

A Phenomenographic Study of Lecturers' Conceptions of Teaching and Learning and their Approaches to Teaching

Anissa Fizya Sari AHmed
University of Algiers

Abstract

The present study aims at investigating lecturers' conceptions of teaching and learning, the approaches to teaching they adopt, and the correlation between the conceptions and approaches identified. It was carried out with fourteen Algerian lecturers at the department of English and uses a phenomenographic method of data collection and analysis. The results reveal that the lecturers hold five conceptions of teaching and learning and adopt five approaches to teaching. A strong correlation between lecturers' conceptions of teaching and learning and the approaches they adopt was found. It was suggested to integrate a conceptual change approach into teacher development programs.

Key Words: *conceptions of teaching and learning; approaches to teaching; conceptual change; teacher development; phenomenography.*

Introduction

Some lecturers of the department of English at the University of Algiers received, during their undergraduate and graduate years, a theoretical training in the field of teaching rather than a practical one while others did not receive any training. The theoretical training is similar to teacher training programs that provide teachers with prescribed skills on different topics as teaching language skills, testing, classroom interaction, lesson planning, course book evaluation in order to change their teaching practices and improve their students' learning outcomes. Lecturers are expected to put into practice the methods and principles learnt during the teacher education program. However, as it is argued that changes in lecturers' practices cannot occur unless their conceptions are examined to be changed, the present study intends to investigate the variety of conceptions of teaching and learning held by some lecturers at the department of English, the variety of approaches to teaching, and the possible correlation between the conceptions and approaches identified. Researchers suggest that a great deal can be learned about teaching at the university level by examining the coherence between lecturers' conceptions of teaching and learning and their teaching approaches. Where there is agreement, there is an opportunity for lecturers, researchers, and staff developers to reflect on lecturers' conceptions for the sake of improving teaching at the university level (Sandretto et al 2002).

1- Background to the Research Study

The importance of considering the conceptions that teachers in general and lecturers in particular hold about teaching, learning, and students when developing professional development programs has been emphasized. Burroughs-Lange (1996), Entwistle & Walker (2000), Hativa (2000), Kember & Kwan (2000), Trigwell & Prosser (1996) consider research into teachers' beliefs, conceptions, attitudes, orientations, practical theories, and implicit or subjective theories about teaching to be grounded in the understanding that these concepts drive teachers' practices. For example, Pajares (1992) noted that 'few would argue [against

the assumption] that the beliefs teachers hold influence their perceptions and judgments, which in turn, affect their behavior in classrooms' (Pajares 1992:307).

Putnam and Borko (1997) argue that 'teachers should be treated as active learners who construct their own understandings'. They explain that current learning theories are now constructivist in nature and view learners as active participants in the learning process, in which they 'construct new knowledge and understandings based on what they already know and believe' (Putnam and Borko 1997:1225). Thus, for 'professional development experiences to be successful in supporting meaningful change, they must take into account and address teachers' knowledge and beliefs' (Putnam & Borko 1997:1281). Other researchers have echoed this view: 'Fundamental changes to the quality of university teaching are unlikely to happen without changes to professors' conceptions of teaching' (McAlpine & Weston 2000: 377). Hence, research into teachers' conceptions emphasizes the important role that teachers' conceptions play in the development of teaching practices.

Given the attention teachers' conceptions gained, studies sought to investigate conceptions that teachers hold about teaching and learning. A significant body of research has been directed towards characterising conceptions of teaching of academics in higher education. A review of twelve articles (Kember, 1997) concluded that there was a high level of agreement over the category schemes from thirteen studies. The review suggests a classification of the category descriptors under two broad orientations of teacher-centered/content-oriented and student-centered/learning-oriented.

While an important body of research focused on conceptions of teaching of academics in higher education, there was fewer studies concerned with approaches to teaching or with the link between lecturers' conceptions and their approaches to teaching. In some of these studies researchers relied on questionnaires or interviews to report academics' practices. These studies examined only what university teachers say about their practice and did not directly observe what they do in the classroom (Kane et al 2002).

Trigwell et al. (1994) found evidence of teaching approaches in interviews with 24 science lecturers. The teaching approaches were characterized by four categories of intention and three of strategy. Only logical combinations of intention and strategy were found, so the result was five approaches. Trigwell & Prosser (1996) developed, from this study, a questionnaire which contained scales corresponding to the intentions and strategies identified in the qualitative study. Use of the questionnaire confirmed the intention/strategy relationship found previously. A further paper (Trigwell & Prosser, 1996) argued that qualitative categories of conceptions of teaching were related to those for approaches to teaching. Their study revealed that university teachers who adopted a student-focused approach to their teaching of a topic conceived of their teaching and learning of the topic in more complex ways. University teachers who approached their teaching from a teacher-focused perspective conceived of their teaching and their students' learning in that topic in less complete ways.

Similarly, Kember & Kwan (2000) found a direction of causality in the relationship between teachers' conceptions and their approaches of teaching. Lecturers who perceive teaching primarily as a process of transmitting bodies of knowledge tended to adopt a content-centered approach to teaching: they were more likely to rely on extrinsic motivators, supply a lot of notes and references, focus on the whole class, employ frequent tests and quizzes, teach to their students' strengths or cater for their weaknesses, and give examples and illustrations from their own experiences. Lecturers placed in the two facilitative categories, on the other

hand, tended to adopt a learning-centered approach to teaching. They were more inclined to recognize the need to motivate students as an intrinsic part of their role as a teacher, encourage students to discover knowledge on their own, deal with the needs of individual students, employ a more flexible system of assessment, make conscious attempt to remediate the weaknesses of their students, and respect and make good use of the students' experience in their teaching.

