

## Students' experiences during their early schooling – when and who should assess schoolchildren's physical education

RODRIGO ATIENZA<sup>1</sup>, ALEXANDRA VALENCIA-PERIS<sup>2</sup>, VÍCTOR M. LÓPEZ-PASTOR<sup>3</sup>

<sup>1</sup>Department of Physical Education and Sport. University of Valencia. SPAIN

<sup>2</sup>Department of Teaching of Musical, Visual and Corporal Expression. University of Valencia. SPAIN

<sup>3</sup>Department of Teaching of Musical, Visual and Corporal Expression. University of Valladolid. SPAIN

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### Abstract:

Scientific literature has pointed out the need to develop formative and shared assessment models at university due to the benefits and advantages they present to the improvement of student learning, but also for their contribution to the development of professional skills for future teachers, which is a facilitating element when applying it in their professional practice. One of the factors to be considered in order to analyze the assessment models that the pre-service teacher education students have experienced is when it takes place; however, evidence in this sense is still scarce. The objective of the study is to explore the perspectives of Primary Education Teachers' Education students in the assessments in Physical Education (PE) during their primary and secondary school stages. The study focused on at what moments of the teaching-learning process was the assessment carried out and what was the participation of the students in the assessment process. A qualitative study was carried out in which 45 pre-service teacher education Spanish students participated during the academic year 2014/15. Each participant wrote an autobiographical account of their experiences and participated in two discussion groups. The results highlight the tendency to hold assessments at different times, according to the type of knowledge in question: a) continuous assessment for the attitudinal field; b) final assessment for the conceptual field (theory). The procedural aspect varied between the continuous assessment of motor skills and games, the final assessment for sports content and the sum of specific assessments for physical condition. It can thus be concluded that the students' assessment systems in PE were aligned with the traditional models of technical curricular perspectives.

**Key Words:** Educational Assessment, Physical Education, Primary School, Secondary School, Teacher Education.

### Introduction

One of the key elements of the European Higher Education Area creation was to promote the necessary conditions for the transformation of the university education systems of the member countries of the European Union (Benito & Cruz, 2005; Pérez-Pueyo & Taberner, 2008). At a pedagogical level, this transformation supposes (at least on paper) a paradigm shift, moving from teacher-centered teaching to student-based learning; and from banking and superficial learning to dialogical and deep learning (López-Pastor, 2006a; 2009). All this well-intentioned speech requires measures and proposals that make it concrete. We agree with Bonsón and Benito (2005) and López-Pastor (2006a) that one of them is alternative assessment models, among which is formative and shared assessment (FSA). We can define FSA as the assessment system whose main purpose is "to improve the teaching-learning processes that take place; It is aimed at students to learn more and teachers learning to improve their teaching practice" (López-Pastor, 2012: 120).

In the last two decades, numerous research studies have emerged that point out the need to develop FSA models at university due to the benefits and advantages they present to the improvement of student learning (Biggs, 1999; Bonsón & Benito, 2005; Brown & Glasner, 1999; Buscà, Pintor, Martínez & Peire, 2010; Ibarra & Rodríguez-Gómez, 2010; López-Pastor, 2009). Among them, the following stand out: a) it substantially improves the motivation and involvement of students towards their learning; b) offers greater and more continuous feedback on both student learning activities and teaching tasks, which allows correcting possible gaps and problems in the teaching-learning process; c) by constituting an experience focused on self-regulation and self-learning, it contributes to the development of responsibility and autonomy of the students. This fact, in turn, has positive consequences on the acquisition of lifelong learning strategies; d) it serves as a measure of student participation in learning processes, facilitating curricular negotiation, the implementation of active methodologies and collaborative work dynamics; e) there is an increase in student learning, which in many cases often leads to higher academic performance.

In the Physical Education teacher education (PETE), in addition to the advantages attributed to the FSA, we find another benefit: it contributes to the development of professional skills for future teachers, which is a facilitating element when applying it in their professional practice (Hamodi et al., 2017; López-Pastor et al., 2020; Palacios & López-Pastor, 2013). In the same way, it contributes to bringing the theoretical postulates (what the academy says should be done) to the educational practice (what indeed is done in the teaching education studies), which allows us to perceive that they are not utopian proposals but feasible.

