

# Differences of students and faculty on the difficulties to implement the formative assessment

*Divergencias del alumnado y del profesorado universitario sobre las dificultades para aplicar la evaluación formativa*

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## Resumen

La evaluación formativa supone un claro cambio en la forma de plantear la evaluación en la docencia universitaria. Su aplicación no está exenta de cierta controversia, y sobre todo de dificultades, que hacen que alumnado y profesorado tengan distintas perspectivas. El objetivo del presente estudio ha sido comprobar las divergencias del alumnado y del profesorado cuando se diseñan y se ponen en práctica sistemas de evaluación formativa. Se ha utilizado un cuestionario para el alumnado (N=3013) y los informes elaborados por el profesorado (N=46) aplicados durante el curso 2012-13. Los resultados muestran que la evaluación formativa es bastante exigente para el alumnado, aunque también muestran una alta satisfacción del alumnado con la misma, particularmente con la calificación. Un inconveniente que refleja el alumnado parece ser la acumulación de trabajo al final del proceso, lo cual resulta paradójico y requiere de una investigación más profunda en el futuro. El profesorado también muestra una alta satisfacción con este tipo de evaluación, aunque tengan una mayor carga de trabajo. Se observan escasas discrepancias entre los dos colectivos (alumnado y profesorado). En el estudio se proponen recomendaciones de puesta en práctica en cuanto al diseño y la planificación para investigaciones futuras. Las limitaciones se observan en cuanto a la población participante en el estudio, con el fin de que puedan generalizarse los resultados.

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## Abstract

Formative Assessment shows a clear change in how to approach the evaluation of university teaching. The application of Formative Assessment is not without some controversy, and above all difficulties due to students and teachers having different perspectives. The objective of the present study was to check the differences of students and teachers when formative assessment systems are designed and put into practice. A questionnaire was used for students (N = 3013) and a report prepared by the teachers (N = 46). Both were taken from the academic year 2012-13. The results show that formative assessment is quite demanding for students, but also that students are highly satisfied with it, particularly with grades. A problem that the students reflect seems to be the accumulation of work at the end of the process, which is paradoxical and will require further research in the future. Teachers also show a high satisfaction with this type of assessment, even if they have a greater workload. There are few differences between the two groups (students and teachers). The study proposes recommendations for implementation in terms of design and planning for future research. The limitations of the research can be seen in terms of participating in the study population, so the results can be generalized.

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The implementation of formative assessment in higher education is not achieved without some difficulties, for both tutors and students. It is not just an issue of lack of knowledge, there is also resistance and a lack of tradition in its implementation (Capllonch et al., 2009; Pérez et al., 2008). This current study analyses the perceptions that students have about the use of formative assessment methods in university courses.

In this study it is assumed that the aim of formative assessment is to improve both the students' learning process and the tutors' teaching (López-Pastor, 2009). Previous studies have shown how the process focuses and re-focuses the learning and teaching process so that students achieve better learning and academic results (Torrance, 2012) and, furthermore, that it has a positive effect on the development of their skills and self-determination (Rué, 2009). Black & Wiliam (2009) and Yorke (2003) believe formative assessment should be approached and delivered in a way that fully reflects its aims; for example, developing self-regulation and stimulating deep learning for students, which requires tutors to acknowledge the independence of the students.

Some studies that endorse the use of formative assessment advocate that students should be directly involved in it (Biggs, 2005; Boud & Falchikov, 2007; Brown & Glasner, 2007; Knight, 2005) as they believe there is a close relationship between the active involvement of students and improvements in their learning (Bowden & Marton, 2012; Cano, 2012; Marton & Säljö, 1976). It appears that students' direct participation in formative assessment leads to improved learning and also to better academic results (Carrillo et al., 2009; Castejón, López-Pastor, Julián & Zaragoza, 2011; Romero-Martín, Fraile-Aranda, López-Pastor & Castejón-Oliva, 2014). Formative assessment requires appropriate feedback to be given so that students can improve their learning; *feedback* as part of formative assessment has been

shown to deliver these improvements as long as it fulfils the criteria for effective *feedback*

Other previous studies have produced helpful findings with regard to implementing formative assessment in different subject areas or academic disciplines. In studies relating to medicine Krasner, Wimmers, Relan & Drake (2006) demonstrated that the use of formative assessment is a better predictor of a student's results than using summative assessment, that the strategies employed during formative assessment reduce tension and stress and make better use of learning time; something not achieved through summative assessment, which favours a good memory and being able recall information and the measurement of final results, in other words, "risking it all on one throw of the dice". Likewise, accounts of experimental studies on the use of formative assessment on social science courses indicate that its results are better than when traditional assessment methods are used (Santos, Martínez & López-Pastor, 2009).

