

## Physical education sessions in secondary school: attitudes towards the inclusion of students with disabilities

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### Abstract

The fact of teaching students with disabilities into mainstream schools it is not an easy job. In the area of Physical Education exist different barriers being the attitude of students without disabilities one of the most important. Worrying for this, the aim of this study was to see if the experience of being part of a class with a student with disability leads to positive attitudes towards inclusion. Mixed methodology was used: qualitatively, an observation, a field diary and two interviews and quantitatively, 49 adolescents completed the CAIPE-R questionnaire. The study observes that, while all the students show a positive attitude, the results vary depending on the groups. Study concludes that continuous proximity to a student with disability does not always lead to positive attitudes, and that the characteristics of the student with disability and the relationships generated over time will have an influence on how those attitudes develop.

**Key Words:** inclusion; instructional innovation; peer relationship; diversity; Down syndrome; physical education

### Introduction

Both the universalization of sport and the existence of schools for all are the result of demands by society that have been contextualized over time. On one hand, the UNESCO MINEPS Conference (1976) stated that Sports and Physical Education (PE) are a right of all persons, whether they have a disability or not. On the other, in the field of education the participation of all students in mainstream education is a relatively recent phenomenon. Previously, students who had some kind of disability were systematically excluded from the system (Echeita & Sandoval, 2002). This changed with the Universal Declaration of Human Rights (United Nations, 1948), which recognized everyone's right to education. At present, legislation is being passed in Spain to the effect that all children up to the age of 16, disabled or not, should study and experience what is called 'inclusive school' together (Spanish Ministry of Education, Culture and Sports, 2006; 2013). This school does not just set out to bring together 'different' students; for it to be successful it is considered essential that children should accept the schoolmate with disability and allow him/her to participate in activities (Block & Obrusnikova, 2016). But *is it possible to guarantee the success of all schoolchildren in all subjects working all together?*

Faced with this dilemma, studies in the area of PE conclude not only that the presence of students with disabilities does not have negative effects on their schoolmates' results (Jing & Ha, 2012; Kodish, Kulinna, Martin, Pangrazi & Darst, 2006). Above all, several studies conclude that sharing PE sessions with a student with disability creates positive attitudes towards inclusion of students with disabilities (Liu, Kudláček & Jesina, 2010; McKay, Block & Park; 2015; Sullivan & Glidden, 2014).

However, while PE fosters the acceptance of students with disabilities it is also observed that there are barriers and facilitators to inclusion (Blecker & Boakes, 2010; Darretxe, Gaintza & Etxaniz, 2016; Haegele, Zhu & Davis, 2017). The attitude of teachers and students can be one of the most important variables when assessing the success of inclusion. As regards teaching staff, the beliefs and the positive attitude of this group are essential for inclusion to be successful (Block & Obrusnikova 2016; Ryan & Gottfried, 2012; Savolainen, Engelbrecht, Nel & Malinen, 2012; Sharma, Loreman & Forlin, 2012). As for the students, depending on each one's attitude, it is known that he/she will seek or avoid contact with a classmate with a disability (Pettigrew, 1998) and that a positive attitude determines the inclusion of classmates with a disability in PE sessions (Xafopoulos, Kudláček & Evaggelinou, 2009).

In an inclusive school, among students with disability we find some students with Down Syndrome (DS). These students have a chromosome disorder (chromosome 21 trisomy). They generally have a good temperament and like to socialize (Pueschel, Bernier & Pezzullo, 1991), although as the years go by social demands increase and, with them, difficulties of interaction with their peers (Dykens, Shah, Beck & King, 2002). In this inclusive school context, a student on a practicum for a Master of Secondary Education (MS), graduate in Physical Activity and Sports Sciences, saw the possibility of working with this sport in PE sessions.

While many studies assess the attitudes of non-disabled students towards a disabled student, almost none have been carried out in a real context. In some cases the analysis is of a hypothetical situation of inclusion in non-inclusive contexts (Bebetsos, Derri, Filippou, Zetou and Vernadakis, 2014; Siperstein, Parker, Bardon & Widaman, 2007) while others, for example, take a leisure context (Liu et al., 2010; McKay et al., 2015; Panagiotou, Evaggelinou, Doukeridou, Mouratidou & Koidou, 2008). In view of this gap and in order to analyse the attitudes of non-disabled students towards a disabled student in a real context, the MS contacted a secondary school attended by a student with DS. So, this study was conducted in a natural school environment. The objective is to see if the presence and participation of a student with disability, year after year, in mainstream PE sessions leads to positive attitudes towards inclusion in real-life Taekwondo sessions.

