The Importance of Pedagogical Student Support in Online Higher Education

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Abstract

The present study intends to analyze the answers given by a group of students regarding the evaluation of this curricular unit which aimed to lead students to reflect on their learning process. The results, both at the general scale and at the level of the subscales, point to a high internal consistency. It was found for the most part, higher scores. There are statistically significant differences in some scales taking into account demographic variables. The values of the means obtained for each variable showed a clear agreement and a moderate / high consensus. This leads us to say that this curricular unit had a positive impact, both in the way these students worked on it and in the way, they will approach the other Curricular Units that are part of the course.

Keywords: Online learning, Higher Education, Pedagogical support;

1. Introduction

The concept of Online Learning has had evolutions over time. This is due to changes in society and to the technological world. Advances in the technological resources of information and communication had repercussions on the human interaction. Online learning has evolved rapidly in the education field and, although there were some skeptics, online learning has reached Higher Education. The urgent need for changes in learning and competences in order to provide a timely and effective response to the needs of society [1], enabled this type of learning system to become a potential ally. This is due to this system flexibility, temporal and physical convenience, and access to content. These contexts allow to extend the learning beyond the space and the time of the class in relation to the face to face contexts. So [2] (…) *the e-learning will inevitably transform all forms of education and learning in the twenty-first century* (p.52)

This "new" way of teaching and learning brought along changes on a pedagogical level, and on the interaction with all of the elements that make part of this core. That is, the need to rethink the whole environment in which learning takes place came up. With this came new fields of study, both theoretical and conceptual, to understand and adapt practices to the world of online teaching/learning [3]. This resulted in a change in the conception of learning processes. The traditional concept of learning process focus mainly on the professor. He is the knowledge holder and transmits it to the students, who are viewed as passive recipients who simply reproduce the teacher's speech. We can thus say that learning by transmission gave way to an interactive learning. In this the student starts to have an active role in the construction of knowledge [4].

All this flexibility allows us to adapt courses and contents to the individual characteristics of students, optimizing learning. Collaborative work among students gains a new dimension. It allows us to have students in various parts of the world to produce knowledge together.

This socio-cultural dimension is also important. It facilitates the knowledge of different realities, different characteristics, different ways of thinking and acting. They are relevant elements for sharing ideas.

It must be remembered that these changes extend to various parties. Among them we highlight, institutional policy, the teacher's role, the student's role, the environment, the pedagogy, the curriculum design, the resources and the interaction. In addition to these elements, the learning process is also taken into account. The different theories of learning, point to some common ideas [5]. According to his reading, all learning theories have the idea that knowledge is an objective that can be achieved through reasoning or experience. That learning theories focus on the learning process itself, not on the value of what is being learned. In this context Siemens proposes a new theory of learning – *connectivism* [5]. This theory, in general, advocates that learning is a process that occurs in diffuse environments of change of central elements - that are not completely under the control of the individual. For this theory, it is vital to distinguish relevant information from information that is not.

Another question that arises is the abandonment of the students in the online system. Frustration, dissatisfaction, lack of confidence, and motivation are factors that have implications for the persistence

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of students continuing their education. Some of the reasons for students' dropouts in online education are the feeling of isolation, frustration, and lack of contact. Reasons for motivation and support were also found. For the support to be adequate it is necessary to know where the students stand and what they need [6]. Different needs imply different types of support [7].

The variables that contribute to promote the factors mentioned above can be found in the students and in the institution / system that receives them. The feedback that is given to students has a double meaning: on one hand, it allows the student to adjust his strategies of study and learning; on the other hand, realize that there is someone on the other side who is with him [8].

In a learning process, self-regulation is crucial. This is, the student's ability to outline the objectives and the strategy to achieve them, to monitor the process and the strategies; finally, the reflection that is made, the self-evaluation.

There is a way of overcoming this state of affairs – through supporting distance students for success ([1], p.11). This support can be understood at different levels. *I will define student support in the broadest terms, as hall activity beyond the production and delivery of course materials that assist in the progress of students to success in their studies*, ([1], p.13).

the pedagogical support to the students relates to the support in the learning of more adequate competences to the study [9].

Online learning requires students to acquire new competences and different study techniques.

2. Method

2.1. Research objectives
Our research's aim was,
a) to identify how one group of online learning students, in general, how do they evaluate the relevance of curricular unit X for their study.
b) to explore the behavior of the evaluation in function of some demographic variables.

2.2. Participants
Our sample included 48 undergraduate level adult's students in online context. Students was recruited from the *X* subject for Education course. The sample included 20.8% men, as well as 79,2 % women. The mean age for participants in the study was 37.49 years with a standard deviation of 6.607 years. The all participants were from an online university and they are at 1st year.