In order to get students to be responsible for their own learning one valuable strategy is to implement formative assessment, self-assessment and peer assessment. Fallows y Chandramohan (2001) suggest that the introduction of self- and peer assessment delivers advantages that more than justify their inclusion in higher education courses. Studies show that students generally respond positively, particularly those in their final year. Nevertheless, students do not always participate with the same level of enthusiasm and differences between the approach of students and tutors can become apparent, either through students' reluctance to assess their peers or for the workload that these assessment methods generate (Gijbels & Dochy, 2006).

The use of formative assessment generally leads to improvements in students' academic performance, particularly when appropriate criteria have been established for its implementation (Sadler, 2005). Several studies undertaken concerning initial teacher training

identify significant improvements in students' marks (Castejón et al., 2011; Julián, Zaragoza, Castejón & López-Pastor, 2010; López-Pastor, 2008; López-Pastor, Manrique & Vallés, 2011), although they also acknowledge that students can demonstrate a certain resistance when participating in this type of assessment and respond negatively to what the tutor proposes. It therefore appears essential to understand students' viewpoints to resolve this apparent paradox and to ensure learning continues, especially when their viewpoints conflict with those of their tutors.

Previous studies have investigated students' perceptions regarding the use of formative and shared assessment methods in higher education and their influence on variables such as: the perception of learning, participation and contribution in the process and the workload that it generates. One example is the work of Hamodi & López-Pastor (2012), which uses group discussion as a tool for obtaining data. The participants in this study were students and graduates of initial teacher education. The authors found that students do not always understand tutors when they introduce assessment, especially when the discourse concerns the need for continuous assessment when what they actually do is to "risk all" the module on a single final exam, possibly linked to some work that students do separately and which they have to pass in order to achieve an average mark. This suggests that differences are apparent not only in terms of students' perceptions of assessment but also due to the lack of training of tutors, as alluded to in the past (Fernández, 1989; Tejedor, 1998) and which remains a critical issue in the initial training and development of tutors (De la Calle, 2004; Tonucci, 2010; Trillo, 2005). Other studies have produced similar findings (Boussada & De Ketele, 2008). However, some studies do indicate a connection between what they have learned about formative assessment during their initial teacher education and the way they implement it during their professional careers (Hamodi & López-Pastor, 2012).

On the other hand, tutors do use assessment methods to determine the learning of their students that are, at times, contrary to institutional guidelines (models) or their personal practices (pedagogic training). Consequently, Palacios & López-Pastor (2013) suggest there are three types of tutor: (a) innovator (25%), with positive attitudes towards continuous and formative assessment; (b) traditional (26%), with negative attitudes towards continuous and formative assessment; and (c) eclectic (49%), those whose position is halfway between these previous attitudes. Tutors that are "innovators", are more predisposed towards having their students actively participate in the assessment process whilst "eclectic" tutors are less predisposed and usually combine innovative methods with a final exam, whilst "traditional" tutors prefer to use a final exam and/or another assignment as a tool for assessing and marking students.

Studies which combine the two perspectives (tutors' and students') consistently indicate clear differences between them. The papers reviewed seem to suggest that students do consider formative assessment to be important and tutors agree but differences are apparent and which are revealed in a resistance on the part of both groups (Struyven, Dochy & Janssens, 2005). For example, Gutiérrez, Pérez, Pérez & Palacios (2011) show that tutors are more open to proposing alternative assessment methods but acknowledge that students do not always recognise them; whilst students perceive that their assessment methods are "the same as always". Tutors also mention, though, that students show a lack of commitment when, for example, the focus is on achieving deeper learning (Gijbels, Segers & Struyf, 2008; Lizzio, Wilson & Simons, 2002), and even to the institution itself (Martínez, Castejón & Santos, 2012).

With these issues in mind it appears there is a need to investigate why it is that students do not fully engage with an assessment process that has demonstrable benefits for their learning. The aim of this study, therefore, is to explore the different reactions of students and

tutors when formative assessment processes are designed and implemented and to understand both the resistance they show towards them and the drawbacks they feel they have.

