Student Autonomy and Metacognition in Online Learning

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Abstract

Online learning contexts promote pedagogical changes to foster students' success and prevent dropout. Teacher and student roles are expected to be redefined to fit the characteristics inherent in the status of teacher and students. Teaching should promote student autonomy, which, according to Holec's (1981) [1] definition, implies the ability to take responsibility for learning. This focus on the student requires the development of competences at the level of self-regulation of learning and metacognitive strategies. That is, setting goals for learning objectives, identifying and developing appropriate strategies, reflecting on their learning, assessing their own progress. It was with this framework that we developed our work. We used a sample of 62 1st cycle students of both sexes who attend online course. It served as a basis for our work by Cubukcu (2009) [2]. The results point to the differentiation of teacher and student roles. However, the most indicated strategies are those that are less related to a reflection on learning. As a conclusion, we point to need a student to approach their strategies for greater autonomy.

Keywords: *Online learning, metacognition, autonomy, e-students.*

1. Introduction

In the digital age, educational institutions seek to develop in their students the skills necessary to work in this society. The development of technology increases both the teacher and the student the opportunity to access, create, organize, and add knowledge [3]. Young people, in today's society, grow with technologies and reach formal learning institutions with digital skills to continue their education. This possibility of accessing information in informal and/or formal environments to develop knowledge in their personal sphere, and as well for the labor market. To do this, it is necessary that students know to self-manage their learning. This competence has gained increasing importance as the need and opportunity for individuals to learn alone outside the formal classroom environment has grown [4]. At the level of the formal environments we should give attention to the design of the training so that it is more appropriate, not only for the learning of the contents, but also for the characteristics of the student (Figure 1).

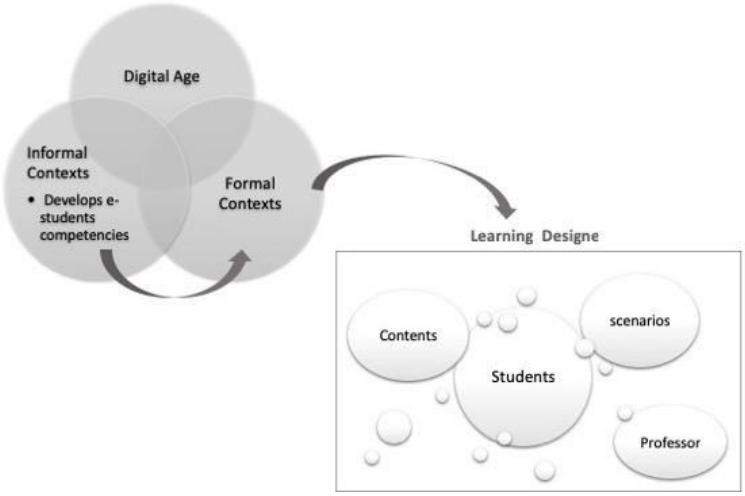

Figure 1. Digital Age and Knowledge (source: the author)

Learning design is had as *a plan for potential activities with learners, which is to be distinguished from a particular implementation of this plan with a particular group of learns* (pag.39) [3]. One of the competencies to take into account in the learning process is the autonomy of the student. Therefore, it is expected that the autonomous student has the capacity to take charge of all phases of his/her

learning. To this we associate the ability of the student to define the objectives of their learning [5]. It is also expected that the student will be able to identify and develop the strategies that best fit his/her objectives, as well as the relevant resources. In this process we cannot forget two other aspects - The ability to reflect and the ability to assess the progress and the learning outcome [6]. However, we must not forget the importance of the teacher and of the course's design. That is, the competence of the student to take responsibility for their own learning, should not forget the quality of the study plan, the quality of the support and the materials provided by the teacher, as elements that are crucial for the development of autonomy.

In the literature [7] we find two important arguments for the development of autonomous students. On one hand, their reflective involvement with their learning may imply greater effectiveness. On the other hand, if they are proactive in learning, the problem of motivation is diminished. That is, when a student accepts responsibility for his/her own formation, it is believed that their motivation is intrinsic. Linked to this autonomy we find the competence of *learn to learn* [8] [9]. Metacognition implies the ability to identify the best way to learn (know the strengths and weaknesses), the ability to reflect, adapt to situations and contexts in order to take advantage of learning opportunities, and thus help students to be successful. Metacognition is understood here as a regulatory system that helps one to understand and control one's own cognitive performance. In this sense, when we speak of metacognitive competences we are referring to the capacity to establish goals and planning; monitoring and learning control, and evaluation of the process (evaluate results and strategies used) [10]. Another concept that comes together with this academic autonomy is the self-regulation of learning. Self-regulated learners set learning goals according to task and use appropriate strategies and resources to achieve those goals [11]. Students then monitor their progress and are able to adjust their learning strategies. They are self motivated and can learn from distractions.