Speaking about studies that examined both teachers' reported practices and observed practices, Gibson (1998) conducted a self-study reflecting into her own teaching beliefs and practices in order to 'assess my instructional approach for effectiveness in its support of culturally relevant pedagogy' (Gibson 1998:360-361). By audiotaping her teaching practices, transcribing those audiotapes, and reflecting upon them, Gibson (1998) was able to 'unravel the tangled web of personal beliefs, cross-cultural perspectives....and traditional education ideologies which informed my teaching practices' (Gibson 1998:361). The analysis of the results showed some situations of classroom practices in which she did not perform consistently with her espoused theories of action on critical pedagogy and participatory democracy and vowed to 'initiate, rather than short-circuit' discussions on issues such as racism (Gibson 1998:368-369).

Martin et al (2000) studied the relationship between university teachers' intentions and their teaching practice with respect to the 'teaching of a particular topic, within a specific context' (Martin et al 2000:387). Twenty-six university teachers in four discipline areas participated to interviews that focused on what the teachers wanted students to learn and how they intended to teach a specific topic or 'the object of study'. The researchers then conducted two teaching observations. Martin et al (2000) found that the results of the research 'showed no observed inconsistency between the teachers' intentions and their practices' (Martin et al 2000:409). They concluded that there is a need for further investigation of 'what is it that teachers want their students to learn and how do they believe their students will come to know this' (Martin et al 2000:411).

Hativa et al (2001) conducted a research on 'the beliefs and pedagogical content knowledge of exemplary university teachers regarding effective teaching strategies, the extent to which they use various of these strategies and the relations between their beliefs and knowledge to their classroom practice' (Hativa et al 2001:703-704). Towards that aim, the researchers conducted teacher and student interviews and questionnaires, videotaped classroom sessions, and analyzed course outlines and exam questions. This study proposes explanations for the differences between poor and good teachers: 'Maybe one way in which the pedagogical content knowledge....differs is in the number of effective classroom strategies with which they are familiar' (Hativa et al 2001:722). Hativa et al (2001) concluded 'that there is a good, but far from perfect, fit between these teachers' beliefs and knowledge concerning effective strategies and their classroom practice' (Hativa et al 2001)

The critical review provided by Kane et al (2002) came to the conclusion that the study of teachers' conceptions should not confine itself to the study of what teachers say they do in the classroom, the way they think about teaching, or their internal and mental constructs. It should also study what teachers do in their classroom in order to confirm their conceptions and see if there is correlation or disjunction between what teachers say and what they do in the classroom. This supports the view of Murray and MacDonald (1997) who argued that by relying only on what teachers say the data obtained may be concerned with what 'they believe they should say' or 'what they would ideally like to do'. There would thus be a

difference between studying the idealized role of the lecturer and reporting actual practice experience (Murray and MacDonald 1997).

2- Conduct of the Study

The present study was conducted with fourteen Algerian lecturers at the department of Anglophone studies at the university of Algiers. These lecturers teach different courses: listening/speaking, reading/writing, grammar, cultural issues, schools of linguistics, study skills, applied statistics and research methods, research paper writing, methods of teaching, critical writing, literary genres, and Anglophone literature.

The research uses the phenomenographic approach of data collection and data analysis. This approach is used to study a range of issues like conceptions about a given phenomenon, approaches of learning, approaches of teaching. It is described by Marton (1988) as a 'research specialization to study the different understandings or conceptions of phenomena in the world around us' (Marton 1988:31)

The purpose of phenomenography is to describe the variations of conceptions that people have of a particular phenomenon. It seeks to explore participants' experiences of a phenomenon and to identify their conceptual meanings of that phenomenon. These meanings are next classified into categories according to their similarities and differences. Finally, phenomenographic findings describe the different categories of conceptions from the perspective of the subjects of the study.

The foundation of phenomenography which is rooted in theory of variation is pedagogical. It aims at applying the findings of research in order to help students and teachers to learn, and to expand their thinking (Bowden 2005). The question phenomenographers are interested in is 'how can we bring about different ways of experiencing something?' (Marton and Pang 2008:540). Researchers in collaboration with educational practitioners try to use the results of phenomenographic studies to bring about learning.

The aim is to create for students and teachers opportunities to improve their learning by viewing a given phenomenon differently, in a more sophisticated way. It is meant to urge learners or teachers 'discern certain aspects of the phenomenon that were previously not focused on or that were taken for granted and to bring those aspects into view' (Marton and Pang 2008:540). Phenomenography can help lecturers understand and perceive the critical aspects to identify a divergence between two ways of viewing teaching and learning, and two ways of approaching teaching. The interest, then, is in what the lecturer has to take into account when he is teaching in the direction of increasing complexity (Marton & Pang 2008).

This method of analysis follows the anti-positivist tradition and the qualitative interpretive research. It therefore embodies the weaknesses and strengths of this research methodology (Cohen et al 2013). Proponents of quantitative methods have often criticized the lack of rigor in qualitative research in that the latter does not have enough explicit controls and standard means of measurement that would allow for the testing of prior hypothesis. Rigor in research is traditionally characterized by the validity and reliability of the research.

Thus, in response to the issues of phenomenography raised by the proponents of the quantitative research, phenomenographers investigated these methodological issues. I have considered the ways phenomenographers have addressed them, and have chosen to apply some of the measures they to the present research to ensure a better quality. Here is a summary of these measures:

- The interviewees were asked questions regarding the phenomenon investigated and then follow up questions were asked to encourage them reflect on the conceptual meanings to clarify and confirm their initial answers. This was meant to ensure that answers are relevant to the phenomenon studied.
- In order to minimize my influence on the research process, I attempted to reflect upon my own presuppositions including: earlier research findings, the assumption of pre-given theoretical structures or interpretations and my personal beliefs in order to bracket them. I therefore avoided: introducing new ideas into the conversation, showing agreement or disagreement at the interviewees' answers, and asking leading questions.
- For the sake of reliability, the interview transcripts were coded. I read the transcripts many times and extracted the categories of description and themes of expanding awareness. Moreover, I made a detailed account of the interpretive steps followed to analyze the data, and used quotations from the interviews to support and clarify the meanings of the reported conceptions.
- One further way to ensure reliability was to triangulate the instruments of research. The phenomenographic interview meant to investigate lecturers' conceptions was used in addition to a questionnaire administered to lecturers. Regarding the phenomenographic interviews which aimed at investigating lecturers' approaches to teaching, classroom observations to investigate lecturers' strategies were added. As intentions are not observable phenomena, the classroom observations could not serve to investigate lecturers' intentions. I intended to administer a questionnaire instead; however, time constraints in addition to the large amount of data generated by the tools used for this research made it impossible. One must point out that the analysis of the interview data related to lecturers' intentions produced categories of intentions that correlated with the lecturers' conceptions. The latter were investigated with the use of phenomenographic interviews and questionnaires.