As the literature points out, the set of experiences that teachers live during their student days determines the thought patterns that will guide their teaching practices (Hamodi et al., 2017). According to Tillema (2000), it may be more important to understand and reflect on how beliefs and experiences have been built than to acquire new professional knowledge. In this sense, various investigations have been carried out on the assessment experiences of university students (López-Pastor et al., 2011; Palacios & López-Pastor, 2013; Trillo & Porto, 1999). However, we could go further, analyzing what kind of assessment the PETE students have experienced in the Physical Education (PE) subject during the primary, secondary and high school stages. Unfortunately, not enough research has been done on this type of experience.

We can get an idea of these experiences from some studies that directly or indirectly analyze the features of PE in primary and secondary schools in different contexts in Spain (Atienza, Valencia-Peris & Devís-Devís, 2018; Blanco & González, 2010; De la Torre, 2011; Rodríguez-Negro & Zulaika, 2016; Sicilia et al. 2006). There is also a review which has focused on the potential of alternative models compared to the traditional assessment methods (López-Pastor et al., 2013); and still, other scientific evidence that gives examples of practical examples of theoretical models in all the educational stages carrying out good practices (García & López-Pastor, 2015; Jiménez & Navarro, 2008; López-Pastor & Pérez-Pueyo, 2017; Ureña & Ruiz, 2012). These studies focus mainly on defining instruments and strategies that can put into practice a FSA that is close to the postulates of practical rationality (López-Pastor, 1999; 2009). We can therefore verify that the interest in analyzing assessment practices in PE has not been reflected in the scientific literature (Blanco & González, 2010). For this reason, we considered it necessary to go on studying this area to achieve an overall idea of the assessment experiences of PETE.

One of the factors to be considered in order to analyze the assessment models that the PETE students have experienced is when it takes place. We can distinguish between an initial, final, and occasional assessment i.e. at the beginning, end, or during a year, term or teaching unit (TU) or sporadically. If instead of at a certain moment, the assessment is carried out daily and integrated into the teaching process, we are talking about a continuous assessment (López-Pastor, 2006b). Despite of identifying different assessment moments, these should not be understood as mutually exclusive, since, as Blázquez (2010) maintains, if we conceive it as a global and permanent process, continuous assessment should be used, since it is compatible with an initial and a final assessment. Not many studies deal with PE teaching practices in Spanish primary and secondary schools or when the assessment should take place. Chaverra-Fernández and Hernández-Alvarez (2019) analyze teachers' decisions when planning assessment. One of their conclusions is that practical content is usually assessed at the end of the TU (this being compatible with an initial assessment), that attitudinal content is normally assessed continuously, and that an initial assessment is not necessary if the students are previously known.

When analyzing how the PETE students have been assessed, learners' responsibilities and participation should be considered. This is a key aspect of a democratic assessment process (whether by self-, peer-, shared assessment, or self-, shared-mark). The literature considers it extremely important that students participate in decision making as regards both assessment and marks (Fernández-Balboa, 2005; Lorente-Catalán & Kirk, 2013; 2014), as it helps them to be aware of their individual progress and responsibilities in learning activities and encourages motivation, autonomy, and learning (López-Pastor, 2004). Certain contributions have been made to this aspect in PE. In the Spanish context, some of the first experiences were an attempt to implicate the students in assessing their fitness (Castejón, 1995; Jiménez & Paramio, 1994; Pérez, 1992; 1994; Ruiz, 1992), followed by others in other curricular contents such as sports training (Falguière, 1994; García, 2002) or motor skills (Del Campo, 2002). The initiatives aimed at democratizing PE assessments are still on the increase, as shown by the self-, peer- or shared-assessment experiences described in López-Pastor et al. (2006) and López-Pastor and Pérez-Pueyo (2017).

With all this in mind, the objective of the study is to investigate the assessment experiences that a group of PETE students had in PE classes during the primary and secondary stages. The central questions are: at what moments of the teaching-learning process was the assessment carried out and what was the participation of the students in the assessment process.

