CHAPTER 78

Assessment of knowledge in online mediation in distance higher education

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ABSTRACT
Distance higher education in Brazil has been challenged to integrate this new educational process with a body of education professionals, including the face-to-face tutor and the distance tutor. This work discusses the distance tutor, the objective is to evaluate the knowledge of the online mediation of the distance tutor in higher education. The relevance of this study is related to the need to evaluate the tutor's work during and after their performance and what needs to be improved. The distance tutor with the use of tools and artifacts performs the online mediation of the student's learning through the virtual learning environment. It is asked, therefore, what knowledge does the distance tutor need to appropriate to carry out this educational work in distance higher education? In the cross-sectional and descriptive research, the data had a quantitative approach. Developed from the theoretical framework in relation to attitudinal, conceptual, and procedural knowledge (COLL,1998). It was observed that the research in the final model provided by the multiple regression and comparing the standardized coefficients β, presented in the conceptual dimension greater weight in the composition of the grade of the evaluation scale (β = 0.529), it was understood that the conceptual knowledge is well represented in the assessment of students towards tutors. As for the attitudinal knowledge, it reached a level of (β = 0.319), signaling a median line between the knowledge, which is conceived that the degree of motivation is above average relative to the results of conceptual knowledge. Procedural knowledge was below average than conceptual knowledge, at a level of (β=0.233). The results showed that this level reveals that although the tutor receives everything ready, the methodologies and didactic strategies must be more intensified, as they need to mediate with regard to adequate language, more intensified online social presence in the virtual learning environment, with activities of targeted learning and diagnostic, formative and continuous assessment activities that regulate student learning.

Keywords: Evaluation. knowledge. Online mediation.

1 INTRODUCTION

The technological revolution has caused changes in the way of learning and teaching, with the emergence of distance education courses in the various educational institutions of our country in higher education. This new way of learning and teaching was regulated in the distance education modality (DE) through the Education Guidelines and Bases Law - Law 9,394, of December 20, 1996, which advocates in its article 80, the use of this modality at all levels and modalities of education.

The cited article was regulated by Decrees 2494 of February 10, 1998 and Decree 2561 of April 27, 1998, both revoked by Decree 5622 of December 20, 2005, and this was revoked by Decree 9057 of May 25, 9057 in force that governs the quality assurance policy with the Ministry of Education, which recognizes (DE) as an educational modality, with legal apparatus in relation to management, planning, implementation,

accreditation, disaccreditation, operation, supervision, monitoring and offer and evaluation of courses the distance in the national territory in all levels and modalities of education that follows the citation of its article 11 § 2 “The accreditation of a higher education institution is allowed exclusively for the offer of undergraduate and postgraduate courses sensu in the distance modality” and takes the opportunity to mention Ordinance 275 of December 18, 2018, which provides for stricto sensu graduate programs in the modalid ade the distance.

Distance higher education is supported by the Quality References for Distance Higher Education (RQESAD), regulated by the Distance Education Department in August 2007, which below transcribes the topics of the quality references for distance higher education:

(i) Conception of education and curriculum in the teaching and learning process;

(ii) Communication Systems;

(iii) Teaching material;

(iv) Evaluation;

(v) Multidisciplinary team;

(vi) Support infrastructure;

(vii) Academic-Administrative Management;

(viii) Financial sustainability.

Item (V) Multidisciplinary Team that regulates the presence of education professionals working in this modality is highlighted with the following content:

> In distance education, there is a diversity of models, which results in different possibilities for the composition of the human resources necessary for the structuring of courses in this modality. However, whatever the option established, human resources must set up a multidisciplinary team with the functions of planning, implementing and managing distance courses, where three professional categories, which must be in constant qualification, are essential for a quality offer. : teachers; tutors; technical-administrative staff. (RQESAD, 2007).

Distance higher education in Brazil has been challenged to integrate this new educational process with a body of education professionals, including the face-to-face tutor and the distance tutor. In this work, the distance tutor is discussed, the objective is to evaluate the knowledge of the distance tutor's *online mediation.* The relevance of this study is related to the need to evaluate the tutor's work at a distance, during and after their performance in what needs to be improved. This assessment allows institutions to combine efforts to monitor the performance and implementation of continuing education so that the distance tutor can act effectively.