In order to collect data related to lecturers' conceptions of teaching and learning, a phenomenographic interview was designed and administered in addition to a lecturers' conceptions of teaching and learning questionnaire. Relying on the methodological process of the phenomenographic approach explained by Marton (1986, 1994) and Bowden (2000), the data in the present research were collected as follows:

The fourteen Algerian university teachers of different courses were interviewed about their experiences of teaching in one of their courses. As the interview was used as a tool to investigate conceptions of teaching and learning and the approaches to teaching, two different interviews were designed and administered. The interviews lasted 45 to 60 minutes each. It took twenty-six hours to interview all the participants.

The interview focused on lecturers' conceptions of teaching and learning and their approaches to teaching in relation to the specific course chosen by the lecturer. This narrow teaching focus was adopted because of the growing evidence that teaching is a relational

activity (Ramsden 1992) where teaching conceptions are related to the teaching context. Thus at the beginning of the interview, participants were asked this question: Could you describe the course you wish to talk about?

Regarding the design of the interview, Akerlind (2005b) suggests that it includes different types of questions, namely contextual questions, open questions, and questions requesting examples. Similarly, and for the sake of validity, Anderberg (2000) explains that the intentional-expressive approach is a useful interview strategy for exploring and confirming the conceptual meanings in the expressions that interviewees make. In the intentional-expressive approach, interviewees are first asked questions regarding the phenomenon investigated; follow-up questions are then asked to encourage interviewees to reflect on the conceptual meanings of the words in the expressions they have used. Hence, some questions of the interview are contextual questions meant to obtain information about the teachers' academic background in terms of years of experience in the English department, field of specialization, modules taught, language teaching training. Other questions request situated examples. They come in the form 'could you please illustrate?' or 'could you please give examples?'. They aim at exploring teachers' understandings of the different dimensions investigated within their particular teaching context.

The lecturers' Conceptions of Teaching and Learning Questionnaire was constructed as a complement to the lecturers' conceptions of teaching and learning interview. The aim was to confirm or challenge the categories of descriptions and themes of awareness that emerged from the interview data on teachers' conceptions.

The first section draws up the lecturers' profile. Participants were asked to indicate their age, gender, degree held, teaching experience (number of years in teaching, modules taught). The questions are in the form of close and open ended ones. The second section aims at investigating lecturers' conceptions. As the latter are context dependent, teachers were asked to answer the questions with regard to one particular course.

Questions of the second section are open ended, they were used in order to allow lecturers' understanding of teaching and learning emerge. Close ended items would not only influence teachers' responses, but also restrict their choice to a limited range of answers, thus failing to provide a genuine picture of the situation.

The open ended questions generated qualitative data which were content analyzed. The participants' answers were read, and all the answers provided by each lecturer were displayed in one same table. Key word analysis and meaning making made it possible to classify every lecturer in one of the categories the phenomenographic analysis produced.

Regarding lecturers' approaches of teaching, a second phenomenographic interview was designed and administered to the participants. The latter was used with structured and unstructured classroom observations. In order to identify lecturers' approaches to teaching, I relied on Martin et al's (2000) model of teaching approaches which presents an approach as being composed of a strategy and an intention. The traditional model of approaches to teaching which used to focus on the teaching strategies as the only component of the model proved to be unsuccessful without an ongoing focus on the intentions associated with the strategy (Trigwell & Prosser 1996). Research on students' approaches to learning has shown the importance of revising this aspect. Hence, approaches to teaching are seen to be composed of these two components:

(1) Intention or motive: this deals with the reason (s) why the teacher adopts a particular strategy or what he is trying to achieve. Biggs (1989) discussed approaches to teaching in a

structurally similar model to approaches to learning: the conclusion being that approaches to teaching also have intention (why the teacher adopts a particular strategy or what the teacher is trying to achieve) and strategy components (or what the teacher does), and that the intention is an important part of the approach.

(2) Strategy: it is related to what the person does in the classroom; that is to say, the practice of teaching.

The interview on approaches to teaching was designed with reference to these two components. The phenomenographic analysis of interviews on lecturers' approaches to teaching yielded themes of expanding awareness regarding both the intention and strategy components. The themes of expanding awareness of the strategy component were used as key aspects to construct the classroom observation scheme. The themes of expanding awareness are: teaching steps, responsibility for learning, consideration of students' differences, attention and assessment. As far as the intention component is concerned, this cannot be observed. As a result the classroom observation scheme could not be used to observe the lecturers' intentions. During the classroom observation session, I filled out the observation scheme of each lecturer. In addition, I took detailed notes about the teaching and learning events that took place in the classroom to complete the data of the observation scheme yielded. The second type of coding scheme, namely the observed/not observed event recording was used and items in the scheme about lecturers' practices were ticked. The observation scheme data were then displayed in a grid with different rows and columns. The rows represent the scheme items and the columns the observed lecturers. I then considered the account made of every item of the observation scheme in addition to the notes taken about the main events and activities during the observed sessions to classify lecturers into one of the three categories that the analysis of the phenomenographic interview generated. The findings served to confirm or challenge the results of the interview on teachers' approaches.

