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Conceptions in Teaching and Didactic Activities and Assessment of University Teachers

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The aim of this study was to detect and analyze the conceptions of teaching, learning activities and assessment of learning in classroom, and blended courses for university professor's face-to-face courses. The study design was non-experimental, descriptive, and mixed cut. The sample was not random with participation of 129 university professors' face-to-face courses. As was applied, the open questions questionnaire on teaching and learning conceptions of teachers and data reported six questions related to the conception of teaching, didactic activities and assessment of learning of courses in classroom and blended courses. The data were worked through content analysis and percentages. The findings showed a conception of classroom teaching with a focus on learning and a conception blended teaching with a strong focus on teaching. The most reported didactic activities in classroom courses at a decreasing hierarchy were: exposition and presentation, case study and mixed courses, technology per se, discussion forums, chat and Wikis. In classroom assessment courses predominated, in the abstract tests, participation, and research and blended courses the research, Wikis, forums and blog, and a significant number of teachers did not specify evaluation resources.

Keywords: conceptions of teaching, conceptions of blended teaching, higher education

Introduction

It has been proposed, consistently, that teaching centered on the student is the most effective way to prepare students for the 21st century (Voogt, 2008). Likewise, Web use and Internet technology in higher education have been increased in the last 15 years (Chen, Lambert, & Guidry, 2010) and an important tendency is the movement toward blended learning and teaching (Bliuc, Goodyear, & Ellis, 2007).

Blended teaching is teaching strategy implementation implying interaction between pedagogy and technology to achieve student learning (Jeffrey, Milne, Suddabay, & Higgins, 2012). This type of teaching is developed in blended course which integrates online and face-to-face activities in a pedagogical and planned way (Laster, Otte, Picciano, & Sorg, 2005).

Educational modality in traditional classroom is mainly sustained by interaction between teacher and student, where voice and body expression are the means of communication, being restricted here and now, and visual and sound means are didactic support to teacher's action (Keegan, 1996).

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Difference between traditional and blended classroom courses implies instructors extend teaching to planning, implementation and assessment areas (Gilakjani & Branch, 2012). Effective integration of information and communication technology (TIC, in Spanish) depends on interactions between technology, content and pedagogy allowing significant results in student's learning (Angeli & Valanies, 2009).

Nowadays, there is an increase of TIC use in higher education (Brouwer, Ekimova, Jasinska, Van Gastel, & Virgailaite-Meckauskaite, 2009) and consequently, it is probable that instructors, who have worked in traditional classroom, add technology to teaching. Instructors are active agents in changing processes, thus, their conceptions can support or obstruct the success of TIC usage so as to achieve learning (Levin & Wadmany, 2006).

TIC incorporation to education should be accompanied by a conceptual change in teaching-learning and in teaching methodology, considering the means it is taking place, either face-to-face or by technology (Kirkwood & Price, 2011). This context is a layer of issues like: what are the teaching conceptions and their components of didactic activities and assessment in traditional classroom courses and blended courses for teachers who teach in classrooms and who potentially shall need to implementblended courses? This is the objective of this study. It was started from differences in conceptions from teachers concerning educational modalities, focusing more on classroom courses learning.

Knowledge of teaching conceptions from teachers due to their influence on teaching methodology and on learning results of the student which could lead to a reflection provoking improvement favorable changes in teaching and learning. Furthermore, it may be useful for designing teaching formation programs inblended courses and its effective implementation.

Conceptions of Teaching

University teaching conceptions are teaching actions shaped and influenced by judgments and beliefs about teaching and learning (Canbay & Beceren, 2012).

Since the 1990s, approaches of instructors' teaching conceptions can be placed in a continuum (Prosser & Trigwell, 2001) where teaching centered on instructor is placed on one side, and teaching centered on the student is on the other side (Akerlind, 2007; Trigwell, Prosser, & Waterhouse, 1999).

Results from previous researches' revision, Kember (1997) proposes five teaching conceptions: orientation centered on teaching formed by information and transmission of structured knowledge; teaching as interaction performing as a bridge between the two orientations and the orientation centered on learning by components to facilitate comprehension and conceptual change and intellectual development.

Gao and Watkins (2002) found five teaching conceptions: impartationof knowledge, preparation for exams, skills development, attitudes promotion, and guided behavior. The first two ones focused on teaching and knowledge transmission and the last three ones are focused on learning where teacher is a learning facilitator and model of attitudes allowing student to learn interacting and communicating appropriately with his fellows, teachers, school authorities, and parents.

A research from Smith (2006) revealed four categories of teaching conceptions: transmission of subject program, program comprehension, program adaptation, and independent learning. The first two ones are focused on teaching where teacher imparts his knowledge, corrects the student if he is wrong and encourages him to apply knowledge in real life's situations. The last two ones focused on learning where instructor is

aguide whose intention is to make student achieve independent learning and construct new conceptions of subjects of study.

Conceptions of Blended Teaching

Teachers' conceptions strongly affect technology integration (Gilakjani & Branch, 2012). A study from Becker and Ravitz (1999) showed teachers' conceptions about teaching and teaching methodology in a based TIC environment are in a continuum, where teaching as impartation, is positioned on one end, and teaching as facilitation of student's knowledge restructuration is on the other end.