## Methods

### Participants

The sample in this study comprises 3,013 students enrolled on a range of degree courses with the majority taking Initial Teacher Education courses (ITE). All participants were asked to rate the formative assessment they experienced on appropriate modules during the 2012-13 academic year. The sample is intentional as the students and tutors involved were specifically chosen for this study. The student participants came from the areas of Teacher Education (32 universities), Physical Activity and Sport Science (6 universities) and other disciplines (8 universities). The students came from every year, from first to final year, of their respective degree courses. Responses were received from 100% of the students that regularly attended their course lectures.

All 46 tutors who participated belong to the National Network for Formative Assessment in Higher Education (Spain). This means they are all obliged to implement formative assessment in their modules and present a structured report on their personal experiences of using it with their students during the 2012-2013 academic year. The students were told at the beginning of the academic year that formative assessment would be used in the module and they were given information with practical examples so that they could understand it and share their opinions on the concept.

### Data collection instruments

Two instruments were used to obtain data: (a) the individual reports of the member of the National Network for Formative Assessment in Higher Education and (b) the questionnaire applied to the students for them to rate the module.

*The individual member reports from the National Network for Formative Assessment in Higher Education.* This is a highly structured individual and personal report on the results of implementing formative and shared assessment within a semester or year-long module. Data is collected during the module and the report produced at the end. This instrument has been previously validated and applied in other published research which means there are precedents that guarantee the validity of these reports (Buscà, Pintor, Martínez, & Peire, 2010; Manrique, Vallés & Gea, 2012; Vallés, Ureña & Ruiz, 2011). The individual reports contain the following sections: (1) Information regarding the context; (2) Correlation between the assessment and the learning; (3) Learning and assessment strategies; (4) Implementation of assessment instruments and the focus of the learning; (5) Ethical criteria and the type of decisions made in assessment; (6) Development of the assessment strategy using ICT; (7) Advantages identified in the assessment strategy used; (8) Disadvantages identified in the assessment strategy used; (9) Academic performance and its measurement; (10) Workloads for students and tutors; and (11) Conclusions.

In section 7 the tutors express their personal degree of satisfaction with the implementation of formative assessment and in section 8 they consider the experience from the students' perspective, in both sections using a five point Likert scale: *not at all*, *little*, *some*, *quite a lot* and *a lot*. Furthermore, in both sections they refer to the results of an anonymous questionnaire their students have completed about the same experience and which is described below.

*Questionnaire on methodology and assessment in Physical Education Initial Teacher Education.* This is an anonymous questionnaire which students use to rate a module. It was validated by Castejón, Santos & Palacios (at press) achieving a Cronbach's Alpha Coefficient score of 0.84. The questionnaire was subjected to a three part validation process for content, understanding

and reliability: (a) validity of the content by experts in the subject matter; (b) a pilot study aimed at defining the questions; and (c) application of the questionnaire to 892 students on the Initial Teacher Education degrees of a range of universities. A Factor Analysis of Principal Components was undertaken with the final version of the questionnaire and acceptable values were obtained for both the KMO measure, 0.807 and Bartlett's Test of Sphericity ( $p > .00$ ). The values obtained from the covariance matrix produced acceptable adjustments for RMSEA = 0.078, and GFI = 0.88, and for all other model adjustment indicators.

Students indicate their level of agreement with the statements provided using a five point Likert scale (*not at all, little, some, quite a lot and a lot*) in relation to the advantages and disadvantages of the assessment process used. The complementarity of the two instruments enables the students' perspective to be identified and compared with that of the tutors'.

## Scope and Variables

The scope and variables refer to the aspects considered as advantages or disadvantages of implementing formative assessment identified through the tutors' reports from previous years, from research meetings and the specialised bibliography. This study focuses on three (see each item in Table 1).

1. Disadvantages - Students. The students' level of agreement with the statements on formative assessment regarded as disadvantages (14 items).
2. Disadvantages - Tutors. Tutors' opinions: (1) Personal perception of the workload generated by the process; (2) Perception of the resistance shown by the students to formative assessment (2 items).
3. Advantages - Tutors. Tutors' opinions: Personal level of satisfaction with the process (1 item).