3- Results:

3.1- Conceptions of Teaching and Learning Held by the Lecturers

The study showed five qualitatively varying ways of understanding the phenomenon, which were considered via six themes of expanding awareness. The first category of description encompasses a view of teaching as *transmitting established knowledge*, whereas the sixth encompasses a view of teaching as *helping students grow as independent learners*. The categories in between consist of: *providing and facilitating understanding, applying theory to practice through interaction, and helping students think independently*. These categories are in line with findings reported in earlier studies like: Fox (1983), Dall Alba (1991), Samuelowicz and Bain (1992), Trigwell et al (1994), Trigwell and Prosser (1996), and Kember (1997). Similarly to the present study, these researchers identified five different conceptions that they classified into three broad categories: knowledge conveying categories, intermediate categories, and facilitation of learning categories. The knowledge conveying categories are reported to be centered on teaching, the teacher and on the established discipline knowledge while the facilitation of learning categories are said to be focused upon learning, the students' role, and the students' construction of knowledge. The intermediate categories mark the transition from the first category to the last one. In the intermediate categories teacher-student interaction is a common element which bridges the gap between transmission of knowledge and facilitation

of learning. It is seen as crucial since it is through this interaction that students become involved to develop their understanding, knowledge, attitudes and skills. Other researchers like Martin and Bella (1991), Pratt (1992), Ramsden (1992), Prosser et al (1994), Kember and Kwan (2000) identified a smaller number of conceptions which ranged between two to four. Nevertheless, these were classified into the three aforementioned broad categories.

After the interview, the lecturers were administered a lecturers' conceptions of teaching and learning questionnaire as a follow-up and in order to cross check the results of the phenomenographic interview. The analysis of the phenomenographic interview data allowed the categories of conceptions to emerge while with the analysis of the questionnaire data, the categories did not emerge; they were predefined. The categories that emerged from the phenomenographic interview were used to content analyze the questionnaires. The questionnaire results support significantly the findings of the phenomenographic interview. The five conceptions of teaching identified in the present study are described below:

Category 1: Transmitting Established Knowledge

This conception focuses mainly on knowledge transfer. The knowledge is possessed by the lecturer to be transmitted to students through lectures. It is the responsibility of the lecturer to provide information, explanations, analysis and interpretations of knowledge that students are expected to reproduce. Even for text analysis, the lecturer transmits his own analysis to students.

Category 2: Providing and Facilitating Understanding

Similarly to the previous conception, the lecturer is the authority who possesses knowledge to be transferred to students. The latter need to remain attentive to lecturers' explanations, to participate by reacting to the information presented. While the lecturer explains, students utter synonyms, key words concepts, definitions or some examples. They are expected to reproduce their lecturer's reflection. Unlike the previous conception, the lecturer does not wait for students to ask for further explanations for a better understanding of theoretical knowledge. He checks for their understanding and uses all means to keep students focused and avoid boredom.

The aim in these two conceptions is to support students' theoretical knowledge involving: events, principles, and theories. In these conceptions, students develop understanding of knowledge within the subject and in a direction corresponding to that of the lecturer. Thus, students may not develop critical thinking.

Category 3: Applying Theory to Practice through Interaction

The teaching process is seen as being deductive. Students are exposed to rules and definitions to support theoretical knowledge that they are then required to turn into practical knowledge to develop their language skills. The knowledge is possessed by the lecturer to be conveyed to students by means of handouts and explanations. It is the lecturer's responsibility to decide on content, to design lessons, and to facilitate students' understanding of the theoretical underpinnings of a lecture. During the practice stage, the lecturer provides activities to encourage students to put their theoretical knowledge into practice, to become

task performers, and to go through a process of self-assessment and peer-assessment. This conception is characterized by intensive two-way lecturer-student and student-student interaction. Unlike the previous conceptions, the teaching process is not limited to theoretical knowledge, but is extended to practice. The ultimate goal is to develop students' language skills through interaction. The lecturers in this conception pay attention to students' differences, distinguish the presence of two types of students in their classrooms, namely introverted and extroverted students. They organize group work in order to target the needs of the students who belong to each category in an individual way.

So this conception involves two stages: the first one consists of gaining and reproducing knowledge while the second one is about the application of knowledge. Students' role expands from that of being knowledge recipients to that of active participants. However, practice is limited to the subject, students are not encouraged to link that knowledge to their own lives or to their future professional lives. In addition, the role of reflection is not stressed.

Category 4: Helping Students Think Independently

Learning is inductive in that students are involved in tasks to reach information by themselves and construct their own meaning of content. Unlike the previous conceptions, students are not limited to reproduce lecturers' knowledge or turn theoretical knowledge into practical one. They are instead encouraged to develop their critical thinking: to find logical interpretations of facts, evaluate a writer's point of view, to form an opinion, and to construct arguments or counterarguments. Students are engaged in discussions to present their opinions and defend them. The lecturers explore students' prior knowledge and use it as a starting point in their teaching. Students are encouraged to do research prior to the lesson in order to reinforce this background knowledge. Lecturers target introverted and unmotivated students and encourage them to take part in the teaching learning process.

This conception focuses on independent knowing as opposed to absolute knowing (Baxter Magolda 2010). This includes the discovery of learners' own voice and the use of group work. The emphasis is on promoting learners' critical and reflective thinking. The purpose is to support students so that they understand issues from their own personal perspectives and create personal meanings. Critical thinking enables students to identify and work out causal relationships, set out arguments, and evaluate them.

Students are encouraged to be reflective thinkers to become critical thinkers. Identifying the opinions of other students is considered to play a crucial role since it enables them to become aware of their own perspectives and those of others. Hence, they end by accepting that there may be different ways of seeing the same thing. The focus on supporting learners' individual and independent thinking requires lecturers to challenge learners to think critically, to express points of view from their own perspective.

Category 5: Helping Students Grow as Independent Learners

This represents the most complex conception of teaching. It sees teaching and learning as aiming to promote the growth of the students as individuals. The class is student-centered to help learners develop metacognitive strategies and study skills. Knowledge is constructed by the students within the lecturer's framework. They are encouraged to look for information by themselves, select it, analyze it, construct their own meaning and present it to the class, develop problem solving skills, and engage in self –assessment and peer-assessment processes. While the previous conception helps learners form opinions and present them on the basis of well constructed arguments, the present conception goes farther. The ultimate goal is to engage learners in the process of anticipating the consequences of their decisions on their professional and personal lives, and on the members of the community.