Kember and Kwan (2000) detected that blended teaching can be integrated in two big categories. On one side, professor visualizes technology in terms of capacity to store and transmit information or access and recovery of resources. On the other side, teachers think that facilitation of communication and synchronic or diachronic dialogue can be achieved. These positions are associated to approach on teaching and learning, respectively.

Ellis, Steed, and Aplebee (2006) found four blended teaching conceptions. Categories A and B correspond to approach learning and categories C and D are approached teaching where technology is used to transmit information and teacher's role is to provide a variety of accesses to information.

In a research made by González (2007), three teaching conceptions were identified in bachelor's instructors, in online face-to-face courses: to provide academic and administrative information related to the course; to create, construct, and share knowledge. The first one focused on teaching and the other two ones on learning, where TIC is used to improve discussion, debate, comprehension development and knowledge construction (González, 2013).

Didactic and Assessment Activities

Teaching and assessment conceptions of instructors are essential to predict their practice, decision-making and teaching approach (Winterbottom, Brindley, Taber, Fisher, Finney, & Riga, 2008).

In teaching approach conception, instructors have informed the use of exposition didactic activities (Gao & Watkins, 2002) and presentation of facts, data and explanations (Tsai, 2002). Assessment resources are multiple option tests, false or true, to be completed, and student's presentation of a subject (Aydeniz, 2006; Gao & Watkins, 2002) being limited to knowledge acquisition imparted by the teacher (Tsai, 2002).

In learning approach conception, teaching has been reported by interaction between student and professor (Gao & Watkins, 2002), problems' solution, self-discovery experiences (Tsai, 2002) and group activities (Smith, 2006). The most frequent forms of assessment are essays, case study, problem-solving tasks (Gow & Kember, 1993) and collaborative projects (Delandshere, 2002).

Moreover, on learning approach, it has been informed the application of knowledge to non-familial problems and use of inferences, discussion, and laboratory practices where students register data are organized logically and analyzed to obtain conclusions (Aydeniz, 2009). Assessment is used to monitor student's progress in order to receive an adequate feedback (Tsai, 2002).

In TIC integration courses, on teaching approach, some didactic activities are the transmission of information related to the course, lecture notes and access to resources online, through technological resources (Ellis et al., 2006; González, 2013).

In a meta-analysis about assessment, made by Thomson and Falchikov (2007), when using technology, it was detected that in more than half of articles, the use of multiple option tests was reported and that discussion forums and student's collaborative work were unusual. Hounsell et al. (2007), in other meta-analysis, found that in many of the studies reviewed, multiple option exams were used.

In blended courses, on learning approach, activities are used to develop skills of thought, reflection, application of real world concepts and among them is the approach based on evidence, problems analysis (Ellis et al., 2006), discussion forums, Wikis or Web-video conference (Giesbers, Rienties, Gijselaers, Segers, & Tempelaar, 2009) and collaborative work (Van Merriënboer & Paas, 2003). These activities are used for teaching and assessment.

Method

Design of Study

Design of study is no-experimental, descriptive, cross-sectional and blended methodology.

Sample

Sample is: no probabilistic sample, participating129 university teachers of traditional classroom courses.

Instruments

Instruments are: open-ended questionnaire about teaching and learning conceptions of face-to-face courses' teachers (Moreno, Rodriguez, & Padilla, n.d.). In this study, six questions data are reported: (1) What is the meaning for you of classroom teaching (face-to-face)? (2) What is the meaning for you of blended teaching (hybrid, online, supported by computers)? (3) What are the didactic activities (teaching-learning-teaching) featuring classroom teaching (face-to-face)? (4) What are the didactic activities (teaching-learning techniques) featuring blended courses (hybrids, online, supported by computers)? (5) How students' learning is evaluated in classroom teaching (face-to-face)? and (6) How students' learning is evaluated in blended courses (hybrids, online, supported by computers)?

In questions, constructs used as well or employed to refer types of courses and didactic activities were incorporated in parenthesis, by accepting conceptual differences and at the same time the presence of central shared elements that could facilitate the understanding of teacher's questioning, considering the diversity of previous knowledge that they could have.

Procedure

Procedure is: Instrument application was individual in an exposition, without limit of time. In qualitative phase, instructors' answers were treated by content analysis. Analysis categories are based on central aspects of a group of teaching conceptions' descriptions, by considering approach on teaching and learning, reported in specialized literature.

Teachers' answers were analyzed and discussed by two persons so as to minimize overlapping and patterns' identification of each category of teaching conceptions and didactic and assessment activities. Qualitative data were transformed in numerical codes and treated with percentages.

Results

In the results, teachers showed a classroom teaching conception focused on learning, and a blending teaching conception strongly focused on teaching (see Table 1).

Sample of teaching conceptions answers:

(1) Classroom course:

(a) Approach on teaching: P105 “Opportunity to transmit knowledge”;

(b) Approachon learning: P16 “It means that I, as a teacher, must be a knowledge facilitator, a guide and assistant looking for knowledge is a significant learning”;

(c) Answers without classification: P180 “Very important”.