Table 1. Scope, items and variables covered by the aims of this study

Scope	Variables
Disadvantages Students	- DS1 It requires compulsory and active attendance
	DS2 It has a work dynamic that is not widely understood and people are unfamiliar with
	DS3 It requires continuity
	DS4 It needs to be explained beforehand
	DS5 It requires a greater effort
	DS6 Group working causes difficulties
	DS7 A lot of work accumulates at the module end
	DS8 There is an imbalance between the workload and the credits awarded
	DS9 The marking process is more complex and sometimes unclear
	DS10 It creates insecurity and uncertainty and doubts about what is required
	DS11 It is unfair compared to other assessment methods
	DS12 The corrections were not clear
	DS13 The marking of the work is subjective
	DS14 It requires students to participate in their own assessment (self-assessment)
Disadvantages Tutors	- DT1 It creates an excessive workload for tutors
	DT2 Students show strong resistance to formative and continuous assessment methods
Advantages - Tutors	AT1 The satisfaction of the tutors with the assessment methods they use

### Procedure

An initial model for an individual report was designed by a working group from the Research & Development Plus Innovation Project on formative assessment in initial teacher education and was used for a pilot study. The model was subsequently modified and changed and the final version was used for this current study. The definitive version of the report (explained in the “Instruments” section) was completed by each tutor after finishing the module in which they had included formative assessment. The deadlines for completion across the Network for Formative Assessment are the end of the first or second semester, depending on the duration of the module. The students complete their anonymous questionnaires at the end of each semester. On average students take 30 to 40 minutes to complete it. The data was sent to the coordinator who, together with the data analysis team, input all the responses into the appropriate software package.

### Data processing

To process the data five points on the ordinal scale with numeric values were

identified; the score 0 corresponds to the option *not at all*; 1 to *little*, 2 to *some*; 3 to *quite a lot* and 4 to *a lot*). The analytical procedures used by Gutiérrez, Pérez & Pérez (2013) for a similar study involving students, graduates and tutors were used as a reference point together with Gutiérrez et al. (2011) for the treatment of ordinal variables. *Descriptive* and *comparative* reports were prepared covering the opinions of the students and the tutors specifically: (1) Descriptive of the variables for both tutors and students (Averages and Standard Deviation); (2) Comparative between the items for the tutors (Spearman’s Rho test); (3) Comparative between the variables for the tutors and students (Kruskal-Wallis Test). Both Excel\_2007 and SPSS\_v19 programmes were used, with a level of significance of  $p$

### Results

#### Descriptive study of the students’ perceptions

Figure 1 presents the results of the level of agreement of the students with 14 statements regarded as disadvantages of using formative assessment in higher education.

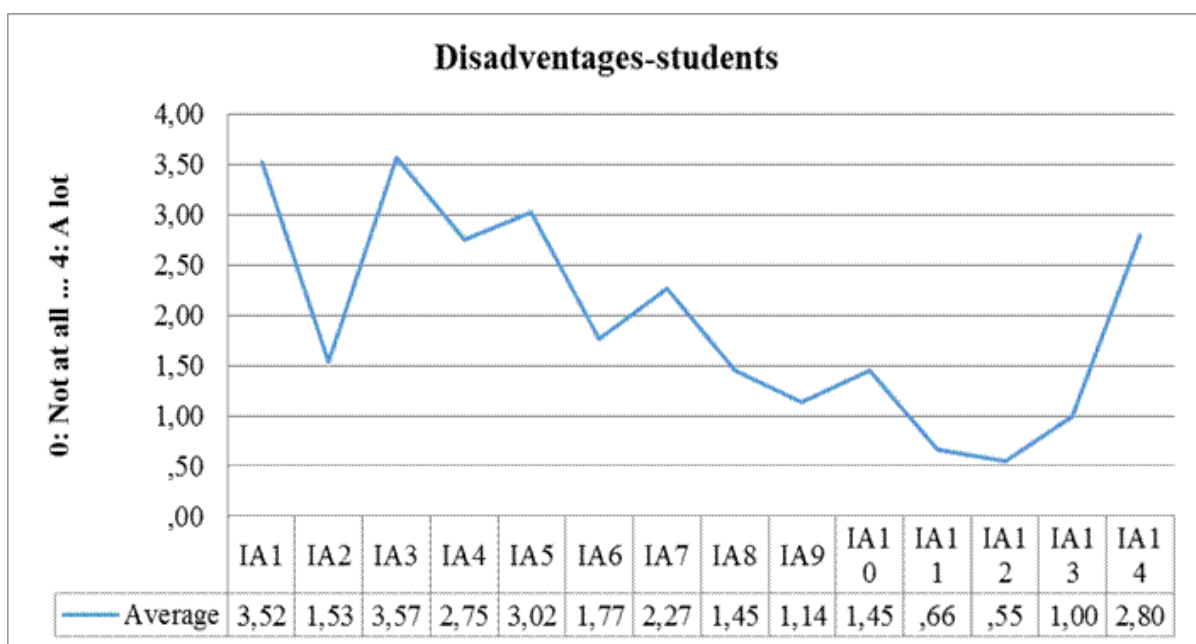


Figure 1. Level of agreement or disagreement of students with the potential disadvantages of formative assessment.

