Design of the portfolio to increase academic motivation and converge with the European Higher Education Area

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Abstract

This experience is part of Psychology of Personality, the core subject in the 1st cycle of the Psychology Degree Course. The project, based on European Higher Education Area (EHEA) guidelines, consists of the design and application of the student's portfolio in the teaching-learning process. In order to guarantee the students' participation in the assessment of the internal quality of this teaching innovation process, an inventory of six items was administered in order to ascertain the influence of the portfolio on the learning process in a sample of 179 students. The results show that 89 % of the students positively rated the introduction of the portfolio in their learning process, and concludes that the process of adaptation to the European Higher Education Space took place correctly and satisfactorily.

General area of interest of this innovation

The interest in the innovation includes three areas: the characteristics of the course (a core 1st cycle course), the introduction of the portfolio as a teaching tool designed to attain the educational objectives of the European Higher Education Space, and finally, the assessment of the internal quality of the innovation process by means of student participation, as recommended by Reichert & Tauch (2005), in their report *Trends IV: European Universities Implementing Bologna.*

1. Objectives

The purpose of the project is to design a teaching tool that increases students' motivation for the subject and meets the European higher education standards.

The objectives are as follows:

1. To design the student's Portfolio in order to improve the teaching-learning process on the course.
2. To adapt the course to the requirements of the European Space for Higher Education Area.
3. To increase the students' motivation concerning the subject.
4. To facilitate students' assimilation of the content taught in class.
5. To work on and develop written communication, as a transversal skill in higher education.

2. Description of the project

2.1. Introduction

In this context of European reforms to implement the Skills Training Model, the replacement of traditional teaching with teacher-focused classes with student-focused teaching strategies, in which students can participate actively, autonomously and co-operatively, and in which students can set their own pace of learning, is widely recommended. The use of these methods in large first cycle classes is complex, and adapting the European standards in this situation is a major challenge (Slaughter, 1998). However, in the scientific literature and various teaching innovation seminars based around the European Higher Education Area, a teaching tool has been identified which meets the new needs of university education: the student portfolio. The student portfolio is a tool that comes from the art and design world, and can be defined as a collection of evidence of the work done by the student, and which should include, arrange and organise in a file and show and summarise the work done and his/her level of commitment during the course (McMullan, 2006; Wright, Knight & Pomperlau, 1999). As well as providing evidence of their academic progress, the portfolio helps students to develop the skills required in their professional field (Elango, Jutti & Lee, 2005; Roberts, Newble & O'Rourke, 2002; Tarwijk, Driessen, van der Bleuten & Stokking, 2007). It may be structured, semi-structured or free, and its aim is to facilitate the student's assimilation of knowledge, the development of skills and the promotion of attitude, as described in the Tuning project for a common European pedagogical strategy (González & Wagenaar, 2003). Independently of the specific knowledge, skills and attitudes in the particular area of Psychology (Peiró & Lundt, 2002; Roe, 2002), use of the student portfolio in higher education has become considerably more widespread during the last decade in order to adapt learning processes to the requirements of the European Higher Education Space and to guarantee continuous assessment of students.

One of the basic objectives of the portfolio is promote in-depth rather than superficial learning (Biggs, 1993; Furnham, Christopher, Garwood and Martin, 2007; Slaughter, 1998). These terms refer to the level of processing applied by students to the learning task. Students presenting in-depth learning are intrinsically motivated by knowledge, try to understand the material they study, relate new knowledge to old knowledge, include knowledge from other subjects, seek meaning in texts and are motivated by a strong desire for personal satisfaction. By contrast, students who process knowledge on a superficial basis focus on memorising in order only to pass the examination, have an extrinsic motivation for knowledge, do not seek meaning or relationships with other subjects and have a superficial strategy for reproducing knowledge in order to meet the minimum requirements for understanding the contents. Despite some the suggestion by some authors that individual differences, personality and preferences of learning style are important in designing teaching strategies and assessment methods (Fallan, 2006; Furnham et al., 2007), the difficulty in personalising the learning process in classes with a large number of students means that structured and systematic methodologies that are the same for all students must be created.