(2) Blended course:

(a) Approach on teaching: P210 “Opportunity to transmit a wider range, breaking time barrier and space”;

(b) Approach on learning: P133: “Guidance promoting autonomy, auto suggestion and collaboration”;

(c) Answers without classification: P128: “Accomplishment”.

Frequently, each teacher mentioned some didactic and assessment activities, thus position in learning approach occurred when, as a group, at least one activity was cited in specialized literature (see Tables 2 and 3).

Table 1

Conception in Teaching Teachers

Category	Classroom course	Blended course
	Percentage (%)	
Teaching approaching	29	63
Learning approaching	48	12
Without classification	18	19
Without answer	5	6

Table 2

Didactic Activities

Didactic activity	Teaching approach		Learning approach	
	Classroom course	Blended course	Classroom course	Blended course
Percentage				
Discussion forums, Chat and Wikis				40
Discussion and debate			22	
Exposition and presentation	83	16	59	7
Information organizers			23	8
Teacher’s interrogatory	13		14	
Case study			28	5
Teacher’s feedback	5		5	10
Readings	9	11	17	13
Works and reports	9		14	20
Essays			11	15
Research			6	20
Analysis and synthesis			8	10
Projects and problems’ solution			2	
Technology use		95		

Examples of didactic activities' answers:

(1) Classroom course:

(a) Approach on teaching: P73 "I, the teacher, speak; you, the student, listen";

(b) Approach on learning: P114 "Exposition, small groups discussion, brainstorm, direct interrogatory";

(c) Answers with classification: P67 "Varied".

(2) Blended course:

(a) Approach on teaching: P103 "The student, when entering platform, reviews files, and there, he shall be able to see objects and contents of document, as well as the way to resolve it and its application";

(b) Approach on learning: P202 "Participation in forums, Wiki, sign-in logs, blog designs, expositions, essays writing, mental map preparation, group activities, assessment, self-assessment";

(c) Answers without classification: P26 "I do not know it".

The position of evaluation activities "without classification" was drawn from inaccurate information or difficulty to define their meaning if they could have characteristics of both teaching approaches (see Table 3).

Table 3

Assessment Activities

Activity	Without classification		Learning approach	
	Classroom course	Blended course	Classroom course	Blended course
	Percentage (%)			
Without specification	28	40		
Exams	56	7	54	34
Participation	28	1	20	3
Works	19	17	18	19
Expositions	18	3	15	3
Essays			15	9
Researches			28	53
Signatures	1			
Wiki forum, blog				44

Descriptions of assessment resources' answers:

(1) Classroom courses:

(a) Approach on learning: P38 "Learning may be evaluated by exams, projects, essays, interventions, researches, etc.";

(b) Answers without classification: P12 "I think knowledge is better founded".

(2) Blended courses:

(a) Approach on learning: P113 "Participation in forums, project preparation, case study, task delivery, graphic organizers, summaries, essays, objective exams online";

(b) Answers without classification: P129 "Because of knowledge acquired".

Discussion

Differences on teaching conceptions and didactic and assessment activities were detected. In classroom teaching conceptions, tendency was higher on learning approach and in teaching blended courses. Therefore,

assumption of differences between the two educational modalities was verified as well as conceptions on higher approach on learning in classroom courses than in blended courses.

In both types of courses, a higher diversity of didactic activities was showed on learning approach than on teaching one. In didactic activities associated to classroom learning approach, it stands out the limited mention of problems solution, collaborative projects, inference use and activities to construct knowledge, among others (Aydeniz, 2009; Smith, 2006). In blended courses, Wikis and discussion forums stood out (Giesbers, et al., 2009), and the few references to approach based on evidence, problems analysis (Ellis et al., 2006) and collaborative work (Van Merriënboer & Paas, 2003).

On teaching approach, exposition and presentation were stood out in classroom (Gao & Watkins, 2002; Tsai, 2002); and in blended courses, technology per se can be related to information transmission so as to place line courses' materials and access to technology (Ellis et al., 2006; González, 2013).

Concerning classroom assessment focused on learning, the most reported resources were abstract exams, researches, participation and exposition and blended courses, researches and Wiki, discussion forums and blog, being this last time an incongruent result from low use of these tools, detected in Thomson and Falchikov's meta-analysis (2007).

In both types of courses, an important number of teachers did not specify assessment resources, especially in blended courses. From this result, it is possible to infer the need of a higher and deeper knowledge from teachers about assessment resources, particularly for blended courses.

Didactic function and/or assessment of activities like cases of study, exposition, researches, discussion forums, Wikis, etc., mentioned herein serve as a deep reflection to instructors and teaching methodology responsible personnel. From this situation, it can be inferred the need of a knowledge that allows characterizing and differentiating theses resources in each function to be used pertinently, adjusted to objective.

Predominancein blended courses of a teaching conception focused on teaching, the higher rate of technological reference per se and TIC limited resources for didactic and assessment activities mentioned by the teachers, allow suggesting the need of a teaching methodology which integrates, in a pedagogical manner, technology to classroom courses.

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