As can be seen, for eight of the 14 items the scores are below 2 which corresponds to some; for three items they are between some and quite a lot and for a further three items they are between quite a lot and a lot. For more than half of the items the scores given by the students to the disadvantages are low and for only three, slightly more than 20%, they give high scores, producing an overall average of  $M = 1.87$ , which is below some. To help with understanding the data they have been arranged in three sections: (a) those relating to aspects of the process and organisation; (b) those relating to the requirements of the assessment strategy; and (c) those relating to marks.

Process and organisation (implementation). Table 2 presents the data relating to the possible disadvantages in implementation (procedures, organisation, etc.) of formative assessment in higher education (items 2, 4, 6, 7, 8 and 10). They show four scores between little and some; the two nearest to little refer to the imbalance between the workload and the credits given for the module ( $M = 1.45$ ) and to whether it produces greater certainty or uncertainty ( $M = 1.45$ ). The two closest to some relate to whether the assessment method has a work dynamic that is not widely understood ( $M = 1.53$ ) and to the difficulty of group working ( $M = 1.77$ ).

*Table 2. Potential disadvantages in the implementation of formative assessment in higher education*

Item	Variable	Avge.	Std Dev.
DS2	It has a work dynamic that is not widely understood and people are unfamiliar with	1.53	1.162
DS4	It needs to be explained beforehand	2.75	0.651
DS6	Group working causes difficulties	1.77	1.008
DS7	A lot of work accumulates at the module end	2.27	1.042
DS8	There is an imbalance between the workload and the credits awarded	1.45	0.926
DS10	It creates insecurity and uncertainty and doubts about what is required	1.45	0.901

Among the items that show a positive level of agreement with potential disadvantages is item DS7 which relates to the possible accumulation of work at the end of the module ( $M = 2.27$ ). Similarly the students showed they were generally in agreement with item DS4, that it is important to understand formative assessment processes in advance (IA4,  $M = 2.75$ ).

*Level of requirement.* Figure 1 shows the highest scores the students attribute to all of

the statements relating to disadvantages are given to the four that include a reference to specific requirements (items 1, 3, 5 and 14; in Table 3). The highest level of agreement was that formative assessment methods require continuity ( $M = 3.57$ ), compulsory and active attendance ( $M = 3.52$ ), a greater effort ( $M = 3.02$ ) and involvement in their own assessment, that is, self-assessment ( $M = 2.809$ ).

*Table 3. Level of agreement with the requirements demanded by formative assessment.*

Item	Variable	Average	Std. Dev.
DS1	It requires compulsory and active attendance	3.52	.762
DS3	It requires continuity	3.57	.587
DS5	It requires greater effort	3.02	.590
DS14	It requires students to participate in their own assessment	2.80	1.112

*Marks.* Table 4 shows how students consider of low importance the possible disadvantages for marks that formative assessment methods might have (items 9, 11, 12 and 13). All are given very low scores,

especially in terms of the potential lack of fairness compared with other assessment methods ( $M = .66$ ) and in relation to the lack of clarity of corrections ( $M = .55$ ).

*Table 4. Potential disadvantages relating to the marking system.*

Item	Variable	Average	Std. Dev.
DS9	The marking process is more complex and sometimes unclear	1.14	.930
DS11	It is unfair compared to other assessment methods	0.66	.861
DS12	The corrections were not clear	0.55	.820
DS13	The marking of the work is subjective	1	.964

### The tutors' perspectives

In terms of the three variables relating to the tutors it can be seen from Table 5 that tutors who use formative assessment in their modules show a high degree of satisfaction ( $M = 3.31$ ).

With regard to the disadvantages mentioned by the tutors the data show that the majority of them feel that using formative assessment increases their workload ( $M = 3.02$ ); however, they do not consider that the students are strongly resistant to formative assessment methods ( $M = 1.18$ ).