## Material & methods

A qualitative method interpretive-model approach was used to obtain the students' experiences of the assessment practices used in their primary and secondary PE lessons. The study was based on the relativist epistemological hypotheses, as it was considered that there were present socially constructed multiple subjective realities (Pérez-Samaniego et al., 2011). By exploring and analyzing their individual experiences we looked for obtaining a reflection of their collective history and also an understanding of the main characteristics of the PE assessment at a given historical moment.

*Participants*

Forty-five students (36 female and 9 male) from a Spanish Faculty of Teaching participated in the study. A non-probabilistic sampling method was chosen from one of the 11 groups in the second-year core subject in the Primary School Teacher Education degree course “Teaching Primary School Physical Education”. The participants were aged between 19 and 25 years old, with a median age of 19/20 years (40 students). This meant they were primary school pupils between 2001-02 and 2006-07, secondary school between 2007-08 and 2010-11 and baccalaureate in 2011-12 and 2012-13.

The leading researcher was also a lecturer of the selected group and special emphasis was given to participation being voluntary, at the same time making it clear that it would in no way affect the subject mark. Ethical use of the data obtained was ensured, as was the privacy of the participants.

*Data collection equipment and procedures*

Two data collection strategies were used to obtain information: autobiographical accounts and discussion groups. The combination of both techniques allowed us to verify and enrich the information obtained individually (Massot et al., 2004). In September 2014 the students were asked to write an autobiographical account of the PE assessment processes they experienced in their compulsory education.

In the last week in November the first 8 discussion groups were formed (1st phase discussion groups). As the members of the groups knew each other an attempt was made to create a feeling of security and confidence by allowing them to form groups freely within the range recommended by Gil (1992) of 5 to 7 members per group. The sessions lasted approximately 2 hours, with the leading researcher as moderator and were recorded by digital audio recorder.

In December 7 new discussion groups were formed (2nd phase discussion groups) who were asked to consider a series of selected extracts from the 1st phase discussions. The new groups contained representatives from each 1st phase group. When showing the participants’ declarations and to identify them while preserving their anonymity a series of codes was used consisting of a letter and a number. 1P-DG:nº-, 2P-DG:nº- o AA- appears beside each textual citation according to whether they are from the first or second phase discussion group or autobiographical accounts, respectively. The code assigned to each person is given after the script. The sessions lasted approximately 1 hour and again were recorded.

*Analysis*

All the recordings were transcribed literally and analyzed by the leading researcher. A discourse analysis was conducted on the qualitative data using the *NVivo v.10*, a qualitative analysis program to select, focus and extract significant units. The categories selected for the study were determined by deduction (see Table 1).

Table 1. Categories and sub-categories selected for the study.

Category	Sub-category
<b>Time of assessment</b>	Initial Assessment
	Final Assessment
	Occasional Assessment
	Continuous Assessment
<b>Assessed by</b>	Hetero-Assessment
	Peer-Assessment
	Self-Assessment
	Shared Assessment

**Results and discussion**

The most significant results of the study are given below and divided into the different categories and sub-categories derived from the analysis.

*Time of assessment*

One of the aspects most commented by the students regarding their experiences of PE assessments during their primary and secondary education was the time at which they took place. The results obtained show that PE teachers frequently used different times according to the type of knowledge involved, although most took place during the last sessions of each TU. As regards theoretical knowledge, the students identified two well-defined assessment times: the end of a TU and the last weeks in each term. We found some examples of priority being given to end-moments to assess theoretical knowledge:

...we dealt with a sport for two weeks, for example, and if we had the subject on Monday and Friday, we did it Monday-Friday, Monday-Friday and [the next] Monday we had the practical exam [...] And on Friday we had the theoretical [exam of] volleyball (1P-DG:2-F2).

...we did the [theoretical] exam at the end of each term on what we had done in the classes (AA-C4).

On the other hand, if we focus on the evaluation of attitudinal knowledge, this was continuous throughout the learning process. The teachers normally supervised systematically aspects such as behavior, as well as involvement and participation during PE classes.

There is a series of evaluation criteria that are common to all the PE stages, such as control of attendance or the students' participation in the activities proposed by the teacher, i.e. the assessment was generally [...] continuous [...]. Everyday activities were assessed, i.e. the student's behavior during the activities in the subject, with the equipment and with his classmates (AA-D5).

