How do students perceive their Learning Assessment?

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Abstract - **The present work was developed considering the learning assessment vector and linking it to students' general satisfaction with the engineering course. The key findings show a positive association between students' general satisfaction and the learning assessment, specifically with the assessment methodologies effectiveness regarding the different subjects taught. Globally, students considered the assessment methodologies effective and appropriate to the different subjects taught however, they do not feel encouraged to be part of the process of monitoring his/her performance, and to the time allocated to the assessment tests as it was not considered appropriate to the volume of subjects taught.**

Keywords - General Satisfaction, Learning Assessment, Students' Perceptions.

INTRODUCTION

Stassen *et al*. define assessment as "the systematic collection and analysis of information to improve student learning." (Stassen *et al*., 2011). In fact, the final goal of all the new (and old) teaching/learning methods and tools is to promote the acquisition of knowledge. One way to perceive if the process is well established is the assessment and the information provided is relevant not only to students but also to teachers. Furthermore, is important the way the assessment rules are defined and presented to students.

In this study, the goal was to understand how students perceive the rules established to classify their learning. In particular, to realize if: *i*) students actively participate in the definition of the assessment rules; *ii*) students are encouraged to actively monitor their learning; *iii*) the assessment rules were timely defined and effective; *iv*) the participation of students in learning activities was prized. The analysis was conducted and focused in chemical and biological engineering courses from three Portuguese higher education institutions (HEI).

METHODOLOGY

A questionnaire was used to collect data allowing the identification of the determinant factors of students' satisfaction in courses from the considered HEI (Leão *et al*., 2015; Leão *et al*., 2018a; Leão *et al*., 2018b).

The questionnaire, after the student characterization, includes a set of fifty-nine items, divided in eight groups (based on a 5-point agreement Likert scale: 1 (Strongly Disagree) and 5 (Strongly Agree)), ending with an open question allowing student's suggestions and opinions (optional). The statistical analysis of data will allow to infer students' perception regarding several topics: Student Interest (SI); Teacher Involvement Perception (TIP); Student-Teacher Interaction (STI); Assessment of Student Learning (ASL); Course Organization and Functioning (COF); Infrastructures (IS); Academic Involvement and Management (AIM) and General Satisfaction (GS).

In order to reach the objective of this work, the topic regarding the Assessment of Student Learning (ASL) will be analyzed and correlated to students' general satisfaction. Six items were evaluated by the students in the questionnaire and contribute to the topic ASL: *i*) the assessment rules were followed (ASL1); *ii*) the assessment methodologies are effective and appropriate to the different subjects taught (ASL2); *iii*) the participation of students in learning activities was prized (ASL3); *iv*) the time allocated to the assessment tests is adequate to the volume of subjects taught (ASL4); *v*) the student has an active voice in the assessment methodology suggested by the teacher (ASL5); *vi*) the student is encouraged to be actively involved in the process of monitoring his/her performance (ASL6). All these items were evaluated using the 5-point agreement Likert scale.

FINDINGS

A total of 359 questionnaires was received and considered valid for study, at the end of June 2017, representing 51.5% of the students' population in the three PHEI. The mean age

of students is 21.8 years (SD = 3.6, range 18-47 years), and the majority (71.7%) are female. Regarding classes' regime, two HEI have both daytime and after work classes. However, all HEI have students with working status.

Generally, students considered that the assessment rules were followed (ASL1, mean=4.1, SD =0.75). However, they do not consider to have been encouraged to be actively involved in the process of monitoring his/her performance (ASL6, mean=2.8, SD =1.11). Figure 1 illustrates the distribution of how students perceived their learning assessment based on the six items considered, presented in descending order of the estimated statistics.

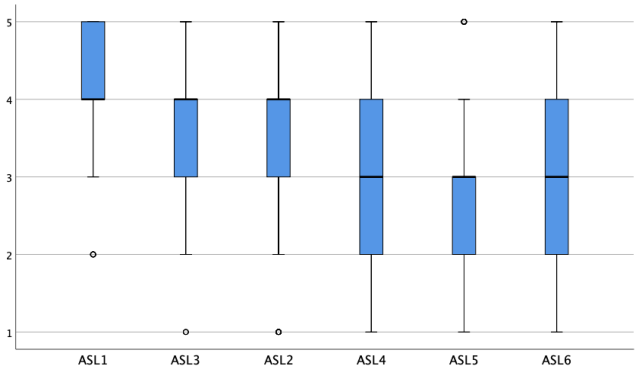

Figure 1. Distribution of Students' Evaluation of their Learning Assessment

Spearman's correlations were performed to determine the strength of the associations between students' general satisfaction with the course and level of agreement in each of the six referred items. The results are presented in Table 1.

Table 1. Values of the Spearman Correlations, r_S

	ASL1	ASL2	ASL3	ASL4	ASL5	ASL6
ASL2	0.43*	1.00				
ASL3	0.41*	0.44*	1.00			
ASL4	0.29*	0.37*	0.31*	1.00		
ASL5	0.27*	0.44*	0.38*	0.44*	1.00	
ASL6	0.21*	0.36*	0.34*	0.29*	0.50*	1.00
GS	0.34*	0.42*	0.37*	0.20*	0.35*	0.20*

* Correlation is significant at the 0.01 level (1-tailed)

All the correlations show a statistically significant correlation ($p<0.01$, for all r_S values). The higher value obtained ($r_S=0.42$) corresponds to the positive association between the assessment methodologies effectiveness regarding the different subjects taught (ASL2) and the general satisfaction (GS). The lowest value of association ($r_S=0.20$) was obtained between the time allocated to the assessment tests adequateness to the volume of subjects taught (ASL4) and the general satisfaction (GS) and also, between the student encouragement in order to be actively involved in the process of monitoring his/her performance (ASL6) and the general satisfaction (GS).

CONCLUSIONS

The present study analyses the relationship between students' perception of learning assessment and their general satisfaction level in chemical and biological engineering courses from three Portuguese HEI. A global trend perspective was used in the assessment of students' satisfaction. The findings confirm that the use of assessment can be seen not only as an opportunity to improve students' learning (Kulasegaram & Rangachari, 2018) but also as a remark to teachers in order to involve students more deeply in the assessment process (Andrews *et al*., 2018).

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