*Table 5. Tutors' opinions: level of satisfaction and potential disadvantages*

Item	Variable	Average	Std. Dev.
AT1	Satisfaction of the tutors with the assessment methods they use	3.31	.569
DT1	Creates an excessive workload for tutors	3.02	.79018
DT2	Students show strong resistance to formative and continuous assessment methods	1.18	.95451

### Comparison between the tutors' opinions

Table 6 indicates the tutors' level of satisfaction with the formative assessment

method they use in relation to whether they feel the workload it creates to be excessive (AT1 vs. DT1)

*Table 6. Comparison between the tutors' level of satisfaction and the workload generated*

Comparison AT1 vs. DT1_ Spearman's Rho	Avge. AT1	Avge. DT1	Coefficient of correlation	Sig. (bilateral)
	3.31	3.02	-0.067	0.688

The average value for both variables is high (see Table 6), being above 3, some/quite a lot. The value of the coefficient of correlation, at close to zero and negative, indicates a very weak inverse correlation, but there is no significance, as shown by  $p = .688$ , meaning that these variables have no

correlation and that tutors hold pairs of heterogeneous opinions.

### Comparison between tutors' and students' opinions

Table 7 compares the tutors' perception of students' resistance to formative assessment to the students' views and also attempts to



identify the issues that could cause this resistance.

According to the tutors the students would show little opposition to formative assessment, as evidenced by their score for this variable (DT2)  $M = 1.18$ , whilst the overall

average score for the students' opinion was greater ( $M = 2$ ). To investigate this further the tutors' variable (DT2) is compared with each of the students' variables (DS, DS2..., DS14), using the Kruskal Wallis test, with the results expressed in Table 7.

*Table 7. Comparison between the tutors' perceptions and the opinions of the students regarding resistance to formative assessment*

Comparison	Avge. tutor	Avge. student	Summary of the Kruskal Wallis hypothesis test - significance .05	
			Sig.	Decision
DT2 vs. DS1	1.18	3.52	.055	accept
DT2 vs. DS2	1.18	1.53	.945	accept
DT2 vs. DS3	1.18	3.57	.370	accept
DT2 vs. DS4	1.18	2.75	.231	accept
DT2 vs. DS5	1.18	3.02	.065	accept
DT2 vs. DS6	1.18	1.77	.356	accept
DT2 vs. DS7	1.18	2.27	.031*	reject
DT2 vs. DS8	1.18	1.45	.161	accept
DT2 vs. DS9	1.18	1.14	.461	accept
DT2 vs. DS10	1.18	1.45	.779	accept
DT2 vs. DS11	1.18	0.66	.019*	reject
DT2 vs. DS12	1.18	0.55	.018*	reject
DT2 vs. DS13	1.18	1.00	.061	accept
DT2 vs. DS14	1.18	2.80	.113	accept

It can be seen that in 11 of the 14 comparisons the significance level is greater than  $p = .05$  so in those 11 cases the hypothesis of equality can be accepted, which means there are no significant differences between the tutors' perceptions and the students' opinions. However, in the remaining three cases marked with an asterisk, DS7 (A lot of work accumulates at the module end;  $M = 2.27$ ); DS11 (It is unfair in comparison to other assessment methods;  $M = .66$ ), DS12 (Corrections were not very clear;  $M = .55$ ), discrepancies between the tutors and the students are evident.

To understand more about these discrepancies a comparison is made between the average scores of the students and the tutors which indicates that the students placed more importance than their tutors on the issue

that a lot of work accumulates at the module end (DT2 vs DS7). In contrast the students gave less importance to the issues of clarity or the unfairness in the marking (DT2 vs. DS11 & DS12).

## Discussion

### The students' perceptions

In previous studies on students' perceptions of possible disadvantages in formative assessment some authors highlight that students demonstrate some resistance when participating in this form of assessment (Castejón et al., 2011; Julián et al., 2010; López-Pastor, 2008; López-Pastor et al., 2011; Pérez et al., 2008; Capllonch et al., 2009); but in this study the students did not present a high level of resistance in general, but rather only in specific aspects, reflecting other published

research which indicates that the resistance appears at various points in the process, from the design and implementation (López-Pastor, 2009; Sadler, 2005), to feedback (Carless, 2006).

**Procedures and organisation.** In terms of procedures and organisation, four issues, which a priori might appear to be disadvantages were not highlighted by the students; they found no major problems with group working, they had few uncertainties or doubts about what they had to do and they did not feel there was any major disproportion between the workload and the credits, that all reflects other studies (Julián et al., 2010; López et al., 2011; Romero-Martín et al., 2014), which suggest that using formative assessment does not create an excessive workload for students, but that it falls within the parameters for the number of study hours per ECTS credits for each module.