Knowledge in this conception is seen as socially-constructed rather than personally constructed. The lecturers are responsible for building a safe, tolerant, and enjoyable atmosphere of learning. Such an atmosphere would create a feeling of respect, increase students' confidence, and the expression of personal opinions, critical thinking, and autonomy. Lecturers also allow the evolution of supportive interaction between members of the class.

The outcome space in table 3.1 summarizes the essential and critical aspects of the conceptions. The critical aspects or themes of expanding awareness are the following: use of content, control of content, students' prior knowledge, lecturers' roles, students' roles and consideration of students' attitudes. They represent the critical differences between the various conceptions, while at the same time highlighting what lecturers should discern and focus on when aiming to direct attention towards a particular conception.

Category Theme	Transmitting established knowledge	Providing and facilitating understanding	Applying Theory to Practice through Interaction	Helping students think independently	Helping students grow as independent learners
Use of Content	To reproduce lecturers' analytical thinking through theory	To reproduce lecturers' analytical thinking through theory	To put theoretical knowledge into practice	To change ways of thinking by forming opinions and constructing arguments	To change ways of learning by developing metacognitive strategies
Control of content	Possessed by the lecturer	Possessed by the lecturer	Possessed by the lecturer	Discovered by students within the lecturer's framework	Discovered by students within the lecturer's framework
Students' prior knowledge	Students do not possess any; they are not encouraged to develop it	Students do not possess any; they are not encouraged to develop it	Students do not possess any, they are not encouraged to develop it	Students possess some, they are encouraged to develop it.	Students possess some, they are encouraged to develop it.
Lecturers' roles	The lecturer explains and provides established understanding	The lecturer provides established analysis to facilitate students understanding	The lecturer is responsible to provide theoretical content and organize practical teaching.	The lecturer uses interaction in small groups or with the whole class or on individual basis to help students develop critical thinking	The lecturer uses interaction in small groups or with the whole class or on individual basis to help students develop metacognitive strategies

Table 3.1: The outcome space of lecturers' conceptions of teaching and learning

Category Theme	Transmitting established knowledge	Providing and facilitating understanding	Applying Theory to Practice through Interaction	Helping students think independently	helping students grow as independent learners
Students' roles	students take notes to reproduce complex knowledge and reasoning	Students take notes reproduce complex knowledge and reasoning	Students acquire theoretical information to become performers in the practical stage.	Students interpret materials to reach knowledge by themselves, form opinions and construct arguments	Students prepare lessons, present to their classmates, tutor and assess each other.
Consideration of students' attitudes	The lecturer notices students' lack of motivation but does not react.	The lecturer cares about learners' attitudes and react to it to catch their attention	The lecturer cares about learners' attitudes and react to involve them in the teaching learning situation	The lecturer cares about learners' attitudes and react to make them participate to debates	The lecturer cares about learners' attitudes and react to make them responsible of their learning

Table 3.1: The outcome space of lecturers' conceptions of teaching and learning (ctd)

The aforementioned discussion shows the hierarchical and inclusive relation between the five categories of lecturers' conceptions. Broadly speaking, the inclusive relation displayed in figure 1 can be expressed as follows:

The purpose of teaching is to transmit established knowledge to develop students' understanding in order to help them put concepts into practice, to think critically and develop as independent students.

Put differently, in category 1, the lecturer lectures and students take notes and ask for further explanations. In category 2, in addition to lecturing the lecturer takes the responsibility to make learners participate in the explanations he provides till understanding occurs. In category 3, the lecturer not only explains and helps understanding of concepts but also guides students to practice and develop their skills through intensive interaction. In category 4, the purpose is not limited to provide explanations of concepts and help students put theory into practice but to help them change their preconceived ideas about the world, form opinions and construct coherent arguments. The lecturer is not the provider of information but a guide who helps students to reach the information by themselves through interaction and meaning negotiation. In category 5, the lecturer goes beyond the aspects of the previous categories in that he helps students change from test-oriented students to autonomous learners. The purpose is to help students build understanding of the world around them as the previous categories and to teach them how to learn in a social and supportive atmosphere.

The inclusive and hierarchical organization of categories of conceptions implies that the last conceptions include aspects of the previous ones, but not the other way around. Hence, the first conception, *transmitting established knowledge*, represents the least complex conception whereas the fourth conception, *helping students think independently*, and the fifth conception, *helping students grow as independent learners* represents the most complete conceptions.

3.2- Approaches to Teaching Adopted by the Lecturers

The approaches to teaching were analyzed in terms of the strategies the lecturers adopt for their teaching as well as the intentions underlying the strategies. The intentions were found to range from one in which the lecturers want *to convey knowledge*, to one in which the lecturers seek *to change students' way of learning*. The categories in between include the following intentions: *to help students understand concepts*, *to put concepts into uncontrolled practice*, *to help students develop critical thinking*, *to change students' way of learning*.

Similarly to conceptions of teaching and learning, lecturers' intentions are organized in an inclusive hierarchy in which the highest conceptions include aspects of the previous ones. Table 3.2 summarizes the essential and critical aspects of the categories of intentions. The critical aspects are the following: objectives, preparation of content, teaching materials designed and motivation. They represent the critical differences between the different intentions. They also highlight what lecturers should discern and focus on when dealing with a particular category of intentions. For instance if a lecturer intends to *convey knowledge* and aims to change his intention towards *changing students' way of learning*, he needs to focus on the aforementioned critical aspects. In addition, this lecturer needs to be aware of the variation of each critical aspect.