In the context of the European Higher Education Area, the co-operative approach is obviously also considered a factor to be taken into account in the design of new teaching strategies. Cartney & Rouse (2006) report that the impact of social integration in the first years of university is a key factor that may influence the subsequent progress of students. Some authors say that when the students experience a cohesive social working group, the learning process improves and motivates them to continue. For example, estimates suggest that between 33 % and 45 % of students in English universities give up their education. An important challenge for European universities is therefore to define how to motivate and increase the potential of their students and how to retain those wishing to give up their education. For this reason, co-operative work is not just one of the transversal skills in higher education, but is also a factor in motivation and maintenance in the continuity of studies. Group work encourages participation in collective discussions and opens up new points of view for the students, as well as helping them to learn to work as part of a team in order to meet future professional challenges. However, working in a group can be seen both positively and negatively. In an ideal context, students should enjoy the experience of co-operation, which should include creative disagreement, shared enthusiasm, fair distribution of tasks, the establishment of positive leadership processes and the gregarious feeling of satisfactorily forming part of a group. However, students may feel overwhelmed, unable to share their ideas, and to say what they think or to contribute in the way they would like, as they are in situations where the distribution of tasks is not balanced, or they have to face situations of interpersonal confrontation when taking consensus-based decisions.

A gradual intervention is therefore necessary starting with the first courses at university using new educational strategies in order to be able to attain the basic objec-

tives of the ESHE in classrooms: integration of the Skills Training Model (STM), promotion of teamwork and improvement of the quality of learning processes.

2.2. Design and application of the portfolio

In order to improve the learning process, students' motivation and performance within the framework of the EHEA and based on the criteria above, a reform process was implemented of the teaching methods in a course on the Psychology Degree course at the Universitat Autònoma de Barcelona: Personality Psychology. This is a core first cycle subject, taught during the first term of the second year of a qualification that is still not part of the Bologna Pilot Plan and therefore still has no MFC design. The average number of students registered in first cycle subjects in this qualification is 448, distributed in 112 students per theoretical module and 46 per practical module (AQU, 2000). It consists of 9 credits, for which students attend six weekly sessions, of one hour's class time each, organised into three theoretical sessions, two practical sessions and one tutorial. Assessment of the course traditionally consisted of a multiple choice examination which assessed both theoretical and practical knowledge. The Psychology assessment report produced in 1999 said that the number of first time passes is low, the number of those failing to sit the examination is large, and that absenteeism in the afternoon presence learning groups is high. The possible reasons are that the background of Psychology students is very varied (access is possible from any branch of higher secondary education) and their adaptation to the first courses is therefore slow and difficult. Moreover, many students combine their studies with work.

Designing a student portfolio was proposed in order to improve students' motivation and to adapt the course requirements to the European Higher Education Area. The design of the portfolio was based on two fundamental ideas:

1. Implementing a learning process that is focused on the student, more active, cooperative and profound, in order to facilitate understanding of the contents of the course, help to study for the final examination and increase motivation and teamwork among the students.
2. Introduction of the Skills Training Model. The skills to be worked on were the following:

    a) *Skill 1 - Generic to the qualification*
       Written communication is vital for both the qualification and in higher education. This is defined as the ability to understand, organise and summarise written information and to write academic texts correctly (correct spelling, grammar and formal presentation), and the ability to communicate ideas and answer in writing in a clear and precise manner.

    b) *Skill 2 - Specific to the course*
       Being aware of, relating and applying basic diagnostic and personality assessment instruments.

Production of the portfolio was proposed and applied by means of practical sessions on the course in groups of 3 or 4 students. 10 activities were organised. These had to be handed in to the teacher on a pre-established date, so that the teacher could return the corrected activities to the students at intervals during the course. Production of the portfolio was voluntary but was assessed with 10% of the final mark. The portfolios that failed to meet the conditions explicitly stated at the beginning of the course and during it were not assessed. The instructions for producing the portfolio were provided orally by the class teachers at the beginning and during the course. They were also given in writing in the course programme and through the medium of the Virtual Campus.

