TEACHING INNOVATION: OPINION AND ANALYSIS OF THE STUDENTS’ ACADEMIC PERFORMANCE

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Abstract

In the European Higher Education Area (EHEA), the evaluation is a controversial issue. In this paper we want to know the students’ opinion about two assessment methods (final exam and continuous assessment), as well as to analyse the student’s academic performance and find out whether this could be linked to the degree of acceptance of both methods. Our study involves 322 students enrolled in Human Anatomy subjects of the Degree in Nursing (N), the Degree in Human Nutrition and Dietetics (HND) and the Degree in Physical Activity and Sport Science (PASS) of the University of Alicante. In order to collect the students’ opinion we used a survey. Although 90% of the students preferred a continuous assessment method, a high percentage of them were not satisfied with the assessment activities. More than 70% of the students passed the subjects with better results in the continuous assessment than in the final exam. Our results suggest a correlation between the continuous assessment method and the academic performance in the final exam for the Degrees of N and HDN. The good academic performance revealed the acceptance of the continuous assessment method by the students, although this study has also exposed points of improvement in our teaching activity.

Keywords: Continuous assessment, final exam, European Higher Education Area, university teaching, educational innovation.

1 INTRODUCTION

The teaching framework established after the convergence towards the European Higher Education Area (EHEA) has implied a change in teaching methodologies, reflected mainly in the evaluation of academic performance. The evaluation is no longer results-oriented through a single final exam (FE) but it is aimed, instead, at achieving a series of desired educational skills or competencies for the student. As defined by Zaragoza and colleagues, it is about learning by doing ([1]). Although the continuous assessment (CA) has turned into the most appropriate assessment tool ([2]), many other evaluation strategies are gaining ground as innovative teaching techniques and acquisition and competency development methods ([3], [4], [5], [6]). It is evident that the methods to assess learning in higher education are constantly evolving in accordance with the students’ needs, adapting to the requirements of real life situations.

Facing this situation, we propose as hypothesis that continuous assessment tests, carried out in Human Anatomy (HA) subjects of three different Degrees taught at the University of Alicante, Nursing (N), Human Nutrition and Dietetics (HND) and Physical Activity and Sport Science (PASS), are highly accepted among the students and favour the improvement of academic performance.

We set ourselves the following objectives:

1 To know and compare the opinion of first year students of N, HND and PASS Degrees, between CA and FE evaluation methods in HA subjects.
2 To analyse and compare the students’ academic performance achieved with CA and FE evaluation methods.
3 To study the relationship between the students’ academic performance and the degree of acceptance of innovative teaching experiences.
4 To study the possible influence of the CA on the results achieved in the FE.
2 METHODOLOGY

In HA subjects of different Bachelor's Degrees in the fields of Health Sciences (N and HND) and Social and Legal Sciences (PASS), several CA activities were carried out throughout the year (objective tests of theory, objective tests of practice, oral presentations, solving of questionnaires and problem-based learning (PBL) cases). All of these were complemented with a written FE covering all the theoretical-practical contents. Each part (CA and FE) represented 50% of the overall mark ([7], [8]). The study sample consisted of 322 students enrolled in the 2017-2018 academic year of N, HND and PASS. All were core subjects of 6 ECTS credits and were taught in the first semester of the year. A survey was given to the students to gain an insight on their perception of both assessment methods. The survey was comprised of 19 questions divided into two fields, "practice" and "theory". Questions about the method they would choose to be evaluated and the time they spent in carrying out the CA activities were closed. The remaining 17 questions were divided into 3 dimensions: general continuous assessment (GCA), continuous self-assessment (CSA) and final exam (FE), and were scored according to the "Likert scale" with values ranging from 1 to 5 (1: strongly agree, 2: agree, 3: indifferent, 4: disagree and 5: strongly disagree). The GCA dimension (7 questions) dealt with general questions of the competencies-based assessment method. The CSA dimension (5 questions) dealt with specific aspects of the CA carried out in the HA subject. The FE dimension (5 questions) dealt with the assessment method based on a single written exam covering all the contents of the HA subject.

The survey was answered anonymously and individually right after the final exam. Detailed explanations were provided for its correct completion, and it was possible to identify the students' sex, age and Degree. The students' answers were copied in an optical mark recognition sheet for reading and subsequent statistical analysis of the results with specific software developed by the University of Alicante computer service staff. The statistical analysis was carried out with Microsoft Office 2011 EXCEL tool, as well as with the statistical program SPSS 23.