### Material & methods

Following the Johnson and Onwuegbuzie (2004) eight-step process, a mixed-method design was used to measure the degree of inclusion. On one hand, in order to measure the individual behaviour of Carlos and social interactions with peers, e.g.; speak, help, approach or collaborate, qualitatively, through systematic observation by the PE teacher during the all sessions, together with the notes made in the field diary by the MS afterwards, data were collected. In addition, the PE teacher was interviewed twice for approximately 60 minutes each time. During the first interview the questions addressed his educational experience and current teaching experience with group 2B. Then the intervention took place and afterwards he was interviewed again to triangulate the data gathered both in the observations and in the field diary.

On the other, quantitatively, with the questionnaire entitled “Children’s Attitude Toward Integrated Physical Education-Revised” (CAIPE-R) (Block, 1995) in its Spanish version (Cordente et al., 2016). This questionnaire evaluates - on a type 4 Likert scale (4= *yes*, 3= *probably yes*, 2= *probably no*, and 1= *no*) the attitudes of students without disabilities towards the inclusion of classmates with disabilities in general PE sessions. As this study analysed a real-life context, in which students in Carlos’ class cannot avoid Carlos being with them in general PE sessions, *the General Questions* of the questionnaire were used for the taekwondo sessions in both 2A and 2B when all the Taekwondo sessions had been completed. For the same reason, this study does not feature pre-test measurements. The taekwondo activity serves as an “excuse” to question students, while at the same time qualitative measurements are taken. The fact of sharing PE lessons with Carlos during secondary education and part of primary education develops certain attitudes *per se*. The students without disabilities are used to having him in their class, and this affected their attitudes. These attitudes are not going to change due to simply taking part in three taekwondo sessions or any other activity run in order to take measurements. To change attitudes takes a deliberate intervention.

With students in 2A, as there were no students with disabilities, a hypothetical scenario was introduced: “*Imagine that Carlos, the boy from 2B, were involved in taekwondo sessions*”. The points in the questionnaire were:

1. I would like Carlos to be in my taekwondo session.
2. Carlos will make the taekwondo session slower and more boring, because he needs help to do it.
3. If we play team sports, such as football or basketball, I would like Carlos to be in my team.
4. The taekwondo session would be fun and enjoyable if Carlos took part.
5. Carlos should have a special taekwondo session with other boys/girls who have similar difficulties.
6. If Carlos were in my taekwondo session, I would talk to him and be his friend.
7. If Carlos were in my taekwondo session, I would like to help him.
8. To do the taekwondo session, Carlos could have a person who would help him.

### Participants

Forty-nine adolescents (35 boys and 14 girls) from 2 groups (2A and 2B) of year 2 of Compulsory Secondary Education (13-14 years of age), among them (in 2B) a boy with DS who we shall call Carlos. Carlos will be 15 this year. Carlos has always been in this school and repeated a year in Primary when he was 7 years old. He has been with this group of students since he started secondary education. In all schooling years, his study programme has been adapted in all subjects. Now, at the age of 15, he is learning within the curriculum of 2nd cycle of Primary (9-10 years of age). Thanks to adapted access, Carlos has personal backup to work on his subjects in the form of a therapeutic pedagogy teacher for 4 hours a week. Carlos works with her outside the classroom, and the rest of the time he spends with his classmates in class. Despite the presence of this professional, the PE teacher is alone with all the students during the sessions with this subject.

### Procedure

The MS and the PE teacher designed the intervention sessions based on Carter's structure for sessions in the study (2016), i.e. 20 sessions of Taekwondo for 44 persons with DS to develop motor skills, adapting Taekwondo to the content of the PE area. Before starting the study, University ethics approvals were obtained and the PE department informed the teaching staff and the families (in writing) about this study. The study guaranteed confidentiality, anonymity, and data protection.

The taekwondo sessions were taught in 3 sessions of 60 minute each. It was the MS who taught them. All the sessions had the same structure: each intervention session started with a 10-minute warm-up (based on games),

followed by about 40 minutes of basic taekwondo drills and all sessions, finished with 10 minutes of cooling down and stretching. In order to develop students' motor skills and at the same time assess Carlos' participation as well as his interactions with his classmates in the taekwondo sessions, the following sequence of basic content was followed:

Basic taekwondo positions, with different steps changing guard or without changing

Basic taekwondo defences, on the spot.

Basic taekwondo kicks, advancing.

In pairs with basic steps to touch shoulders and knees.

Basic kicks striking an object.

Combination of the different steps with kicking an object.