2.3. Design of the assessment of quality

As recommended by the European standards (Reichert & Tauch, 2005), a brief inventory was designed for the students with two objectives:

1. To promote the students' participation in the process of assessment of the internal quality of new learning processes.
2. To ascertain the perceived influence of the portfolio in the learning process.

Due to the lack of validated instruments in the scientific literature with these objectives, an inventory to measure the quality of the new learning process using the portfolio was designed specifically for this project.

3. Methodology

3.1. Participants

368 students (82 % of the 450 students registered for the course) in the 2006-2007 academic year decided to produce the portfolio. Of these, 179 students (75 % women, 25 % men) aged between 18 and 23 years old answered the final inventory to ascertain the influence of the portfolio on the teaching-learning process. The inventory was administered by various teachers during the final session of each of the four theory modules, so that the students had passed through the entire portfolio production process. The students completed the inventory voluntarily and anonymously, and returned them to the teacher during the same session.

3.2. Material

The Inventory to ascertain the Influence of the Portfolio on the Students' Learning Process (I-IPSLP) was designed and administered (Muro & Gomà-i-Freixanet, 2007).

This Inventory consisted of six Likert format items, with answers showing the level of agreement on a scale of 1 to 5 (1 = none, 2 = a little, 3 = some, 4 = a fair amount, 5 = very much). It examined six aspects of the portfolio that were taken from the scientific literature consulted and which were the basis for its design: understanding

of knowledge, motivation for the course, help with studying for the final examination, group work, the structure and approach of the process, and finally the workload involved (see Appendix 1). The scores ranged between 6 and 30. The answers were encoded to establish a dichotomic cut-off point between «*Perceived influence*» and «*No perceived influence*» on the learning process. Scores from 6 to 17 were deemed as no perceived influence and those from 18 to 30 were deemed to be *perceived influence*.

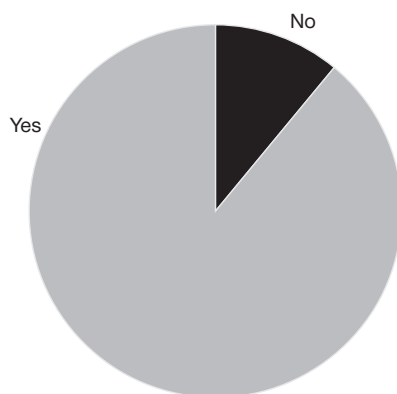Analysis of the data was carried out using the SPSS 14.0 statistics program.

4. Results

The internal reliability of the inventory was high (Cronbach's alpha = 0.76). Analysis of the portfolio's influence on the learning process showed that 89 % of students had a positive perception of the portfolio (Figure 1). The difference in averages between the group of students who valued the portfolio positively and those who valued it negatively shows that portfolio influenced the learning process in a statistically significant manner (F = 145,088, p < .005).

Table 1. Averages and standard deviations on the marks obtained in the I-IPSLP

		M (DE)	n = 179
Perceived influence	YES	22.6 (2.7)	160 (89.4%)
	NO	15.0 (1.8)	19 (10.6%)

Figure 1. Influence of the Portfolio on learning according to the students

The results of analysis of the frequencies of responses are shown in Table 2. It can be seen that the total percentage of «none or very little» answers is low, except in item 6, which was formulated in the reverse format. The other answers showed that the aspects of the portfolio assessed influenced a little, some and a great deal, with total percentages of between 84 % and 96 %.

Table 2. Frequency of answers in the various aspects of the portfolio

	$n = 179$				
	None	Very little	A bit	Some	Very much
1 It helped me to understand the contents of the course.	1 (0.6 %)	6 (3.4 %)	47 (26.3 %)	95 (53.1 %)	30 (16.8 %)
2 It motivated me to continue the course.	5 (2.8 %)	23 (12.8 %)	57 (31.8 %)	66 (36.9 %)	28 (15.6 %)
3 It helped me to study for the examination.	1 (0.6 %)	12 (6.7 %)	59 (33 %)	75 (41.9 %)	32 (17.9 %)
4 Working in a group made the task easier for me.	6 (3.4 %)	23 (12.8 %)	46 (25.7 %)	65 (36.3 %)	39 (21.8 %)
5 The structure, approach and distribution made it easier for me to produce it.	2 (1.1 %)	6 (3.4 %)	66 (36.9 %)	77 (43 %)	28 (15.6 %)
6 Producing it involved a lot of work for me.	18 (10.1 %)	65 (36.3 %)	75 (41.9 %)	19 (10.6 %)	2 (1.1 %)