3 RESULTS

3.1 Analysis of the scale of measurement

A KMO value of 0.848 confirmed that our construct was well designed to carry out the analysis for which it was made. The Cronbach’s alpha coefficient (\(\alpha\)) value was 0.874. Values greater than 0.8 are sufficient to guarantee the reliability of the construct. Regarding the level of response to the survey, it was 97%, 81% and 95% in the Degrees of N, HND and PASS respectively. For data analysis, the five possible responses (1 to 5) of the Likert scale were included in one of the following four categories: agree (responses 1 and 2); indifferent (response 3); disagree (responses 4 and 5); and unanswered questions.

3.2 Continuous assessment versus final exam

The total of the students (100%) of N and PASS were inclined for the CA both, in practice and in theory. In the Degree of HND, this percentage dropped to 82.2% and 68.5% in theory and practice, respectively. 52% of respondents found that the CA implied a large increase in the workload, especially for the theory (70%) with respect to the practice (34%). 66% of students were satisfied with the CA and 18.3% were indifferent, reaching up to 21.2% in PASS students, who even showed a rejection of this method (11%).

Regarding the FE, 38% of students rejected this assessment method, particularly in the Degree of N, with a 43.6% compared to a 31.7% in HND. Only 33% of students manifested feeling satisfied with the FE, especially PASS students (37%). Very similar percentages were found between practice and theory: 34% agreed, 23% were indifferent, 37% disagreed and 6% did not answer some of the questions (Fig.1).

In the individualized analysis of GCA and CSA, 71% of the students showed satisfaction with the CGA and only 61% in the case of the CSA. The percentages of satisfaction with the GCA were very similar between Degrees, whereas with the CSA, the best score was given by PASS students (67%) and the worst one by ENF students (55.8%). Regarding rejection, we found values of 14% versus 8.5% for the GCA and CSA, respectively. The highest rejection score was found for ENF students (20.7%) and the lowest one for HND students (10%). A higher degree of satisfaction was found with the CA method in
practice than in theory in both, the GCA (73% versus 68%, respectively) and the CSA (64% versus 58%, respectively).

![Student's opinion about CA y FE](image)

**3.3 Academic performance**

81% of the students scored at least 5 out of 10 points with the CA method, while 74% did it with the FE. HDN stands out with the highest percentage of students scoring at least 5 out of 10 points with the CA (97%). Even more, 33% and 28% of HDN students achieved a score of 7 out of ten or more in the CA and the FE, respectively. The Degree of PASS showed the highest rate of not present/non-assessable students: 4.41% in the CA and 8.8% in the FE. Also, PASS students showed the lowest academic performance of the three Degrees analysed, with 68% passing in the CA and 62% in the FE. We did not find significant differences between groups, p>0.05.

**3.4 Systems of evaluation and academic performance**

Regarding the effectiveness of the CA to influence the results of the FE, a statistically significant effect was found in N (t = 3.234, p <0.025) between the average in the CA (2.9) and the FE (2.7), as well as in HND (t = 2.682, p <0.025) between the average in the CA (3.3) and in the FE (3.1). There were no significant differences in the Degree of PASS.

**4 CONCLUSIONS**

From our study it is concluded that:

1. The students of HA subjects of N, HND and PASS Degrees show a clear preference for a continuous assessment method, despite a higher workload compared to a final exam-based assessment method. The degree of satisfaction is higher in practice than in theory. The level of satisfaction is greater with the GCA than with the CSA of HA subjects.
2. N students are the ones that manifest the highest degree of satisfaction with the GCA, and the highest level of discontent and less satisfaction with the CSA and the FE.
3. PASS students stand out for their high indifference regarding the GCA and FE evaluation methods, while presenting the highest level of acceptance and satisfaction with the CSA and FE.
4. HND students showed the highest rates of unanswered questions in the survey, the lowest satisfaction values with the CA method and the lowest degree of rejection to a FE exam.
CA methodology renders better academic performance than a FE, particularly for HND students, who present the highest results. CA methodology has a significant positive effect on the academic performance in the FE in the Degrees of N and HND.

REFERENCES