Category Theme	To convey knowledge	To help students understand concepts	To put concepts into uncontrolled practice	To help students develop critical thinking	To change students' way of learning
Objectives	To reproduce lecturers' analytical thinking through theory	To reproduce lecturers' analytical thinking through theory	To help students develop language skills using the rules and strategies taught	To help students form opinions and construct arguments	To help students learn independently
Preparation of content	To write lectures and memorize them and to design short reading texts with questions	To write lectures and memorize them and to design short reading texts with questions	To design handouts including some theory in addition to an important amount of practice	To select authentic audiovisual materials, texts, to design tasks implemented inductively, and to design a handout comprising a summary of the lesson	To select relevant sections of articles to be used inductively. To design activities and a handout comprising a summary of the lesson, topics for presentations
Teaching materials designed	Short reading texts and comprehension questions used deductively	Short reading texts and comprehension questions used deductively	Handouts, pedagogical, semi-authentic, and authentic materials used deductively.	Questions and activities in accordance with the audiovisual teaching materials practiced inductively to activate students' schemata and challenge their creativity	Reading texts followed by questions , exercises. All is practiced via group discussion, in an inductive way to activate students' schemata and challenge their creativity.
Motivation	It is not the lecturer's responsibility to motivate students extrinsically nor intrinsically	Extrinsic motivation	Extrinsic motivation	Intrinsic motivation	Intrinsic motivation

Table 3.2: The outcome space representing lecturers' intention

As far as strategies are concerned, they range from one in which the *lecturer is the focus* to one in which *the student is the focus*. The intermediate category encompasses *lecturer-student interaction*. Table 3.3 shows the hierarchical and inclusive relation between the three categories that represent lecturers' strategies. This inclusive relationship can be expressed as follows:

Lecturers offer lecturer-focused teaching to create student-lecturer interaction in order to encourage students to be the focus of the teaching-learning situation.

This indicates that the categories are ordered from less to more complete strategies of teaching. At the lowest level, category 1, the lecturer takes the entire responsibility for the teaching he offers to students. The latter have little responsibility: they listen, take notes and ask for clarifications. The shift is then to the intermediate category where the lecturer creates a two-way intensive student-teacher interaction to make learners contribute to the situation and develop their practical skills in the field. Finally, the most complete strategy, category 3, focuses on students. They are encouraged to be responsible for their own learning to become independent.

Table 3.3 summarizes the essential and critical aspects of the strategies. Teaching steps, students' learning styles, assessment, lecturer and students' responsibility for learning, attention. They represent the critical differences between the various strategies and emphasize what lecturers should discern and focus on when aiming to direct attention towards a particular conception.

Theme	Category	Lecturer-focused strategy	Lecturer-student interaction strategy	Student-focused strategy
Teaching steps		Deductive	Deductive	Inductive
Students' learning styles		Not taken into account	The lecturer accommodates to the differences	The lecturer accommodates to the differences
Assessment		Formal summative assessment: test and exam	Formal summative assessment in addition to informal formative assessment	Formal summative assessment in addition to informal formative assessment
Lecturer and students' responsibility for learning		The lecturer assumes all responsibility	The lecturer assumes all responsibility for theory. As for practice, the responsibility is shared	Lecturers create opportunities for students to assume responsibility
Attention		The class as a whole	The class as a whole when concerned with the teaching of theory, students individually when dealing with practice	Individual students and the class from time to time.

Table 3.3: The outcome space representing lecturers' strategies

The combination of strategies and intentions yielded five approaches to teaching that are qualitatively different from one another: *lecturer-focused strategy with the intention to convey knowledge*, *lecturer-focused strategy with the intention to help students understand concepts*, *lecturer-student interaction strategy with the intention to put concepts into uncontrolled practice*, *student-focused strategy with the intention to help students develop critical thinking*, *student-focused strategy with the intention to change students' way of learning*. These categories are in line with the findings reported in early studies carried out by Trigwell et al (1994), and Trigwell and Prosser (1996). They identified the following five categories whose intentions are close to the ones obtained in the present study: teacher-focused strategy with the intention of conveying information to students, teacher-focused strategy with the intention that students acquire the concepts of the discipline, a teacher-student interaction strategy with the intention that students acquire the concepts of the discipline, a student-focused strategy aimed at students developing their conceptions, a student-focused strategy aimed at students changing their conceptions. Martin et al (2000) identified an additional category in which the teachers do not only engage students with the discipline knowledge but also in the practice of the discipline with the intention of helping students develop their conceptual understanding. This category is situated between the two last categories that prosser et al (1994) and Trigwell and Prosser (1996) identified.

In addition to the phenomenographic interview which aimed at investigating lecturers' approaches to teaching, a classroom observation scheme along with the unstructured observation were used to cross check the results of the interview with respect to lecturers' strategies. Since intentions deal with the way lecturers intend to approach their teaching, they cannot be observed. Hence, the classroom observation aimed at investigating lecturers' strategies only. The findings of the observation confirmed the results of the phenomenographic interview on strategies reported by the lecturers. Similarly to the questionnaire, the classroom observation did not allow to construct the categories but to confirm the results of the interview, knowing that the observation scheme was constructed out of the categories that emerged from the interview. The five approaches to teaching identified in this study are the following:

Category 1: Lecturer-Focused Strategy with the Intention to Convey Knowledge

This approach is one in which the lecturer uses a teacher focused strategy with the intention of conveying knowledge. The teacher reads books and articles related to the topic, analyses, sums up, paraphrases, and writes his lectures focusing on the aspects he considers to be important. Once in the classroom, the lecturer reads his notes and explains to students who are silent most of the time, listen and take notes. Students assume little responsibility in the teaching learning process and interaction is essentially of a one way lecturer-student type. Although the lecturer aims at developing learners' critical and analytical thinking, they receive and cumulate teacher's knowledge and analysis of the concepts of the discipline to reproduce it for the exams. Assessment is formal and summative.