The distance tutor using digital tools and artifacts performs the *online mediation* of student learning through the virtual learning environment. It is asked, therefore, what knowledge does the distance tutor need to appropriate to carry out this educational work in distance higher education?

2 CONCEPTION OF KNOWLEDGE IN ONLINE MEDIATION

It is observed that to carry out this educational work, the tutor needs knowledge and it is verified that there is a need for the distance tutor to position himself through the pillars of knowing how to be, knowing how to know and knowing how to do. Finally, adopt the posture of being in the learning process. Belloni (2001, p.85), confirms that "To face this new situation, the teacher will have a very strong need for constant updating, both in their specific discipline and in relation to teaching methodologies and new technologies". Several authors carry out this discussion of knowledge in which Farias et al (2008, p.73) are cited and contextualize that the

> Synthesis of existing categorizations of teaching knowledge: professional training knowledge, disciplinary knowledge, curriculum knowledge, experience knowledge; knowledge of Educational Sciences, knowledge of the pedagogical tradition, experiential knowledge, knowledge of pedagogical action, attitudinal knowledge, critical-contextual knowledge, specific knowledge, curricular didactic knowledge, knowledge of knowledge.

It is conceived that for this study it is considered that the performance of the distance tutor is constituted in the knowledge of the attitudinal, conceptual and procedural dimension based on the studies of Coll *et al* (1998).

Mediating learning in the virtual learning environment in the attitudinal dimension is a motivational action in which the distance tutor seeks to awaken in the student the desire to learn, to study, to attend the discipline, to continue in the course. This motivation contributes to the virtual solitude being disarticulated and the student can feel the sign of belonging and come to interact with the tutor at a distance, with the course colleagues with the tool, with the didactic material in the construction of the knowledge of the subject he is studying. .

Coll et al (1998, p. 122) assures that attitudinal knowledge is "an enduring organization of motivational, emotional, perceptual and cognitive processes in relation to some aspect of the individual's world". In this it can be observed that the attitudinal knowledge is integrated in a humanizing, educational and emancipating process that encompasses the motivation, emotion, perception and cognition of the student and the distance tutor. It becomes a two-way relationship in which the tutor learns and teaches.

But to work in distance education, conceptual knowledge is also highlighted in Coll *et al.* (1998, p.132) admits that "The more intertwined is the network of concepts that a person has about a given area, the greater will be his/her ability to establish meaningful relationships and, therefore, to understand the specific facts of that area". Conceptual knowledge is constituted by the pedagogical foundations that involve the domain of pedagogical, didactic and technological concepts mediated via *online that* become essential for the monitoring, regulation and evaluation of the student's learning.

In the online mediation of the distance tutor, the procedural knowledge that Coll et al (1998, p.77), evokes that "the set of actions or decisions that make up the elaboration or participation is what we call procedure" is still present. Procedures are represented by "habits, techniques, skills, methods and routines".

The procedural knowledge integrates the didactic knowledge, the curricular knowledge, the knowledge of the experience, the know-how that involves the methodologies and the strategies that guide the pedagogical practice via online.

Procedural knowledge consists of discovering how the student learns, as each one has their own learning style and, in this way, acquire strategies that reach the students in a collaborative way; procedural knowledge is concerned with planning which contents promote the construction of knowledge, sensitizes itself in the use of adequate tools and artifacts to carry out effective mediation so that the student in the virtual learning environment can learn and apprehend the contents for their academic formation and human formation.

3 METHODOLOGY

The study refers to an excerpt from the master's thesis, whose research was carried out at the Federal University of Ceará (UFC) in the academic unit, the Instituto Universidade Virtual, in undergraduate courses in the distance education modality, with data collected through a tutorial evaluation instrument in which students in the virtual learning environment through the SOLAR System, evaluated the knowledge of the distance tutor's performance.

Gonçalves (2003, p.14) comments that "research in terms of objectives is classified as exploratory, descriptive and explanatory research". The research had a transversal and descriptive nature and the data had a quantitative approach, in which Silva and Silveira (2007, p.148-151), evoke that "the quantitative research aims to measure numerically or statistically the phenomena".