The differences between the times chosen to assess theoretical and attitudinal learning could be due to the different manner of making them fit into the logic of a pedagogy by objectives, which has been widely adopted by PE teachers. This method of designing and developing a curriculum reduces assessment to an act or measure of estimating the quantity of knowledge acquired by the pupils (López-Pastor, 1999). To determine whether the pupils have acquired sufficient conceptual knowledge it would be enough to give them a theoretical exam either at the end of the TU or term. However, the assessment of attitudes is dealt with in a different way. These results are difficult to assess by logical technical methods (as in the pedagogy by objectives) and so cannot be measured by a final exam. This means other strategies could be adopted, in this case a continuous assessment of the pupil's actions in the teaching and learning processes, as proposed in Velázquez Buendía and Maldonado (2004). This seems to be the case of the teachers interviewed by Chaverra-Fernández and Hernández-Álvarez (2019), who found that in spite of continuous assessment being the usual practice in PE, it was usually based on the attitudinal aspect.

On analyzing the results that referred to the time of the assessment of practical-procedural knowledge, they were found to frequently vary according to the type of curricular content involved. The assessment of contents such as games and motor skills is normally continuous and included in the learning activities themselves, especially in the primary school, as was shown by some citations from the discussion groups:

Assessment for the first to sixth course was on what you did in class, i.e. the game in each session [...] a continuous assessment of your progress (1P-DG:1-A1).

[in primary], for example, [contents] like the somersaults you learned, were assessed on the day ... [they were done]. They did not wait to finish the TU but were assessed when we did them (1P-DG:3-G3).

Motor games and their presence in the PE curriculum have been widely documented, although the same treatment has not been given to how and when they should be assessed. Basic Motor Skills are a similar case, as we can find research referring to the types of test that can be used for this purpose (Contreras, 1998; Díaz, 1999; López & Garoz, 2004; among others) but not the times when they should be carried out, or if this is mentioned it is only superficially (Díaz, 1999). A recent paper (Atienza et al., 2018) describes how games and motor skills are usually assessed by practical demonstrations in both primary and secondary schools. This appears to be consistent with continuous and integrated assessment into the learning situations.

On the other hand, the students described the assessment of fitness as a compilation of different assessments (or measurements, to be more exact). These usually happened at the end of each term and so can be called "final assessment", although they could also be considered "occasional assessment", since a large number of teachers consider them *en masse* throughout the year with the aim of showing the annual *progress* of the different physical capacities. Some of the participants' statements were notable in the sense that they described assessments that measured fitness by the evolution of the pupils' marks in a battery of basic physical tests at different times throughout the year:

The tests of physical [capacities] were: first, second and third terms and final (1P-DG:3-C3).

In my case we had fitness tests, such as speed, and all that [...] the teacher paid special attention to progress, well ... that, continuous evaluation. They gave you tests at the start, in the middle and at the end, and your mark depended on your progress (2P-DG:2-B3).

As described by López-Pastor (2006b), the students interviewed identified the total of multiple occasional assessments (marks) with a continuous assessment, although according to their statements this was not systematic or integrated into the entire educational process but at irregular intervals. The idea of progress (or advancing) they referred to was based on a highly instrumentalist PE technical conception that links progress in fitness (in quantitative performance terms) with sports training and promoting health. In this way, each student's physical condition should improve throughout the term thanks to the physical activity in PE sessions. However, the periods of time in the TUs are not enough to guarantee improved motor development (Devis-Devis & Peiró-Velert, 1992). They therefore assess *what exists* (since the result would be determined by a series of anthropometric and physiological variables) and not *what has been learnt* (López-Pastor, 1999), which is not only irrelevant to the teaching-learning process but also detaches the student from playing an active role in the teaching and learning process.

In the case of sports contents, most students said that they were usually assessed at the end of the TU, which would have been a type of corollary to the sequence of analytical technical learning throughout the different TU sessions:

Every three weeks we did a different aspect, for example, two weeks of football, two weeks of basketball and two of volleyball [...] In volleyball, one day they taught us how to pass the ball, another day how to receive a pass, another day putting the ball into play, and all this was assessed when we were actually playing a game [...] (1P-DG:2-B2).

In my case [assessment] was always at the end of the term. All the term we practiced the sport itself as well as techniques, and then when there were still 2 or 3 sessions before the assessment session, the teacher called us out individually and examined us in ... in each technique we had learnt during the term (2P-DG:6-F4).