Students did not highlight as a major disadvantage the lack of familiarity with this form of assessment, which coincides with the work of Gutiérrez et al. (2011); Palacios & López-Pastor (2013) and Palacios, López-Pastor & Barba (2013), concerning the gradual increase in the percentage of tutors in Spanish universities that use formative and continuous assessment strategies.

With regard to the distribution of the work throughout the academic year the results suggest that at least a small number of tutors that used formative assessment did not spread the tasks appropriately throughout both semesters. This creates a greater accumulation of tasks towards the end of the year, precisely at the time when students have to spend more time preparing for their traditional final exams. This is evidenced in Hamodi & López (2012), which identified and analysed students' negative opinions on this tradition in Spanish universities and also in Julián et al. (2010), which demonstrated that if fixed deadlines for each assignment are not established in advance for the whole year, it leads to an excessive accumulation of work at the end of the year and to increased failure or withdrawals. All of this reinforces the idea that it is vital to set

deadlines for undertaking and submitting the majority of assignments in the first three months of the academic year to avoid the problem of an excessive workload at the end of year.

The students considered it important that they understood the assessment method in advance, as identified by Castejón et al. (2011), who place significant importance on making the whole process very clear, thus avoiding being over confident in it being successfully received, as cautioned by Buscà et al. (2010).

It is not possible to conclude therefore whether the factors relating to the organisation of assessment systems produce disadvantages that are unsurmountable, although some items provided important data on where improvements can be made in the implementation of formative assessment.

**Level of requirement.** The students confirm that formative assessment requires a greater effort from them than other assessment formats and that it requires continuity of work and class attendance and that their attendance needs to be active; meaning that the student's involvement cannot remain purely superficial. This, in turn, leads to processes of self-regulation being required (Black & Wiliam, 2009 & Yorke, 2003), which impacts positively on students' involvement, reducing student failure and withdrawals, enhancing their learning (López-Pastor, Pintor, Muros & Webb, 2013) and their overall academic performance (Biggs, 2005; Boud & Falchikov, 2007; Bowden & Marton, 2012; Brown & Glasner, 2007; Cano, 2012; Carrillo et al., 2009; Castejón et al., 2011; Knight, 2005; Marton y Säljö, 1976; Romero-Martín et al., 2014).

**Marking.** The results contradict the prevailing opinions about this form of assessment. In spite of the volume and range of learning activities normally undertaken when formative assessment is used the students in this study did not believe the marking process was more complex or unclear. On the contrary, they indicated that the marking of their work had not been as

subjective and they highlighted as a positive issue the general fairness of the process and the clarity of the corrections. This tends to suggest that the tutors had designed and implemented effective teaching strategies for using formative assessment, in accordance with the recommendations in Castejón et al. (2011)

These findings are particularly interesting given the well-known obsession with marks; both on the part of students and also the tutors who need to ensure they reflect the true effect of the teaching and learning process for each student. Several studies about the use of formative assessment in the initial training of physical education teachers actually found significant improvements in students' marks (Castejón et al., 2011; López-Pastor, 2008; López-Pastor et al., 2011), which in this study is reflected by the students' positive perception of the marking process in formative assessment.

### **Tutors' opinions**

In this study the tutors indicated a high level of satisfaction with formative assessment; but it should be remembered that the tutors participating had undertaken voluntarily to implement formative assessment strategies and therefore reflected the profile of "innovative tutors" according to the terminology of Palacios & López-Pastor (2013) and Palacios et al. (2013), who define it as tutors with positive attitudes towards continuous and formative assessment, meaning they had overcome the resistance as mentioned by Pérez et al. (2008) and Capllonch et al. (2009); therefore the high level of satisfaction they recorded is as might be expected.

The tutors also felt their workload was higher, reflecting other studies that suggest the main disadvantage of formative assessment is the additional time and commitment required of them (Bennet, 2011; Gibbs & Simpson, 2004-05).

Comparing these two variables shows a slight tendency towards tutors being generally satisfied with implementing formative assessment in spite of the increase in workload

it creates. This is possibly because they are aware the workload actually falls within the parameters set for ECTS credits for their modules, as shown by research published by Julián et al. (2010) and López-Pastor et al. (2013), which use authentic data on the actual workload to demonstrate that it is perfectly viable. The correlation, though, is not significant, which means it is not possible to fully confirm this assertion.