The object population of the study consisted of students enrolled in the 2011.1 academic semester in undergraduate courses in the distance education modality at the Virtual University Institute of the Federal University of Ceará. The sample was constituted by the random selection of 07 (seven) courses among those offered by Instituto Universidade Virtual in the academic semester 2011.1; and involved 1957 students, 175 tutors, 26 disciplines, 7 undergraduate courses, in 27 centers located in the State of Ceará.

Data collection was carried out through a tutorial assessment instrument that consisted of a questionnaire with 16 closed-answer questions (multiple choices and items on a *likert scale* with items agree, disagree, partially agree) developed from the theoretical framework of the study in relation to attitudinal, conceptual and procedural knowledge (COLL et al,1998).

4 RESULTS

The data obtained from the research were submitted to a multivariate analysis that, through the measurement of the *likert scale, one* can evaluate the tutor's knowledge at a distance. hair *et al* (2005, p.32) mention that "the objective of multiple regression is to predict changes in the dependent variable in response to changes in the independent variables". In this study, the tutor is constituted as a dependent variable and

knowledge as independent variables in which the result of the knowledge scores attributed by the students evaluated the degree of changes in which the distance tutor needs to make to act effectively.

4.1 ANALYSIS OF RESULTS

Table 1 - Models obtained in the multiple linear regression

		Non-standardized coefficients		standardized coefficients		
Model		B	standard error	Beta	t	Sig .
1	(constant)	,758	,049		15,419	,000
	noteD2 - Note in dimension 2 - CONCEPTUAL - Scale [0 ; 10]	.899	,006	.958	147.228	,000
two	(constant)	.808	,032		25,347	,000
	noteD2 - Note in dimension 2 - CONCEPTUAL - Scale [0 ; 10]	.632	,006	.673	97.471	,000
	gradeD1 - Grade in dimension 1 - ATTITUDINAL - Scale [0 ; 10]	,284	,005	,359	51,997	,000
3	(constant)	,072	,022		3,242	,001
	noteD2 - Note in dimension 2 - CONCEPTUAL - Scale [0 ; 10]	,497	,004	,529	113,369	,000
	gradeD1 - Grade in dimension 1 - ATTITUDINAL - Scale [0 ; 10]	,253	,003	,319	78,123	,000
	noteD3 - Note in dimension 3 - PROCEDURAL - Scale [0 ; 10]	,242	,004	,233	61,443	,000

Dependent variable: note_ATD – Tutor assessment score - Scale [0 ; 10]
SPSS 15.0 font

Observing Table 1, in the final model 3 provided by the regression and comparing the standardized coefficients β , it is verified that the conceptual dimension had greater weight in the composition of the evaluation scale grade (β =0.529), it is understood conceptual knowledge is well represented in the students' assessment of the tutors. As for the attitudinal knowledge, it reached a level of (β = 0.319), reaching a median line between the knowledges, which is conceived that the degree of motivation is above average in relation to the results of conceptual knowledge.

Procedural knowledge was below the average that conceptual knowledge presented, at a level of (β =0.233). This level reveals that didactic methodologies and strategies should be further intensified, because

although the distance tutor receives the ready-made didactic material and the virtual learning environment, he still needs to mediate with adequate language, targeted learning activities, a more intensified online social presence. in the virtual learning environment, either in the forums in the discussions of the themes studied, and in assessment activities that are diagnostic, formative and continuous and that regulate learning, so that mistakes, doubts, are worked on and reversed in new learning.

4.2 GENERAL CONSIDERATIONS

The study showed that the distance tutor needs to appropriate conceptual, attitudinal and procedural knowledge to carry out online mediation in blended education, thus answering the question.

The study showed that conceptual, attitudinal and procedural knowledge can be used as criteria for the evaluation of the distance tutor, since evaluating the distance tutor is a complex activity and the theme requires continuity in new research to accompany the development, the performance of the distance tutor through the knowledge built in their online pedagogical practice.

The theme instigated the deepening of a new look at contemporary education with regard to empowerment in educational relationships, aiming in this way that the means and ends are directly linked to the construct of this phenomenon that is Distance Education that appears in education as a transformation movement in the learning and teaching process and in the distance tutor training itself, both in academic and continuing education and in their pedagogical practice.

The knowledge investigated was presented in a different way in the research, and it is important to pay attention to the procedural knowledge that involves the distance tutor's know-how and that denotes the need for continuing education so that they can deepen their pedagogical practice in the virtual learning environment with strategies and effective methodologies.

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