We can find a possible explanation for this in the teaching model used to introduce students to games in schools, which often focuses on teaching technical skills by analytical strategies (Robles et al., 2011). It seems logical that the teachers that use these models assess the pupils' learning at the end of the process after practicing the technical skills involved (regardless of whether the assessment is global or analytic). If models are used that focus on play as a complex global activity, the assessment would probably be different, more like an authentic assessment (Mintah, 2003), such as the comprehensive model, *Teaching Games for Understanding*, *Game Sense*, *Play Practice*, and therefore more suitable for continuous and integrated application in the pupils' learning process (Brown & Hopper, 2008; Devis-Devis & Sánchez, 1999; Méndez-Giménez, 2005; Oslin et al., 1998).

Finally, when the students were asked about the assessment of corporal expression, we received two types of answer: some remembered a continuous assessment that considered the process of designing and rehearsing a final project (usually a choreography or theatre performance):

...we could choose choreography, a theatre, a musical... [...] that took all the term. They gave us a certain time to finish at the end of the term, but before that we had to present an act or a dance during one of the classes [...] the teacher went from one group to another asking: How are you doing? Have you got the costumes? What have you done today? And she followed up what each group had done every day [...] Those days were a type of test or rehearsal to show the class a piece of what you had done and you were given a mark, as if it was a performance (1P-DG:1-F1).

While some others remembered only a final assessment, for example, as described in the following citation:

In the first term we practiced a choreography but we weren't given a mark for practicing, there was only a final assessment that was an exam on the choreography [...] And the same thing happened with the ballroom dancing, we practiced and all that and in the end there was an exam that we did in pairs (1P-DG:6-E6).

If we consider the differences between the usual assessment times of the different stages, we can see that the continuous integrated assessment was more usual in the primary school, while occasional and final assessment were more frequent in the secondary school and baccalaureate, as was commented in the following citation:

The male and female teachers I had in the three (primary) cycles assessed your social behavior, self-respect and your respect for others, teamwork, bringing the necessary materials to class and how you looked after it, and your competitiveness in games. This meant a continuous assessment [...] However, in the secondary school this changed radically. [...] There was a practical exam at the end of each TU (that we practiced first in class). There was a theoretical exam at the end of each term in which they gave us some notes on a given subject and we were also assessed every day on for example if we changed, if we did the exercises correctly, etc. Besides all this, we also had a physical test at the end of term that consisted of running around a track for so many minutes (AA-D6).

We could say it was a continuous progressive assessment in primary school and in the secondary they focused only on the final mark (2P-DG:4-D1).

As can be seen in Table 2, both the relation between the type of knowledge/content assessed and that of the assessment time with the educational stage are consistent with the results obtained by Atienza et al. (2018) and Sicilia et al. (2006), who established the relationship between the type of knowledge assessed and the educational stage. It can therefore be understood that both the stage and contents are determining factors when choosing assessment times.

Table 2. Relationship between content, knowledge assessed and assessment time.

Type of knowledge and content	Most frequent assessment time	Prevailing stage
<b>Attitudinal Knowledge</b>	Continuous	Primary
<b>Procedural knowledge</b>	Basic motor skills	Continuous
	Motor games	Continuous
	Sports	End of TU
	Fitness	Occasional and final
	Corporal expression	Continuous / final
<b>Theoretical-conceptual knowledge</b>	Final	Secondary and baccalaureate

The time of assessment is considered a fundamental factor in a formative assessment since it should make both teachers and students aware of the teaching and learning processes, reflect on them and if necessary improve them. In this regard, the students recognized that the fact of receiving information continuously during

the learning process created opportunities for improving the final product (and learning) as argued by the following student:

... there were groups that did one thing in the first performance and then did it differently in the second because they saw that it wasn't liked or they hadn't done it well (1P-DG:1-F1).

This thesis is defended by diverse authors, who underline that continuous assessment contribute to better assimilation of contents and competences, give better information on the assessment process, identify errors made during the learning process and provide the keys to rectify them (López-Pastor, 1999; 2006b), which reverts positively on the student's learning and academic performance (Kapambwe, 2010).