## Results

The qualitative data. *Observation by the PE teacher* (ObservPE, 1<sup>st</sup>, 2<sup>nd</sup> or 3<sup>rd</sup>), *field diary of the MS* (FdiaryMS, 1<sup>st</sup>, 2<sup>nd</sup> or 3<sup>rd</sup>), and *PE teacher interviews* (PEinterview, 1<sup>st</sup> or 2<sup>nd</sup>).

In general, the PE teacher has not observed differences in Carlos's relationships in the taekwondo sessions in comparison with other sessions he has had during the school year. All the information was analysed using a qualitative approach of thematic analysis (Braun & Clarke, 2006).

- As regards the individual behaviour of Carlos, three aspects stand out:

*Participation.* Carlos has actively participated in the sessions, although he gets easily distracted and often does not do what he is instructed:

“Carlos did nearly all the activities” (ObservPE, 1<sup>st</sup>, 2<sup>nd</sup> or 3<sup>rd</sup>);

“He works, but as you have seen he's easily distracted, with his clothes, talking to you or to his classmates. He likes talking ...” (PEinterview, 2<sup>nd</sup>);

“Carlos is like that; he talks a lot but he works ...” (PEinterview, 2<sup>nd</sup>);

“He generally finds it hard to concentrate on the activity” (PEinterview, 1<sup>st</sup>);

“At the end he was tired, he was moving from one place to another, it was hard for him to do what he was told” (FdiaryMS, 3<sup>rd</sup>);

“In activities in pairs he doesn't shut up” (FdiaryMS, 2<sup>nd</sup>).

*Motivation.* Carlos has been motivated in the sessions, although it is more a case of accepting that he has to do it:

“Before starting the session, he asked a thousand questions: why I was there, what I did, how old I was, how long I'd be there and above all what we were going to do in taekwondo and why” (FdiaryMS, 1<sup>st</sup>);

“During the session he came to me on different occasions to show me how he was doing it and ask if it was right” (FdiaryMS, 1<sup>st</sup>);

“He's always excited to start a new teaching unit; in principle, he likes new things” (PEinterview, 1<sup>st</sup>);

“He often does the salutation learned in the first session” (FdiaryMS, 2<sup>nd</sup> and 3<sup>rd</sup>);

“He seems to have liked it; sometimes he saluted me when we met in the corridor” (PEinterview, 2<sup>nd</sup>);

“He needs the adult's approval or recognition” (PEinterview, 1<sup>st</sup>);

“He asked me whether there would be more taekwondo classes” (FdiaryMS, 3<sup>rd</sup>)

*Performance.* Carlos did the exercises at a slower pace than his classmates, sometimes experiencing coordination problems:

“It's normal for him to do things more slowly; he generally tries to do the same as his classmates and it's hard for him” (PEinterview, 2<sup>nd</sup>);

“While working on the basic positions he gets mixed up over which arm to raise” (FdiaryMS, 1<sup>st</sup>);

“Combining different steps, he has learned is hard for him and sometimes he doesn't do it” (FdiaryMS, 3<sup>rd</sup>).

“He hardly lifts his leg for the left-leg kick” (ObservPE, 2<sup>nd</sup>).

- As for Carlos' relationship with his classmates:

In general Carlos does not interact with them very much. However, those he has interacted with more tend to be boys. The results have been classified based on the behaviour observed:

*Respect.* Carlos respects his classmates at all times, and vice versa. From the observations it was concluded that Carlos is accepted in the group. On the one hand, no disparaging, critical, mocking or scornful behaviour was observed on the part of the other students. On the other hand, Carlos does not display negative behaviour towards his classmates either, he has a very careful vocabulary, he doesn't insult and he gives some of the girls a fairly wide berth. The PE confirms that in general, as noted in the MS field diary and in all the observations, Carlos interacts with boys.

*Help.* When he needs help and asks for it, there is always someone who responds, usually a boy. Both in the PE's observations and in the MS field diary, it is always the same 4 or 5 boys who help him. In general, it's him who makes the approach and shows them how he does an exercise and they help him when he has difficulties.

*Doing exercises together.* When the other students have to work in pairs with Carlos they do so easily. Although, as mentioned above, he prefers working with other boys to girls and it has sometimes been observed how he actively seeks to get together with a boy. He has not been rejected, nor have they got angry with him, even though he talks a lot. They do get annoyed when he fools around instead of doing the activity in question, especially the girls.

The quantitative data. The data from the *CAIPE R questionnaire* were analysed using SPSS version 20.0. The Cronbach alpha coefficient of the scale was 0.83. Out of 32 points, the average score in Carlos's class was 21.6400 while the class he is not in showed an average of 23.5652 (Table 1). In order to determine if these differences observed in the descriptive analysis are significant, a comparison of parametric measures is made (Student t-test). The results show that there are no significant differences between the two groups ( $p = 0.123$ ).

