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Home
Contents

Instructors' Teaching Practice Reflections

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Abstract

Twelve instructors' reflections lead to engagement and proactivity in pedagogical knowledge, thus building an analytical approach which is fundamental to the development of university professional practice.

Introduction

Higher education in Spain is undergoing deep curriculum changes regarding the structure and focus of teaching at higher education universities (Villar & Alegre, 2004).

1. Objective

The objective of this study is to develop a practice teaching epistemology grounded in systematically collected and analysed teaching concepts data (e.g. instructors as teaching researchers are constantly comparing pieces of classroom teaching information and proposing sets of teaching concepts that are plausible for understanding patterns of classroom teaching actions). This study assesses 12 classroom-teaching innovations in 11 departments of the University of Seville (Spain). (See Table 1).

DEPARTMENT	DISCIPLINE INNOVATION CASES	SAMPLE STUDENT FREQUENCY AND PERCENTAGE
Art History	Initiation research activity and University teaching (Case 1)	(N = 254) (38.2%)
Modern History	New teaching strategies in the History of Sciences and Technologies (Case 2)	(N = 7) (1.1%)
Morphological Sciences	Anatomy of the foot: technical study based on training and education research (Case 3)	(N = 24) (3.6%)
Business Administration and	Participation approach to enterprise administration	(N = 46) (6.9%)

Marketing	by means of projections and case studies (Case 4)	
Business Administration and Marketing	Development of managerial training tools: the case study method (Case 5)	(N = 38) (5.7%)
Teaching of Experimental and Social Sciences	Design of curricular materials for teaching and learning Art in Primary Education (Case 6)	(N = 25) (3.8%)
Teaching and School Organization	Internet applications to preservice teacher education (Case 7)	(N = 43) (6.5%)
Teaching of Mathematics	New Technologies in the Teaching of Mathematics (Case 8)	(N = 51) (7.7%)
Roman Law	Seminary of exegesis of information sources. Theme: the patrimonial situation of family children in Roman Law (Case 9)	(N = 9) (1.4%)
Psychiatry, Personality, Evaluation and Psychological Treatment	Role-playing of conflicting situations among handicapped students, their parents and the school (Case 10)	(N = 61) (9.2%)
Architecture Graphic Expression	The organization of a thematic classroom of Architecture as a strategy of education innovation (Case 11)	(N = 74) (11.1%)
Architecture constructions II	Attribution of tasks based upon students' learning styles of learning. Individualization (Case 12)	(N = 33) (5%)

Table 1. Departments, Discipline Innovations Cases and Sample Frequencies and Percentages

Source: The authors.

Method

1. Procedure

The instructors taught their courses using innovation materials and strategies. The twelve instructors held group meetings, semi-structured interviews and informal conversations with the researchers

to focus on classroom innovation processes and assessment issues (e.g. practice coding processes, pedagogical views), in order to write down a rationale for adopting a qualitative research approach to describe their teaching innovation. We assume that an instructor's conception of what pedagogic knowledge is and where it comes from – that is, their epistemological beliefs – will have an impact on how they teach (Marra, 2005). After class selection, 24 observers wrote down 79 narrative vignettes, and interviewed 84 students. Observers were reminded to create a climate of trust with instructors and students through non-threatening and objective behaviour. All observers were trained specifically for this study using a blank sheet on which they recorded everything that happened.

They also collected other pieces and artefacts, including instructors' lesson plans, to better describe instructors' teaching practice. The purpose of the interviews was to understand the meanings constructed by these students of their college years. During dialogue, ethical considerations for the students (e.g. consent, privacy, etc.) were maintained. However, each interviewer made an interview script for each student adapted to meet the teaching situation. Additionally, instructors answered questions about the purpose of their innovation from an interview script designed by the researchers. All observations and interviews were transcribed and coded by the participant instructors.

2. Data Analysis

Teaching practice content analysis was condensed by means of three linked sub processes: data reduction (i.e. data can then be coded, classified and aggregated), data display (i.e. this can be in the form of a chart, matrix, map (concept map) and conclusion drawing (i.e. verifying the meaning that has been extracted from the data) (Huberman & Miles, 1994: 429). Instructors coded descriptions from the log sheets into one of sixteen categories, (see Table 2).

CATEGORY	CODE	DEFINITION
PHYSICAL ENVIRONMENT	PHE	Physical space where the training activity is developed with all its elements (size, distribution, light, temperature...).
CLASS ATMOSPHERE	CAT	Social climate - participation, trust or mistrust, etc. - where a class session is developed.
OBJECTIVES / AIMS / EXPECTATIONS	OAE	What instructor and students expect from the teaching and learning process.
PRESENTATION	PRE	Educational strategy in which the instructor acts as a transmitter and the students as receivers of information.