#### *Students' participation*

The data collected show that most students had a very small participation in assessment processes. Some citations of the participants explicitly refer to this point:

... we students did not participate in the assessment process, [...] and we often did not know what was being assessed, what [the PE teacher] was looking for in the exercise or the marks he had given until the end of term when we got our reports (AA-B5).

... The assessment was strictly the teacher's job, we students did not assess either each other or ourselves (AA-D1).

These results are not at all in agreement with those obtained by Panadero et al. (2014), who asked Spanish primary, secondary and university teachers about their opinion of facilitating peer-assessment and self-mark. Most of the teachers said that they used these practices in their classes (both in primary and secondary the results were above 90% for self-assessment and 60% for self-mark). This disparity can possibly be explained by the different perspectives of teachers and students or the different traditions in different areas of knowledge. On the other hand, the results obtained in the present study point in the same direction as those by Chaverra-Fernández and Hernández-Álvarez (2019), who interviewed six primary and secondary PE teachers in Medellín, Colombia, and found that students' participation in assessment was not habitual. They also coincide with regional studies, such as the one by Rodríguez and Zulaika (2016), who found that in the Basque Country most primary and secondary PE teachers use hetero-assessment and almost never use self- or peer-assessment.

To a lesser extent we also found situations in which students had in some way a certain responsibility in PE assessment. In these cases, the degree and manner of participation varied according to the type of knowledge assessed. The teachers that opted for involving students in assessment of theoretical knowledge preferred peer-assessment in which students corrected each other's exams. However, if we analyze the students' real possibilities of intervening we realize that their participation was rather false. As can be seen from the following, it was the teachers who indicated the correct answers while the students were limited to checking whether the answers indicated by the teacher were the same as those on the answer paper.

... one day we got together in the classroom, the exams were given out without marks for a classmate to correct your exam while you corrected his. The teacher called out the questions in the exam with the correct answer and some sort of standard to judge them by. The answers were graded into bad, regular or good (1P-DG:5-E5).

If we compare the results obtained with the specialized literature, we see that the experiences of our students on participating in assessment are far from the practices and proposals that have arisen since the beginnings of the 20th century. They are not only poor in relation to participation, but they are sufficiently reflexive to be considered as really formative. In the experiences compiled by López-Pastor (2006b) and López-Pastor and Pérez-Pueyo (2017), situations are described that involve both primary and secondary students in assessing their theoretical knowledge by means of their notebooks or self-assessment questionnaires. In these the students are given standards to guide their assessment in an attempt to raise them above being mere appliers of rules, adopting an active role and committed to their learning. The proposal by Herranz deserves a special mention, in which he proposes a process of mentoring students to familiarize them with the task of assessing class notebooks.

... at the start of the experience the teacher corrected all the notebooks every day, pointed out the errors, justified them and offered solutions. As the students gained experience they also participated in correcting notebooks and exchanged them with their classmates for correction by certain rules that everybody knew. All such corrections had to be justified to your classmate. The teacher supervised everything and in case of doubt gave his decision on the matter (Herranz, 2017; p.182).

Equally revealing is the proposal in Heras and Pérez-Pueyo (2017) and Pérez-Pueyo and López-Pastor (2017), who suggest the use of assessment scales for written exercises in secondary PE classes. In this way the student, besides being aware of the characteristics of good work, when he assess a classmate's work and gives them a really useful feedback, he can also apply the same system to his own work.

As regards the assessment of attitudinal knowledge, we find that teachers can ask for a self-assessment of aspects such as effort and participation in certain learning activities:

In the first baccalaureate year [we had to] do a project on health that consisted of: the teacher assessed the work itself, what you had written down, but you assessed your own effort, what you had achieved and what you hadn't achieved (1P-DG:3-B3).

On other occasions, there was a dialogue between teacher and student that could be interpreted as an attempt at shared-assessment:

... the teacher told us: *each one of you can tell me the mark that you think you are worth ... as regards your participation and suchlike.* [...] sometimes he said: *well, I'm going to give you an 8 [out of 10].* And the student might answer: *I deserve an 8 because [...] I have made a big effort.* And if the teacher thinks it's ok he gives you that mark. [...] I think the teacher indicated certain aspects, he would say: *as regards motivation, participation ...* (1P-DG:6-H6).