Table 1. *Average and standard deviations in general attitude*

	2A		2B (Carlos)	
M	23.5652		21.6400	
SD	3.2309		4.9990	
	Girls (n=7)	Boys (n=16)	Girls (n=7)	Boys (n=18)
M	25.1429	22.8750	16.8571	23.5000
SD	1.3451	3.5939	5.0142	3.6501

The descriptive analysis of the score in the attitude of the participants in relation to gender per class shows that the girls who are not in Carlos's class have the highest score, while the girls in Carlos's class show the lowest score of the four groups. The results indicate that the variances of the four groups are homogeneous, (Levene<sub>(3,44)</sub>=2.730,  $p=0.055$ ). The results of a single-factor ANOVA (A=4 among subjects shows there are statistically significant differences among the four groups ( $F_{(3,44)}=7.355$ ,  $p=0$ ). The corresponding *post hoc* analysis (Scheffe) shows that the girls in Carlos's class scored significantly lower than the rest of the groups ( $p<0.05$ ), and the latter do not show significant differences among them.

## Discussion

This study was carried out in an inclusive school where not all the student groups have students with special education needs. In Carlos's group the Taekwondo sessions are real and very similar to those held throughout the school year. Although there are no significant differences, the attitude of the class Carlos is not in is better than the one in which he is. A comparative study conducted in France, Ireland, Portugal and Spain shows similar results; "older children in inclusive classes were more reticent about inclusion than those in regular classes" (Gash, Guardia, Pires & Rault, 2000, p. 211). The results obtained also make it clear that there are two realities in the field of the study: the real and the hypothetical.

In the hypothetical situation, all the students show positive attitudes and the girls score significantly higher than the boys. These results coincide with many studies conducted in 'non-real' PE contexts: one-off recreational activities - "Paralympic Day" (Liu et al., 2010; McKay et al., 2015), providing information (Kalyvas, Koutsouki & Skordilis, 2011), or generating hypothetical scenarios in non-inclusive contexts (Bebetsos, et al., 2014; Siperstein, et al., 2007). The results of 2A, in which the students 'imagine' that they share PE sessions with Carlos, tie in with all these studies. Besides, there are significant differences with the girls in Carlos's class, which are those who show the worst attitude. For a possible explanation of this unexpected result, it is worthwhile considering the psychological concept of *Social Desirability*, i.e. the tendency to deny socially unacceptable actions and to admit socially desirable ones. Various studies suggest that, when the participants consider what is politically correct, the attitude revealed in the questionnaires may be affected by socially desirable responses (Hall & Minnes, 1999). As inclusion is a politically correct idea, and the majority of adolescents consider this to be the case (Verderber et al., 2003), it may be that the respondents give socially desirable answers (Avramidis & Norwich, 2002; Lui, Sin, Yang, Forlin & Ho, 2015; Lüke & Grosche, 2017). In the educational world it has been seen that *social desirability* predicts the attitude of students towards persons with disabilities (Strong, 1987) and that girls from nursery to university age "projected a socially desirable image of themselves" (Eisenberg, Fabes & Spinrad, 2006, p. 92). Considering these studies, it cannot be ruled out that the girls who are not in Carlos's class may give a socially desirable response to the hypothetical situation.

In the real situation, although all the students show positive attitudes, the results show a different reality. On one hand, the better attitude of Carlos's male classmates in comparison with that of boys in the other class coincides with the previous studies that reported a positive relationship between exposure to disability in college students and attitudes towards students with disability (Krajewski & Flaherty, 2000; Siperstein et al., 2007). The data collected in the study by Slininger, Sherrill and Jankowski (2000) and those of Kalymon, Gettinger and Hanley-Maxwell (2010), support the idea that the boys' attitudes improve through contact experiences, thus confirming the theory of mere exposure effect (Zajonc, 2001). On the other hand, and contrary to what would be expected, the girls score significantly lower than the boys. Nevertheless, both the boys and the girls in Carlos's class over the years have been participating in the same context, so... *Why is Zajonc's theory not borne out with girls?*

