10.1080/00336297.1988.10483902
- Trost, S.G., Pate, R.R., Dowda, M., Saunders, R., Ward, D.S., & Felton, G. (1997). A prospective study of the determinants of perceptions of ability in rural 5<sup>th</sup> grade children. *Preventive Medicine*, *26*, 257–263. doi: 10.1006/pmed.1996.0137
- Trost, S.G., Pate, R.R., Sallis, J.F., Freedson, P.S., Taylor, W.C., Dowda, M., & Sirard, J. (2002). Age and gender differences in objectively measured physical activity in youth. Medicine and Science in Sports and Exercise, 34, 350–355. doi:10.1097/00005768-200202000-00025
- Verscheure, I., & Amade-Escot, C. (2007). The gendered construction of physical education content as the result of the differentiated didactic contract. *Physical Education & Sport Pedagogy*, 12, 245–272. doi:10.1080/17408980701610185
- Vilhjalmsson, R., & Kristjansdottir, G. (2003). Gender differences in physical activity in older children and adolescents: The central role of organized sport. Social Science and Medicine, 56, 363–374. doi: 10.1016/S0277-9536(02)00042-4
- Wellard, I. (2011). Girls and physical activities: An update. *Education* and Health, 29(3), 46–50.
- Wellard, I. (2012). Body-reflexive pleasures: Exploring bodily experiences within the context of sport and physical activity. Sport, Education and Society, 17, 21–33. doi:10.1080/13573322.2011.607910

- Whitehead, S., & Biddle, S. (2008). Adolescent girls' perceptions of physical activity: A focus group study. *European Physical Education Review*, 14, 243–262. doi:10.1177/1356336X08090708
- Wilkinson, C., & Bretzing, R. (2011). High school girls' perceptions of selected fitness activities. *Physical Educator*, 68, 58–65.
- Williams, A., & Bedward, J. (2001). Gender, culture and the generation gap: Student and teacher perceptions of aspects of National Curriculum Physical Education. Sport, Education and Society, 6, 53–66. doi:10.1080/713696037
- Wright, J. (1999). Changing gendered practices in physical education: Working with teachers. *European Physical Education Review*, 5, 181–197. doi:10.1177/1356336X990053002

### Authors' note

Francisco Javier Giménez Fuentes-Guerra (jfuentes@uhu.es) is affiliated with the Department of Physical Education, Music and Artist, University of Huelva, Huelva, Spain.

Francisco Javier Castejón Oliva (javier.castejon@uam.es) is affiliated with the Department of Physical Education, Sport and Human Movement, University Autónoma of Madrid, Madrid, Spain.

# Corresponding author

Francisco Javier Giménez Fuentes-Guerra Department of Physical Education, Music and Artist Facultad Educación UHU - Campus del Carmen Avenida Tres de Marzo s/n. Huelva 21071, Spain.

Phone: +34 959 219 264 Email: jfuentes@uhu.es

Manuscript received on May 27, 2015 Manuscript accepted on October 27, 2015



Motriz. The Journal of Physical Education. UNESP. Rio Claro, SP, Brazil - eISSN: 1980-6574 – under a license Creative Commons - Version 3.0