Although some students stated they had participated in the assessment of aspects such as interest and behavior during PE sessions, they could not remember having a clear system of reference to do so (as regards, level, rules, criteria etc.) so that their part in the task was reduced to mere subjective speculation. As pointed out in Siedentop (1999) and Moreno-Murcia et al. (2006), students should have a clear idea of the nature of the assessment tasks, as well as their learning expectations to avoid confusion when they are given responsibilities in them. Experiences of this type can be found in Barrientos (2017) and Herranz and López-Pastor (2014), who resorted to different instruments that specified different conducts to guide students when they do PE self-assessment in primary schools. Pérez-Pueyo and López-Pastor (2017) also describe a secondary PE assessment in which pupils self-assessed their attitude in class using a series of items that described different types of behavior in contrast with that observed by the teachers. Other examples can be found in Martínez (2017) and Heras et al. (2017); the first of them describes an inter-group self-assessment in which the student has a series of keys graduated on a Likert scale to assess and consider his attitude during the learning activities, solving conflicts and complying with class rules. The latter opts for a 6-level behavior scale (zero, bad, regular, normal, good and very good) regarding attention, effort, attitude to classmates, etc. In both examples the students must do a guided reflexive assessment that allows them to realize what is expected of them and what they should do to improve.

We found differences in the content of what the students referred to as fitness and sports in the assessment of practical-procedural knowledge. The students' participation in assessing fitness usually consisted of recording times achieved and establishing a relationship with the mark awarded. Sometimes a classmate would record the times:

...often, in pairs, it was: *Come on, do sit-ups and your partner can count them while he's timing you, and then you can change around* (1P-DG:5-A5).

This type of practice, in spite of appearing to give the students an active role in assessment, has very little educational value since it neither gives significant information on the execution nor trains the students. They are simply limited to verifying fitness with a table of times and ages (López-Pastor, 1999). This opinion also seems to be shared by the participants in our study, as shown by the extracts from the discussion groups:

... the only thing in the practical tests was that the observer waited his turn and checked what you did, but not ... he didn't tell you: *That's right, that's not right, you did it well.* Or: *You did it badly.* No. He only monitored the time it took you to do the circuit (1P-DG:5-E5).

... You always joined up with your best friend, and he wasn't going to tell you you didn't do it properly, and when the teacher said: *How many sit-ups did you do?* He would say ten more than what you did, you know? It's true. Or when we were running: *Come on. I'm going to time how long it takes you to do the laps. How many minutes?* Well, your mate always said: *I've given you a shorter time so that you get a better mark.* Of course, that's not assessing, either (1P-DG:5-A5).

After the 1990s, Spanish studies and action proposals began to appear that involved the students in assessment fitness (Castejón-Oliva, 1995; Jiménez & Paramio, 1994; Pérez, 1992, 1994; Ruiz, 1992). In some ways the assessment were similar to the experiences narrated by the participants in our study when they told how their part in the assessment was simply used to save time and/or to improve their self-confidence. However, the above-cited studies appear to be designed more to monitor the students' fitness than assessing other more educational aspects, such as learning, healthy and responsible practice, or a reflection on practice. In the last decades, some authors have recommended a re-thinking of the learning associated with fitness that is educationally valuable (Devis-Devis & Peiró-Velert, 1992) and therefore deserving of assessment (López-Pastor, 2006b). However, the experiences of the participants in the study did not coincide with these postulates.

Finally, we found that involving students in the assessment of sports contents seems to be associated in a certain way with the style of reciprocal teaching proposed by Mosston and Ashworth (2002), in which teaching and assessment are integrated and proposes a structure based on task sharing. The teacher decides on a series of teaching activities and assessment criteria, while the students are organized into small groups that take turns in execution and observation-assessment tasks. In view of the results obtained, only the most skilled students were given responsibilities for teaching and assessment their classmates (either because they practiced sports outside the school and were familiar with certain technical principles or because they had shown a facility for acquiring new motor skills). Some of our students had witnessed similar episodes:

... he used to get the two or three who were best at this sport and said: *Go around and when you see someone with problems help them, explain how to do it, I don't know what.* In this way you learned things better [...] When you arrived they told you: *It's not like that, you have to do it like this and things like that.* And he may not have been the teacher but one of your classmates, but... and that's also a bit

of [...] reciprocal teaching [...] for him [the skilled student] who has also just learnt it, but he's good at it and he can also explain it to someone else and help a classmate (1P-DG:5-F5).