INQUIRY	INQ	Teaching method based on questions that the instructor outlines to the students.
ACTIVITIES	ACT	Compilation of tasks that a student carries out individually.
GROUP WORK	GWO	Compilation of tasks carried out with the participation of a group of students following a common objective.
EVALUATION	EVA	Measurement of attained results. It includes the evaluation of the activity, the assessment of students, and the evaluation and improvement of quality.
RELATIONSHIP	REL	Cordial and friendly relationships between instructor and students.
AUDIOVISUAL MEDIA	MAV	Audio and / or videotape equipment used to transmit information to students.
RESOURCES	RES	Written curriculum and communication materials, such as books, reports, articles, programs...
COLLABORATION / COOPERATION	CCO	Interrelation style among students involved in fulfilling the innovation (among different disciplines, majors, courses, groups, people, etc.).
MOTIVATION OR INTEREST	MIN	Degree of enthusiasm and expectations that instructor and student show in the implementation of the innovation.
VALUES	VAL	Development of values by the instructor or students (solidarity, mutual respect, self-confidence, competition, individualism, social concern, hierarchy, etc.).
PROJECTION OR IMPLICATIONS	PIM	Implications of results or conclusions of the innovation to improve teaching, future professional life of students, or society.
TIME ADAPTATION	ADT	Appropriate time development of the innovation; time invested by an instructor and students in the innovation.

Table 2. Category System, Codes and Definitions Developed by Instructors

Source: The authors.

Results

Then, codes made up of 16 built-up teaching concepts, defined by instructors, were developed to accomplish the empirical categorizations of the texts Consequently, they elaborated a concept map or theoretical model derived primarily from the examination of transcribed materials (class observation vignettes, in-depth interviews, and so on) that mapped key categories as specific features of a University teaching committed to excellence as well as their previous knowledge and consequent effects. Codes highlighted teaching concepts that were connected to innovations. Hence, a variety of data sources and a methodological triangulation of class observations, instructors' and students' interviews and student perceptions were used in this study.

1. The emergence of a teaching framework

Instructors' concept model about pedagogy is summarized in Figure 1, which is broken down into the main categories that emerged from the analyzed data (Table 2).

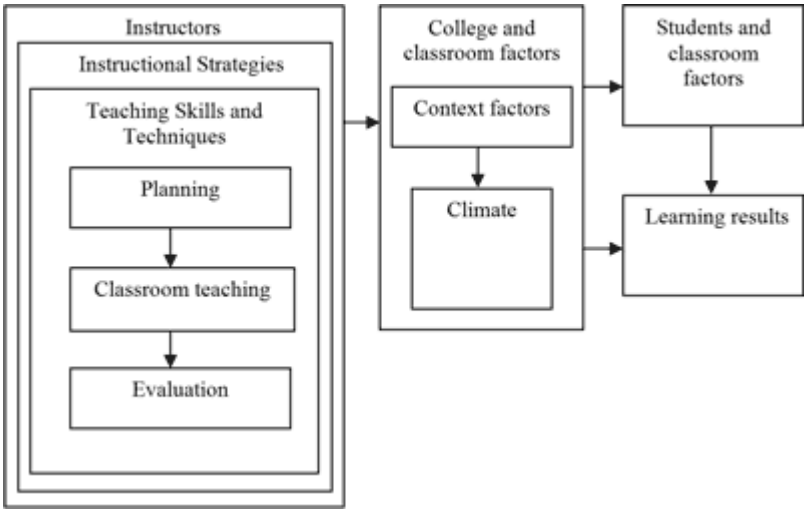

Figure 1. Conceptual model of University teaching innovations

Source: The authors.

Instructor participants mentioned both applications of practical knowledge and innovative teaching as an extension of the contextual classroom level. Instructors have differentiated discrete pedagogical knowledge and interpreted instructional strategies that are constituted by class processes and contextual factors through which they assess teaching innovations and measure learning results. In Case 8, the **Instructional Strategies** concept shows an inveterate yearning for inquiry, as demonstrated in a class teaching session:

The instructor indicated that he was striving for recapturing what had been done previously in order to recover the acquired knowledge and to find the rationale to the problem.

The intellectual and emotional relations in working groups characterized a type of class teaching style. A student in Case 12 said:

Yes, we work in groups. To me, group work contributes to seeing other people's approaches, to see if I'm mistaken, or right, to share knowledge, not only to see how I face up to the tasks, to feel support...

The frequency of categories INQ and GWO makes patent the full expression of an innovative teaching that breathes in the depth of inquiry and reflects on the students' working group understanding. With this aim, the Teaching skills and techniques concept affirms its presence before, during and after class teaching communication. The starting point is exactly from category objectives, aims and expectations (OAE) that are shown condensed in the expression of the question made by a student observer to another student in a Case 5 class:

Question: Would you believe that this subject covers all the expectations that you had of it? Answer: Instructors said what the subject would be like at the beginning of the course, and we follow the objectives.

In general, the instructors' statements about their roles as teacher were congruent to their stated learning outcomes and their descriptions of teaching strategies used. The image of class teaching is a road made up of six categories wrapped by the presentation of ideas and concepts (PRE) by means of resources (RES). For instance, in Case 1:

All slides were quite clear, which helped the instructor's explanation a lot, and they enabled an understanding, knowledge, and follow-up of the churches slides that were shown.