Category 2: Lecturer-Focused Strategy with the Intention to Help Students Understand Concepts

This approach is one in which the lecturer adopts a teacher focused strategy to help learners understand concepts of the discipline. Similarly to approach 1, the lecturer is responsible for the reading resources, writing his lectures in a simplified way, and presenting them to his students. But unlike approach 1, the lecturer elicits guesses,

comments, and answers to make students participate; interaction is two way lecturer-student. The aim is to help learners understand the lecturer's reflection and analysis of concepts, to visualize them, and reproduce them in their own words for the tests and exams. Assessment is summative and formal, motivation is extrinsic

Category 3: Lecturer-Student Interaction Strategy with the Intention to Put Concepts into Uncontrolled Practice

This approach is one in which the lecturer adopts a lecturer student interaction strategy to help learners to put concepts into practice, and to move from guided to unguided practice. Like approach 1 and 2, it is the lecturer's responsibility to find the information of the discipline and present it to students; the lecturer equips students with all the necessary theoretical rules, guidelines and explanations. But unlike the two previous approaches in which practice is confined to reading texts, answering questions, and filling the gaps, this practice is intensive to encourage students to move from controlled exercises to uncontrolled production. The purpose is to show how knowledge can be used in practice to help learners develop their language skills. The lecturer engages in intensive interaction with students to explain concepts, rules, and to guide them in their practice. A two way student-student interaction is encouraged through group work. Lecturers move from one group to another to assist students while they perform different tasks. Lecturers use external motivators like: authentic texts, and an enjoyable atmosphere. They also accommodate for students' differences in that they answer the needs of the extroverted as well as the introverted students. They use formal and summative assessment besides informal and formative assessment

Category 4: Student-Focused Strategy with the Intention to Help Students Develop Critical Thinking

This approach is one in which the lecturer adopts a student-focused strategy to help learners develop their critical thinking. Unlike approaches 1,2 and 3; the lecturer encourages learners to be responsible and focuses on what they do in the teaching learning situation. Students discover and /or reconstruct knowledge within the teacher' framework. Teaching is presented inductively by the lecturer through tasks and group work. Learners need to reach knowledge by themselves and to form opinions. The lecturers help them develop the necessary skills to evaluate critically a reading text, a literary work or a movie; to identify the arguments; to take position knowingly; to express it in an academic way on the basis of well constructed arguments. Intrinsic motivation is used by raising students' awareness about the usefulness and relevance of university learning as well as the value of knowledge and intellectual skills.

Category 5: Student-Focused Strategy with the Intention to Change Students' Way of Learning

This approach is a student focused strategy with the intention to change students' way of learning. Like approach 4, students are made responsible for their learning. It is not accepted that they be passive recipients; they are expected to contribute actively to the learning process which is made inductive. But unlike the previous approach, learners are expected to do more than taking positions, constructing arguments, and changing their misconceptions. They are encouraged to look for reliable and relevant resources, construct

their own understanding of knowledge, present it to the class, debate with the lecturer and their classmates, develop their own notes and perform tasks. Opportunities are also created for students to tutor each other, to develop their abilities to manage group work and to engage in peer assessment process for the sake of developing their abilities to be supportive fellow students. They are encouraged and guided to change from test-oriented learners to autonomous students; that is to say, to transform into learners who see the importance of knowledge itself rather than the importance of scores. Hence, learners are intrinsically motivated; they are sensitized to the usefulness of learning and the relevance of metacognitive strategies development to build self-confidence and self-esteem. Assessment is formal and summative in addition to being informal and formative. Lecturers notice the presence of different types of students: visual/auditory, extroverted/introverted, students needing translation; they accommodate for these differences.

Lecturers' intentions *to help students develop critical thinking* and *to change students' way of learning* are the highest in the hierarchy of lecturers' intentions while *Student-focused strategy* is highest in the hierarchy of lecturers' strategies. Since the approaches of teaching result from the combination of intentions and strategies, this implies that the students-focused strategy with the intention to develop students' critical thinking approach and the student-focused strategy with the intention to change students' way of learning approach are the most complex and complete approaches. They are characterized by the fact that lecturers: help students develop cognitive strategies in addition to metacognitive ones to become critical thinkers and independent learners, select updated and authentic teaching materials: audio-visually, texts, articles, design tasks that help activate students' schematic knowledge and create group discussions, implement these tasks via group work, develop students' intrinsic motivation by sensitizing them to the usefulness of university teaching and learning, implement inductive teaching, accommodate to differences in students' learning styles, use formal summative assessment along with informal formative assessment, create increasing opportunities for students to assume responsibility, address students individually most of the time through group work.

3.3- The Link between Lecturers' Conceptions and Approaches to Teaching

Table 3.4 shows a close relationship between the way the fourteen lecturers approached their teaching of a particular subject and their conceptions of teaching and learning of that subject.

Conception Approach	Transmitting established knowledge	Providing and facilitating understanding	Applying theory to practice through interaction	Helping students think independently	Helping students grow as independent learners
Lecturer-focused strategy to convey knowledge	Lecturer A1				
Lecturer-focused strategy to help students understand concepts		Lecturer B2			
Lecturer-student interaction strategy to put concepts into uncontrolled practice			Lecturer A3, lecturer B5 Lecturer A5, Lecturer B6 Lecturer A7		
Student -focused strategy to develop students' critical thinking				Lecturer A2 Lecturer A4 Lecturer A6 Lecturer B7	
Student-focused strategy to change students' way of learning					Lecturer B1 Lecturer B3 Lecturer B4

Table 3.4 Correlation between lecturers' conceptions and their approaches to teaching

The table indicates that lecturers who adopted a lecturer-focused approach to their teaching of a topic conceived of their teaching in simple ways in that they consider that teaching is about transmitting lecturers' understanding and reflection. Lecturers who approached their teaching from a lecturer-student interaction perspective held a conception of teaching positioned as an intermediary category in which interaction is a key principle to help students move from theoretical teaching provided by the lecturer to free production of language. Lecturers who approach their teaching from a student-focused perspective conceive of teaching in more complete ways. They seek to help students develop their ability to think critically and to learn independently. Thus lecturers who adopted more complete approaches ranked the highest in the hierarchy held more complete and complex conceptions while lecturers who adopted simple approaches ranked lower in the hierarchy. Lecturers who adopted simple conceptions ranked lower in the hierarchy. Lecturers who adopted the intermediated lecturer-student approach held a medium conception of the hierarchy.