2.3. Procedures and Instrument
The unit course evaluation questionnaire was administered to the participants via "Google Docs", in the end of course unit. The link to the questionnaire was in the course unit. Students were informed of the nature of the questionnaire and completing it was optional. O instrument was designed by us. The questionnaire is divided into 5 areas (sub-scales). They are the acquired competence, the transfer of knowledge to other curricular units, the contents, the teacher and, finally, the usability. We used a Likert scale with 4 points (1 - 4)

3. Results

3.1. Internal Consistency
Taking into account our objective, we present only the behavior of 2 subscales and the values of Total Global (TG). We begin by presenting internal consistency values in these domains - table.

Table 1. Internal Consistency

Internal Consistency – values of $\propto$		
Total competencies acquired (subscale)	Total transfer of knowledge (subscale)	Total Global
$\propto = .0913$	$\propto. = .889$	$\propto = .980$

3.2. Behavior subscales and total global
We will then present the results of statistical tests to study the behavior of the values of the two sub-scales and Total Global.
In Table 2 we find the values obtained in the items listed according to the different totals.

Table 2. Factor statistics

	N	Mini	Max	Average	SD
Total competencies	48	15	20	18.75	1.896
Total transfers	48	9	12	11.17	1.226
Total Global	48	62	92	83.69	8.932

Continuing to explore the behavior of the total of these subscales according to the variables gender and age. The data in Table 3 are relative to the gender variable.

Table 3. Statistical behavior of the variable Gender

	Gender	N	Average	SD
Total competencies	F	38	83,08	9,283
	M	10	86,50	7,215
Total transfers	F	38	18,58	1,995
	M	10	19,40	1,350
Total Global	F	38	11,11	1,290
	M	10	11,40	,966

To verify the meaning of these differences we formulated the following hypothesis
H0 = *There are no significant differences between women and men in the different scales*.
As we can see the averages vary according to sex. However, by applying the *T test* was found that these differences are not statistically significant, which leads to accept H0.
Let us move to the variable age. To study this variable divided the subjects into two groups - Younger & Older, based on the median [10].

Tabel 4. Statistical behavior of the variable age

		Total Global	Total competence	Total transfers
Younger	Average	85,83	19,29	11,46
	SD	1,550	,304	,208
Older	Average	81,39	18,13	10,83
	SD	2,063	,446	,286

For age we formulated the following hypothesis:
H0 = *There are no significant differences between the Younger group and the Older group at different scales.*
After applying the *T test*, in the Total Transfer and Total Global scales, no statistically significant differences were found regarding variable Age (accept H0). In the Total Competences scale there is a statistically significant difference [T (48) = 2.17; gl = 45, p = .035], the group of the younger ones being said to have acquired more competences.
On the other hand, is the transfer of knowledge associated with the acquisition of competences? The values of *Pearson's correlation coefficient* show that there is a positive relation between the overall result of the questionnaire and the acquisition of competences (r = .918, p = .001), as well as to knowledge transference (r = .868, p = .001). We found a positive association between the acquisition of competences and the transfer and transmission of knowledge (r = .906, p = .001).
To verify the agreement and disagreement of the values obtained for each of the parties and the general scale, the result of the sum was divided by the number of items in each scale so that we can find the average values between 1 and 4. The first level is the lowest level of agreement and the highest level 4 – Table 5.

Table 5. Level, Average and meaning of evaluation

Level	Average evaluation	Evaluation's meaning
1	1.0 to 2.2	Clear Disagreement
2	2.3 to 2.8	Evaluative Undefined
3	2.9 to 4.0	Clear Agreement

The standard deviation (SD) is also used to identify the consensus of the mean values obtained for each part. The standard deviation is an indicator of low, moderate, or high consensus – Table 6.

Table 6. Level of standard deviation and its level of consensus

Standard Deviation	Level of consensus
0.0 to 0.29	High
0.3 to 0.59	Moderate / High
0.60 to 0.89	Moderate /Low
≥ 0.90	Low

The values of the means and standard deviations of the questions that compose the variables under study are shown in table *7*

Table 7. Average and SD: General

Variable	Average	SD
Total Global	3.64	0.39
T. Competence	3.75	0.38
T. transfers	3.72	0.41

The average value per question, of the 3 scales expresses clear concordance of results and a moderate/high consensus.

4. Conclusion

The literature points to the advantages of having pedagogical support in online learning [11] [12].
The *unit course* X aimed to answer this need and the students' evaluation points to an overall satisfaction with the course. Students also find this course useful to acquire competences that can be transferred and reused in other courses. The clear agreement and the high consensus obtained reinforce the idea of the importance of the support in this context of learning.

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