2. Methods

2.1. Research objectives

Our research's aim was to know

a) How students evaluated in 2 areas the teacher's contribution to their learning and

b) The role of the student and the strategies they use in their learning process

2.2. Participants

Our sample included 62 undergraduate level adult's students in online context. These students were recruited from the Education course. The sample included 20.8% men, and 79.2 % women. The mean age for participants in the study was 37.49 years with a standard deviation of 6.607 years. All participants were from an online university and they are at their 1st year.

2.3. Procedures and Instrument

The questionnaire was administered to the participants via "Google Docs", in the end of 1st semester. The link to the questionnaire was in one course unit. Students were informed of the nature of the questionnaire and completing it was optional. The instrument used was based on the Cubukcu [2] questionnaire. It consisted of three questions of Yes/No answer. In the last question was given 12 study strategies to select one that was most in agreement to their method of learning.

3. Findings

3.1. The teacher's contribution to their learning

The analysis of this aspect was made from 2 questions:

a) The teacher should help students to be autonomous in their learning;

b) The teacher should help students to become responsible for their learning.

The obtained answers are shown in Table 1.

Table 1. Teacher's contribution

	The teacher should help students to be autonomous in their learning		The teacher should help students to become responsible for their learning	
	N	%	N	%
No	4	6.5	8	12.9
Yes	58	93.5	54	87.9

As can be seen from the results obtained, there is consensus regarding these two positions of the teacher in the student learning process. However, there is a greater consensus on the role of teachers in fostering student autonomy. These results are in the same sense as those obtained in the Cubukcu study [2]. Here again, the answers point to the importance of the teacher in reinforcing student autonomy and responsibility in his/her learning process.

3.2. The role of the student and the strategies they use in their learning process

We now present the results of the student's role (Table 2).

Table 2. Student's role

	Students should build knowledge for themselves	
	N	%
No	13	21
Yes	49	79

Most students select the option that points to an active role in the knowledge building process. This result is also in line with previous responses, as well as in the Cubukcu study [2].
Finally, we sought to understand whether students were aware of the metacognitive strategies they use in their study (Table 3).

Table 3. Metacognitive strategies

		N	%
Strategies	Highligting	9	14,5
	Underlining	9	14,5
	Circling	4	6,5
	Imaging	4	6,5
	Rereading	12	19,4
	Semantic mapping	4	6,5
	Paraphrasing	5	8,1
	Making adaptations or changes if necessary	3	4,8
	Defining goals	7	11,3
	Summaries	2	3,2
	Writing the contents several times to better learn them	1	1,6
	Monitoring progress	2	3,2

The results obtained point to a recognition of their strategies in a learning situation. However, in the three most indicated strategies there is nothing that points to a planning and monitoring of learning.

The planning strategy comes in 4th place. We can therefore say that students are aware of strategies, but making plans and monitoring seems not to be so popular amongst them.

4. Conclusion

In today's society, education systems strengthen autonomy, independence and lifelong learning in order to develop the capacity to meet the challenges of a global society [12]. That is, one of the objectives of education is to promote students' autonomy. This is an important factor as this means implication and motivation in their learning process. With this, we cannot neglect other factors, such as the environment or the role of the teacher that can contribute to this process. In order to meet this need for lifelong learning, online education contributes greatly. Several studies point to the role of student autonomy in these teaching environments, being that (…) *academic leaders were asked to identify the major barriers to online learning, and the most common concern was the need for discipline on the part of online students* (pag.11) [13]. Student autonomy is an important contribution to success in e-learning environments in which students are responsible for their own learning [14]. Factors such as knowing how to learn, the motivation to participate fully in the process, seem to play a relevant role when we speak of virtual teaching environments. In our research, the importance of student autonomy is seen in the responses given either to the role of the teacher or in the role of the student. However, in order to guarantee their autonomy, in online environments, students must develop the use of the most appropriate metacognitive strategies.

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