The reality of our students (in which peer-assessment was almost always the job of the best student, who concentrated mainly on technical aspects) contrasted with some of the recent proposals for primary and secondary schools. Méndez-Giménez (2005) proposed an assessment focused on the analysis of real game situations that involved not only technical aspects but also understanding the game, tactical principles and the students' involvement, related to theoretical and social and affective areas, offering a wider and more holistic perspective of learning. García (2002) describes an experience of self-assessment and peer-assessment in which the final aim is not so much to measure sports performance but to help students to understand what they are supposed to do, how to do it and how to assess their own learning. Pérez-Pueyo and López-Pastor (2017) and Heras et al. (2017) describe a similar system of peer-assessment in a secondary school in which the students get and receive continuous feedback based on a set of structured rubrics. This practice makes students aware of what the teacher requires from the educational process (i.e. the aim of each TU, how to help classmates to achieve it and be aware of their own learning).

In view of the recent consensus of researchers on the suitability of students participating in assessment processes, we are troubled by a certain doubt: Why does this practice not get much support among PE school teachers? As Vera and Moreno-Murcia (2007) point out: Why is student participation in assessment more present in theory than in practice? We can find a possible answer in the work by Mateo (2000), who points out that teachers more easily accept the suggestions and requirements of formative assessment than actually putting them into practice.

The scarce and precarious participation of students in assessment tasks could be due to many factors; one being the teachers' little faith in students' capacity and knowledge for providing feedback to their classmates, or possibly the widespread perception among both teachers and students that students' participation needs more time than the more traditional methods. Finally, we must highlight teachers' reluctance to lose control of the class and thus their authority over the students (Martínez-Rodríguez, 1999; Moreno-Murcia et al., 2006; 2009). Whatever the reason, there is an urgent need for a radical change in student participation in assessment, as Blázquez (1990) points out "we complain about the students' inability to assess, judge, choose and take decisions, but have we done anything to develop this capacity?" (p. 55).

## Conclusions

The participants identified a series of common features in PE school assessment experiences. One of these was that these were usually final assessment (in the last stages of the TU) and that this was more frequent in secondary than primary schools. Their assessment were usually characterized by scarce student participation and in the cases in which they did participate the models used varied according to the knowledge field involved. The assessment of theoretical-conceptual knowledge usually took place at the end of term or TU, while student participation was in the form of peer-assessment in which each one corrected someone else's exam according to the answers indicated by the teacher.

Attitudinal knowledge was usually assessed continuously as part of the learning activities throughout the year. The students that remembered having participated in self- or shared-assessment on attitude in PE classes did so only in general aspects such as effort and active participation but not in specific aspects of the motor content involved.

We found differences in the practical-procedural knowledge according to the content involved; games and basic motor skills were normally assessed continuously, while we found two main tendencies in corporal expression, one of which was a combination of continuous assessment of the learning process and a cumulative assessment of the final product, while the other was based on a final assessment of the product generated. Fitness was assessed by a series of occasional and a final assessment and in some cases students could self-assess by tasks such as recording the times obtained in the different tests. Sports contents were assessed at the end of the TUs and the best students were sometimes given responsibilities for correcting the tests of their less advanced classmates.

In general terms it can be concluded that the PE assessment systems experienced by the students in the study in both the primary and secondary stages are in line with the traditional models pertaining to technical curricular perspectives.

One of the study's possible limitations is that the number of analysis units included could be considered only a partial view of the reality studied. We believe the results will be of interest to professionals involved in the field of PE assessment in primary and secondary schools, especially as regards the events of the last twenty years, also to researchers in the PETE's formative and shared assessment, since being aware of the background of university students is the initial step in transforming school PE assessment practices. In future lines of research we consider it important to study the experiences of these assessments and their influence on the methods used by future PE teachers as regards the extent to which they contribute to constructing alternative assessment models.

**Conflicts of interest** - The authors declare that they have no conflict of interest. This manuscript has not been published elsewhere and it has not been submitted simultaneously for publication elsewhere.



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