For that reason the class crumbles in activities (ACT) that attempt student participation, delaying the monologues of participant instructors. A student expressed herself in the following way in a Case 4 class:

Question: Can you explain how have you done tasks in this subject matter? Answer: We have done the tasks by means of summarizing topics.

Discipline curriculum is full of opportunities to include values interventions, regardless of the innovation. Category values (VAL) born out of another one - group work (TGR) –can be communicated in innovation teaching in three main ways - through content, process, and application. For example, in a Business class, the importance of valuing others is brought out during the public meeting, where students have to listen carefully to each other and ask questions appropriately:

Question: Do you believe that group learning is better that individual learning? Answer: You look for support from your peers and you might find an open door in them (Case 5).

Generally speaking, College class teaching is symbolic, that is, a bunch of lecture notes, code samples, homework assignments, and homework solutions that instructors put together when they are teaching. Participant instructors take this issue into account and plan otherwise to form concrete-thinking students by fostering interaction between students and their physical environment. Immersion is made a reality by audiovisual media (MAV) and resources (REC) categories. A passage on the use of MAV appears in the following statement in the innovation:

As the videotape comes to an end, the first student begins to speak, while a second student displays a transparency on the overhead projector (Case 1).

Finally, the evaluation (EVA) category reels off understanding of a possible schooling that an instructor commented on to an observer in the initial contact of his class innovation:

The evaluation will be carried out in two ways. Firstly, we will keep the quality of task realization in mind; and secondly, exposure and participation. An 80% attendance is compulsory in order to have a passing grade (Case 4).

The articulation of an innovation is a way of describing the dynamic processes of learning development, such as College curriculum flexibility and other context factors. The physical environment (EFI) category affects the behaviour and development of the students:

Students are sitting at the computers; one per computer. They switch on the computers and are being introduced to the program "Win-logos", with which they will work during the class period (Case 8).

Teaching innovations engage students in activities that create a positive classroom-learning climate, promote the value of scientific knowledge as a social construction and develop ethical behaviour. A Case 4 participant instructor describes this in terms of working on the methods of learning:

What is fundamental for introducing an innovation is creating an atmosphere of open and participative work where well-done tasks are rewarded, even if this is done so informally. In our department these intrinsic rewards for innovative work have always been regularly encouraged (Case 4).

Cohesive social relationships (REL) refers to the degree to which students are directly connected to each other. It is a measure of

the attraction of the group to its members. Cordiality in social relationships is stressed with the desire to provide a friendly environment for students:

The instructor asked the student if something was wrong with her, but she was silent. The fear to present a task before the entire group has made her so nervous that she cannot speak, so they have to take a break for several minutes from her lecture (...). Meanwhile, the instructor tries to encourage her, calming her down and giving her some advice (Case 5).

A teaching utopia refers to participant instructor efforts to create a better, or perhaps perfect class teaching innovation, that is almost limited to searching for the concept of teaching collaboration / cooperation (CCO). It is assumed that students learn best when they are actively involved in the teaching process. Students who work in collaborative groups also appear to be more satisfied with their class teaching:

Question: What are the positive and negative aspects that you perceive from this teaching?

Answer: Well, the most positive thing is that we hold relationships with different students in the group. You share ideas, and this is fantastic (Case 4).

Category motivation or interest (MIN) is the internal state or condition that activates learning behaviour and gives it direction. Changes in behaviour are better explained by principles of ecological influences, cognitive development, emotion, and explanatory style. In an innovation class teaching students learn how to manage their learning:

Students show great interest for the topic, constantly participating by means of brief interventions which reveal their competence. In the discussion, all students participate in an organized way and regulate their own interventions (Case 5).

The data show that all instructor participants indicated some pedagogical strategy, which was open to constructivism. The category of projection or implications (PIN) of innovation teaching is about close connections, a logical relation between two propositions: teaching and learning. For example, the following statement from a participant instructor exhibits a relationship of implication:

Question: Do students have a very active role in this subject teaching?

Answer: Yes, we have directed our project teaching towards the principles of a quality system-type of teaching. Therefore, students are constantly self-learning, day by day (Case 5).

Discussion

Much rouse for University reform has focused on changing University teaching, but this research suggests a need to change the teaching setting from a cognitive perspective taking into consideration that the “process requires instructors to think about their discipline in non-traditional ways” (Marra, 2005: 136). Moreover, all the innovations we studied exhibited the following characteristics:

Fostering an inquiry style of teaching and creating a supportive classroom environment that enhanced the quality of participation, as in Dallimore, Hertenstein & Platt’s (2004: 107) research.

Valuing interdisciplinary composition of groups, as in Wildman, Hable, Preston & Magliaro’s (2000: 259) study.

Creating significant tasks that provide students the interest to cope with teaching-learning complexity episodes, as in Eilam & Poyas’s (2006: 341) intervention.

Conclusion

All twelve instructors expressed pedagogical beliefs or employed teaching strategies which recognize that students' understandings are based on their own unique experiences. Participant instructors provide multifaceted teaching to allow students to express preferences.

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Contents