### **Comparison between the tutors' perceptions – and the students' opinions**

Although some literature shows tutors perceived some resistance from students towards formative assessment (Capllonch et al., 2009; Pérez et al., 2008; Struyven et al., 2005), the tutors in this study perceived little resistance, possibly because their day to day observation suggested a good general level of acceptance, which the students went on to confirm. The results indicate that the students' opinions matched the tutors' perceptions to a high degree.

Of the three instances where discrepancies are found, in two of them the students score those disadvantages even lower than the tutors, particularly for "It is unfair in comparison with other assessment methods" and "The corrections have not been very clear". It is important to recognise that this is an unexpected result because marks often cause disagreements between students and tutors, but if formative assessment demands that students should become critical and independent learners (Torrance, 2012), it is reasonable to expect that their opinions were given based on that situation.

In the third instance where there was a discrepancy between tutors and students, in relation to the accumulation of work at the end of a semester, the students' scores were higher than the tutors'. This is particularly relevant when considering that one of the basic features of formative assessment is continuity, in as far as it enables constant feedback to be given which constantly refocuses students' learning and continually reduces the gap between what they do know and what they should know

(Taras, 2009; Torrance, 2012); in summary, it maximises the students' use of information to enhance their learning which, in turn, increases their motivation and performance, as shown in studies that focus on this aspect (for example, Burke, 2009; Carless, 2006; Carless et al., 2010).

These results enable tutors to modify their perceptions and suggest ways in which the formative assessment processes they implement can be improved.

## Conclusions

Scientific research into the effects of formative assessment appears to be still inconclusive. So far, studies have focused on comparing advantages and disadvantages or providing additional evidence to support other studies. This present study, reflecting the approach in Dunn & Mulvenon (2009), has produced data based on a concrete experience, providing valuable information so that tutors can implement formative assessment knowing that they need to do so carefully and with arguments ready to overcome possible resistance. Just as this study intended, it has proved that there are differences in the opinions of tutors and students regarding formative assessment. Students tend to show resistance to formative assessment, although in this study it was less than expected in relation to its implementation and the increased workload, possibly due to them having experienced this assessment strategy in various modules and therefore being more accustomed to it. However, the results also indicate that it is beneficial if tutors spread the workload more carefully over the whole year, to avoid overloading the final weeks of the semester when continuous assessment can clash with more formal end of year summative assessments in other modules. Students' perception of the workload seems to improve when deadlines are set that enable them to cope with the requirements of formative assessment. It also reduces the rates of withdrawal and failure that are seen when deadlines are too closely bunched

Another of the study's aims is also proven; that when students are involved in the design and implementation of assessments they become better disposed towards it. Despite them still considering it a method that demands constant attendance and dedication, this does not seem to make them perceive it overall in a negative way. Students' experience of formative assessment actually improves their self-regulation in terms of assessment and learning. Students also have a positive view on the relationship between formative assessment methods and their marks; they do not see it as a less fair method or indicate any other concerns about it. They are particularly positive about the relationship between the level of involvement, the range of learning tasks incorporated and the marks they receive.

Meanwhile, the tutors believe formative assessment implies a high level of commitment but also a high degree of satisfaction because of the advantages it has for students. Moreover, it appears that the level of commitment required is not inconsistent with the ECTS parameters, although the data here are less clear than in other published studies.

Comparing the opinions of tutors and students in our study shows a high degree of agreement between them on around 80% of the items and significant differences on only the remaining 20%. These concern: it is unfair in comparison with other assessment methods, the corrections were not very clear and the workload can accumulate at the end of the semester. But these issues can be easily resolved, as shown throughout this paper, through more careful planning on the part of tutors and greater involvement on the part of students.

Among the limitations of this current study is that the participating tutors have been using formative assessment for some time and therefore their responses should be contrasted with those of tutors that have not implemented it or those that have a variety of degrees of experience in using formative assessment. Likewise, a comparison should be made

between students that have some or no previous experience of formative assessment. It would also be valuable to investigate other relevant issues such as help for tutors when planning the tasks and assignments that students have to submit and with the type of feedback they should give in order to ensure students develop greater self-regulation of their learning and development.

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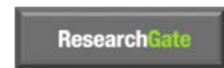
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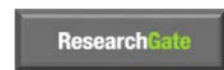
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