INTERACTION EQUIVALENCY THEOREM AND DESIGN OF ONLINE COURSES – A PRELIMINARY RESEARCH PROPOSAL APPROACH

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Introduction

There are various conceptual frameworks concerning the concept of interaction. It is upon the interaction as an instructional exchange between four elements (student-content, student-teacher, student-student and student-interface) that this study focuses, more specifically in Anderson's "Interaction Equivalency Theorem" (2003), an extension of Moore's model, where other forms of interaction are identified and postulate, at its core, two hypothesis. 1): Deep and meaningful formal learning is supported as long as one of the three forms of interaction (student-teacher; student-student; student-content) is at a high level. The other two may be offered at minimal levels, or even eliminated, without degrading the educational experience; 2): High levels of more than one of these three modes will likely provide a more satisfying educational experience, although these experiences may not be as cost or time effective as less interactive learning sequences.

According to Miyazoe and Anderson (2010), the three published studies on the hypotheses of equivalency support the first thesis, whilst the second thesis is only partially supported. Given the importance of the EQuiv Theorem and its theses for the design of online systems and courses, as well as for pedagogical practice, we consider it relevant to analyse and test the two theses in greater detail.

Research Proposal Context and Methodology

This investigation takes place in a higher education virtual learning environment in a 2nd year course of a distance education undergraduate degree at the Universidade Aberta. The faculty members of this course consist of a leading teacher and three tutors. Each one will follow a different class, although the leading teacher will supervise the work of each tutor. In this study each class will have a different interaction setting so that we are able to test the two theses proposed by Anderson (2003).

The use of a mixed methodology of data collection and analysis is most adequate for this investigation. In terms of the methodological strategy, we will move towards transformative mixed methods procedures (Creswell, 2003). In this type of approach, we begin from a theory, in order to structure all the collection of data, with both qualitative and quantitative characteristics. Until this moment a questionnaire was applied to support the decision upon the learning scenarios settings.

Preliminary Results and Perspectives

In one class we will have the subject structure intensely centred in student-teacher interaction with the other types of interaction at a low level; in the second class we will have a structure that is geared towards a strong student-content interaction with the others at low levels; finally, the last class will be design based on the responses of a questionnaire given to 96 students of the subject that will be intervened, but of the previous academic year to that of the intervention.

The results of the first questionnaire point to a greater importance, attributed by students, of the interaction with content and with the teacher and less relevance of the interaction with classmates. This data coincides with that obtained in previous studies on the Interaction Equivalency Theorem (Rhode, 2008; Miyazoe, 200; Bernard et al, 2009) that focus on the importance given by students in the interaction with content and with teachers in online education context. Therefore the last class will have a structure intensely centred in student-content and student-teacher interaction.

With the results that will be found and conclusions to be drawn, this study intends to systematize relevant information based on the Interaction Equivalency Theorem, allowing the support of decisions related to the design of online courses.