This is in line with earlier studies carried out by Trigwell (1994), Trigwell and Prosser (1996), Kember and Kwan (2000), Martin et al (2000), and Hativa et al (2001). These studies are summarized in the background to the research study (see p 3)

The correlation established between lecturers' conceptions of teaching and their approaches to teaching implies that lecturers' teaching practices are guided by their conceptions of teaching and learning. This goes in line with the findings of previous research (Kember & Kwan 1997, Trigwell et al 1994, Trigwell & Prosser 1996). Hence, one can argue that a change in conceptions of teaching and learning of lecturers would be accompanied by a change in their teaching approaches as suggested by Bowden (1989), Gibbs (1995), Gow&Kamber (1993), Ramsden (1992), Trigwell (1995). In order for lecturers to adopt a student-focused strategy with the intention to help students become critical thinkers and autonomous learners, an approach in which lecturers' conceptions of teaching and learning are explored and modified towards the most complex conception needs to be implemented in a teacher development program.

Research in belief change showed that experience on its own without the intervention of any other factors such as preservice and inservice training can lead to belief change with both experienced and preservice teachers (Alger 2009, Simmons et al 1999). Marton and Pang (2008), however, reported that two kinds of changes are often described in research: changes due to development or experience and changes due to learning. This section is concerned with suggestions to help lecturers develop and change their conceptions of teaching and learning, and approaches to teaching through learning.

The conceptual change approach to teachers' development can be a means to achieve this goal. It can be used with inservice lecturers and preservice lecturers or postgraduate students. The latter receive presently a theoretical training in the field of teaching rather than a practical one. They study courses like: methods of language teaching, teaching language skills, assessing language skills, curriculum design, theories of language acquisition, teacher identity. This is similar to teacher training programs that provide teachers with prescribed skills on different topics as teaching language skills, testing, classroom interaction, lesson planning, textbook evaluation in order to change their teaching practices and improve their students' learning outcomes. However, many staff developers have pointed out to the limitations of such approaches in that the

participants do not know how to implement these methods in the classroom or use the methods in a mechanical way (Gibbs 1995, Trigwell 1995).

Hence, as an alternative to the theoretical and prescriptive training the lecturers of the department attend, a conceptual change staff development programme can be implemented with preservice and inservice lecturers. It would help them understand and perceive the critical aspects to identify divergences between two ways of viewing teaching and learning, and two ways of approaching teaching. The foundation of developmental phenomenography which is rooted in the Theory of Variation is pedagogical. It aims to apply the outcomes of research in order to help students and teachers to learn, and to expand their thinking (Bowden 2005). The aim is to use the theory of variation to create a learning environment in which students and teachers improve their learning by viewing a given phenomenon differently, in a more sophisticated way. This is to help learners or teachers 'discern certain aspects of the phenomenon that were previously not focused on or that were taken for granted and to bring those aspects into view' (Marton and Pang 2008:540). The interest, then, is in what the lecturers have to take into account when they are teaching in the direction of increasing complexity (Marton & Pang 2008).

Towards that aim the conceptual change staff development program would consist of workshops that would develop lecturers' conceptions from the simplest to the most complex and complete ones. This program would be based on the model for conceptual change program designed by Ho et al (2001) with reference to a theoretical base provided by four theories of change: Argyris & Schon's (1974) theory of transition between theories of action, Posner et al's (1982) theory of conceptual change, and the model of teacher change proposed by Shaw et al (1990).

On the basis of these components, the workshops would consist of the following stages:

Stage One: Exploring the participants' conceptions of teaching and learning:

Stage Two: Exploring the participants' reported approaches to teaching (intentions and strategies)

Stage Three: Raising the participants' awareness about the range of conceptions that exist in a group.

Stage Four: Raising the participants' awareness about the range of approaches of teaching that exist in the group.

Stage Five: Exposing the participants to different models of conceptions and approaches found in the literature

Stage Six: Analyzing the aspects of participants' conceptions and approaches

Stage Seven: Exposing participants to good teaching practices

Stage Eight: Designing a lesson

The aim of this study was to identify and analyze the conceptions of teaching and learning held by a sample of lecturers, to investigate their approaches to teaching they adopt, and to examine whether any correlation exists between those conceptions and approaches. In terms of conceptions of teaching and learning, the study showed five

qualitatively varying ways of understanding the phenomenon, which were considered via six themes of expanding awareness. The categories are ordered from the simplest one to the most complex as follows: (i) *transmitting established knowledge*, (ii) *providing and facilitating understanding*, (iii) *applying theory to practice through interaction*, (iv) *helping students think independently*, (v) *and helping students grow as independent learners*. These categories were found to hold an inclusive relationship. The most complex and sophisticated categories include aspects of the previous ones, but not the other way around. As far as approaches to teaching are concerned, the data analysis revealed the following five approaches to teaching that are qualitatively different from one another: (i) *lecturer-focused strategy with the intention to convey knowledge*, (ii) *lecturer focused strategy with the intention to help students understand concepts*, (iii) *lecturer-student interaction strategy with the intention to put concepts into uncontrolled practice*, (iv) *student-focused strategy with the intention to help students develop critical thinking*, (v) *student-focused strategy with the intention to change students' way of learning*. The correlation between lecturers' conceptions of teaching and their approaches implies that lecturers' teaching practices are guided by their conceptions of teaching and learning. Hence, in order for lecturers to implement the most complete approaches to teaching in the classroom, they need to hold the most complete conceptions of teaching and learning. Hence, a program that aims at exploring lecturers' conceptions of teaching and learning to modify them in the direction of the most sophisticated conceptions would help lecturers adopt a student-focused strategy with the intention to help students become critical thinkers and autonomous learners. The conceptual change approach to staff development can be a means to achieve this goal. It can be used with preservice and inservice lecturers.

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