5. Conclusions

From the results obtained, we can conclude that the teaching innovation process was introduced satisfactorily by means of use of the portfolio. The data provide evidence of the positive perception of the portfolio in the case of students of this core first cycle subject presented here. It was also observed that most students perceive this tool as a positive influence on the various aspects that guided its construction. These data are relevant for expanding and confirming the hypothesis that the portfolio improves the learning process (Elango et al., 2005; Wright, 1999) and that the design of teaching tools that promote co-operative work have a positive influence on students' motivation (Cartney & Rouse, 2006), thus increasing their likelihood of continuing their studies and reducing the risk of them leaving their studies during the first years. Appropriate design of the portfolio is essential for its satisfactory inclusion in the learning process (Tarwijk et al., 2007): Its design must take into account the objectives to be achieved in the learning process and its context, including the characteristics of the students, teachers and the course. Furthermore, without a realistic and adequate design, the portfolio could become an obstacle to the correct

implementation of the process and take up a large amount of time for both students when producing it and teachers when correcting it (Elango et al., 2005; McMullan, 2006). In the case presented here, this factor was taken into account in the design of the portfolio in order not to impose too great an effort on the students. It was observed that this factor was controlled appropriately, as the students did not perceive the portfolio as an excessive addition to their workload; only 12 % thought that doing it involved a great deal of work.

These data are interesting because they provide the students' view of the teaching innovations proposed by the EHEA. There is little data of this nature available and there are few studies with these characteristics (Elango et al., 2005; Reichert & Tauch, 2005; Vila & Monreal, 2004). Obtaining a positive assessment of the process for introducing European standards by means of the portfolio confirms the success of the introduction of the new university teaching model in the specific case of the first cycle core subject presented here — Personality Psychology. It can also be concluded that the Skills Training Model (González & Wagenaar, 2007) has also been introduced satisfactorily and it has been possible to appropriately assess both generic competence in written communication and specific competence related to the particular skills worked on in the practical classes on the course.

The I-IPSLP (Muro & Gomà-i-Freixanet, 2007) is therefore proposed as a reliable and useful instrument for examining the quality of the teaching-learning process using the portfolio. Taking into account the lack of published instruments in the scientific literature with the same objective, we suggest that it may be suitable for use in ensuring the internal quality of teaching adapted to the European Higher Education Space (Reichert & Tauch, 2005). Both the apparent validity of the inventory and the high level of internal reliability obtained confirm that its construction was relevant according to European higher education standards. This experience fulfils the condition of making students participate in internal assessment processes and assessing learning as an overall process in which the student plays a central role to the detriment of traditional internal assessment by teachers, in which the teacher's reputation and prestige, and his/her particular performance in the classroom or personal image are seen as more important than the educational process in itself (Gurung & Vespia, 2007). In the context of the European Higher Education Area, and ideally in any educational context, the role of the teacher should be to guarantee quality in education, and should be that of a guide and facilitator of independent, active and co-operative learning, and to promote in-depth consideration of the contents proposed in classes (Furnham et al., 2007; Slaughter, 1998). This educational task of teachers must gradually replace the oral transmission of knowledge as an exclusive means of teaching, as the focus of the process according to the new higher education standards is on the student and on the time he/she invests in working on the course, and not on the specific performance of teachers in classes.

Acknowledgements

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Presentation of the project leader and the working group
Montserrat Gomà i Freixanet is a full professor in Personality Psychology in the Faculty of Psychology and is head of the UAB *Personality and Individual Differences Research Group*, of which the other members of the project are also members. The research objectives are: to apply and analyse personality psychology in various social and health areas, to adapt and generate instruments for measuring personality, checking the basic structure of personality and providing a response to unresolved questions within the discipline.

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