For a possible explanation, it is interesting to focus on the student with a disability, Carlos, a 14-year-old boy who has Down syndrome. As regards gender, it is known that attitudes vary according to the gender of the person with a disability (Connor, Serbin & Ender, 1978). The gender of the adolescent emerged as a significant variable (Dolphin & Hennessy, 2014), and it is also known that students in the upper elementary grades tend to choose friends who are similar, for example, of the same gender (Hartup, 1992). Nevertheless, by analysing this behaviour in 6-13-year-old disability students, Hall and McGregor (2000) find that none had

gender preferences when it came to choose classmates and conclude that this could be due to delayed development. Therefore, perhaps Carlos's behaviour indicates that at 14-15 years of age, following the prevailing model and identifying with other boys, he would choose to approach them when it comes to carrying out activities. It is also known that, as they get older, these persons show difficulties in interacting with their peers (Dykens et al., 2002; Van Gameraen-Oosterom et al., 2013) and are found to be at considerable risk of becoming socially isolated as they have fewer interactions with classmates (Koster, Pijl, Nakken & van Houten, 2010; Scheepstra, Pijl & Nakken, 1996). Carlos's relational difficulties mean that he usually approaches the same boys in his class. He feels more comfortable with them, they understand him and over time he is more likely to have developed friendships with them. In other words, the fact that Carlos's female classmates score lower may have more to do with Carlos's behaviour than with the girls themselves.

Thus, the characteristics and behaviour of a student with disability may provide an answer to the question of *Why is Zajonc's theory not borne out with girls?*

Carlos's behaviour with the boys is different from that he shows with the girls. As he has got older, Carlos prefers to interact with boys. This is consistent with the idea that adolescents gravitate toward their own gender when making friends (Hartup, 2001), and over time the quality of the contact has improved, leading to new behaviours and generating - as research shows - positive attitudes: "behaviour change is often the precursor of attitude change" (Pettigrew, 1998, p. 71). In turn, Carlos has stopped interacting with the girls over time. They, perhaps due to the simple fact that they are girls, have often found a "wall" when trying to cooperate with or help Carlos, leading to minimum or poor-quality contact, which does not help in the development of positive attitudes (Keith, Bennetto & Roggey, 2015). It is known that superficial contact in a class may be negative (Schwab, 2017), even jeopardising positive attitudes (Ruscitti, Thomas & Bentley 2017). As a result, contact with the girls does not help to promote positive attitudes. Indeed, Tripp, Franch and Sherrill (1995) point out that, while contact affected attitude change, the direction of change was both positive and negative, depending on the conditions under which contact has taken place: "favourable" or "unfavourable".

### Conclusions

This study, carried out in a real context in an inclusive school, shows that the majority of non-disabled students developed positive attitudes towards the student with a disability. It also shows that attitudes vary according to the context (real or hypothetical) and the personal characteristics of the student with disability. This study reaches the following conclusions:

When students' attitudes are measured in non-real contexts through questionnaires designed for hypothetical situations, one should bear in mind the effect that social desirability may have on the results. In this sense, the responses of adolescent girls may be conditioned by social desirability. More studies are required in this field to obtain more credible data on non-disabled girls' attitudes towards their classmates with disabilities. As Lüke and Grosche (2018, p. 38) point out, "social desirability is a neglected issue in research on attitudes towards inclusive education".

When the attitudes of students are measured in real contexts, it is possible that the gender and age of the disabled person may have an influence on his/her classmates' attitudes. It could be said that a 14-15-year-old student with DS decides who he/she establishes relations with or asks for help and plays an active role in attitudes developed by his/her classmates. He/she assimilates the prevailing gender stereotypes and prefers to relate to classmates of the same gender, achieving higher-quality contacts with them than with those of the other gender. The quality of contact that boys and girls experience is different, with contrasting changes in terms of attitude. Relationships with male classmates increase and are consolidated over time, and this means that attitudes improve. In contrast, relations with girls deteriorate over time and there is hardly any contact, which leads to attitudes worsening.

### Implications for Practice

The above conclusion indicates that non-disabled students' attitudes towards those with disabilities can be improved, creating positive contact experiences. As we have seen, at the age of 13-14, the mere fact of being in the same class does not mean that attitudes improve; rather, if during previous years care is not taken, they may even worsen. The type of activity proposed and the working methodology in PE sessions can be crucial in creating suitable contact experiences.

Several limitations of the study need to be acknowledged. (a) The size of the sample is relatively small, one secondary-age class institution a mainstream school (b) the specific student with a disability displays features and behaviours of his own that may affect the results for him and his classmates (c) The time of day when the PE class takes place: Carlos' group had the lesson at 8 in the morning and the other group at 11. It is known that secondary students participate differently in PE lessons at different times of day (Moreno & Hellín, 2002). So, in order to improve understanding of students' attitudes and behaviours, more research is necessary in real contexts to evaluate the relationship between the attitudes held by non-disabled students and the behaviours they display, given the circumstances.

### Conflicts of interests and ethical approval

*Conflict of Interest.* The authors declare that they have no conflict of interest.

*Ethical Approval.* All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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