

The Influence of EFL Teachers' Educational Beliefs on Classroom Practices

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ABSTRACT: *Teaching English as a foreign language is given a vital concern in the Algerian field of education due to the major role English plays in the modern world. Many research papers have been devoted to find ways to make the process of teaching/ learning English successful and evidently found that the educational beliefs or the conceptions teachers hold about teaching and learning have a direct influence on shaping teachers' classroom practices and figuring their students' learning experience. Many research papers have been devoted to find ways to make the process of teaching/ learning English successful and evidently found that the educational beliefs or the conceptions teachers hold about teaching and learning have a direct influence on shaping teachers' classroom practices and figuring their students' learning experience. This study is an attempt to investigate Algerian teachers' conceptions of teaching and learning and the potential relationship existing between these conceptions and the teaching approaches. To reach this aim, ten (10) teachers of English have participated in the study. The data were collected through classroom observation, the Conceptions of Teaching and Learning Questionnaire (CTLQ) and the Approaches to Teaching Inventory (ATI). The results revealed teachers' dominant conceptions and prevailing beliefs about teaching and learning and showed the salient impact these conceptions have on their teaching approaches. The study concludes with some pedagogical implications addressed to provide policymakers with insightful information about the current educational practices and the EFL contemporary learning setting aiming to inform and enhance pre-service teachers' education program as well as in-service teachers' professional training and development.*

KEYWORDS: Teachers' conceptions, educational beliefs, teaching approach, teacher's education program, teacher's professional training

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1. Introduction

Teachers' conceptions about the teaching of English as a foreign language are widely linked to the methods they use. These conceptions are believed to have a great influence on the teaching process (Stern, 1983, as cited by Johnson, 1992). When teachers hold traditional conceptions of teaching, they perceive teaching as a process through which certain information or knowledge are transmitted by the teacher who is the centre of the class. This may raise problems and make learning a difficult task because students have different learning styles that make their perceptions of various learning forms different too. Kember and Gow (1994) claim that the way teachers think about teaching and learning and the way they approach teaching in their own practices are associated with students' approaches to learning.

The quality of learning English does not depend only on students' abilities but, to a great extent, on teachers' methods too. Teachers' practices in class deeply reflect what they think. Their conceptions about the world will impact the way they teach (Richards & Lockhart, 1994). Research in the area of teaching approaches show that students' approaches to learning are influenced by the way teachers teach (Entwistle et al., 2003; Entwistle & Ransden, 1983; Kember & Gow, 1994; Prosser & Trigwell, 1999).

Researchers have been investigating the various factors that may affect teachers' classroom practices. Rollnick, et al., (2008) note that knowledge of the concepts of subject-matter is able to encourage teachers to use innovative learning approaches and practices. Yet, even teachers with proper knowledge of the subject matter may use different teaching strategies and practices due the teaching conceptions they hold. The conception of teaching and learning is the teacher beliefs about the proper ways or methods to implement teaching and learning. In this case, it also includes a conception of the role of teachers and students in the learning activities (Baumert & Kunter, 2013).

Teachers who have traditional teaching/learning conceptions believe that the teacher is a source of knowledge and their classrooms are mainly teacher-centered. Conversely, teachers who believe in the importance of learners' active role in the learning process tend to use teaching as a process of discovery and exploration where learners are encouraged to think critically and work collaboratively to promote and build knowledge rather than receive it. Knowledge is therefore constructed and not transmitted.

Recent educational reforms have, consequently, dictated new roles to teachers and learners. In the modern classroom, teachers are no longer knowledge sources and transmitters but they are facilitators for students in discovering and constructing knowledge leading the learning approach to change from teacher-centered to learner-centered. Subsequently, learners' role changes from passive receivers to active participants in the teaching learning process. However, if the teachers' beliefs are not initially constructivist, his/her constructivist teaching approach is doomed to failure (Anderson & Piazza, 1999). That is, we cannot anticipate any innovative changes obtained from educational reforms unless a deep understanding of teachers' beliefs is achieved.

Based on aforementioned descriptions, the present study attempts to investigate Algerian teachers' conceptions of teaching and learning and the potential relationship existing between these conceptions and the teaching approaches. To reach this aim, the researcher addresses the following questions:

- 1) What are the EFL teacher's conception of teaching and learning?
- 2) What are the EFL teachers' teaching approaches?
- 3) What is the relationship between the EFL teacher's conception and the teaching approach (practice) in the classroom?

2. Conceptual Framework

2.1. Conceptions of Teaching and Learning

Teachers' conceptions about teaching and learning refer to teachers' beliefs about their preferred ways of teaching and learning. These include the meaning of teaching and learning and the roles of teachers and learners (Chan & Elliot, 2004). Moreover, Richards (1996) assumes that beliefs are the outcomes of teachers' evolving theories of teaching which reflect teachers' epistemological beliefs and individual philosophies of teaching developed from their experience of teaching and learning, their teacher education experiences, and from their own personal beliefs and value systems. Hence, the beliefs are formed early in life as a result of a person's education and experience and strong beliefs about learning and teaching are well established by the time a student completes schooling (Nespor, 1987).

Teachers' beliefs include ideas about what makes an effective teacher and how students should behave, and, though usually unarticulated and simplified, they need to be brought into teacher preparation programs (Richards, 1996). There are two chief conceptions of teaching and learning: traditional and constructivist. Teachers with traditional conceptions advocate teacher-centred teaching strategies. The teacher is the source of information and the learner is the passive receiver of knowledge. In contrast, teachers with constructivist conceptions utilize student-centred teaching strategies because this type of learning will help students to actively participate in the learning process as they develop critical thinking and collaboration skills (Chan & Elliot, 2004; Cheng, Chan, Tang, & Cheng, 2009).

2.2. Teaching Approach

Teaching approach refers to the way teachers' beliefs are put into practice (Lam & Kember, 2006). It represents classroom practices and teaching methods implemented by teachers. In other words, the teaching approach encompasses the distinct qualities exhibited by a teacher that are consistent from one situation to another regardless to the content being taught (Conti, 2007).

Two main opposite approaches are distinguished a teacher-centered/traditional and a learner-centered/constructivist approach to teaching (Kember & Kwan, 2000; Samuelowicz & Bain, 2001; Trigwell & Prosser, 1996; Vermunt & Verloop, 1999). In the traditional teaching approach, the teacher is the primary source of information who transmits knowledge in a direct instructional strategy. In the constructivist teaching approach, on the other hand, the learner is the center of the educational process. The teacher is a facilitator who encourages learners to engage actively in constructing knowledge.

3. Methodology

The research attempted to examine teachers' conceptions of teaching and learning, their teaching approach and the potential relationship between these conceptions and the favored teaching approach. The study is mainly descriptive with a qualitative research design. The study was conducted on ten (10) EFL secondary school teachers in Biskra during the academic year 2022/2023. The data were collected through classroom observation, the Conceptions of Teaching and Learning Questionnaire (CTLQ) and Approaches to Teaching Inventory (ATI). Every teacher was observed three times in their ordinary EFL classes. The CTLQ was administered before the observation session to obtain information about teachers' conceptions and beliefs about teaching and learning. In addition to that, the ATI was conducted to determine teachers' preferred teaching approach. The objective of using classroom observation is to collect data about classroom atmosphere, teachers' dominant teaching methods and styles, and the prevailing teaching

approach. It is also used to see whether students were motivated and participated in class activities or not. Neither teacher nor students have been informed about the aim of the study to avoid bias.

In the observation activity, the researcher uses observation guidelines and field notes to record important events that arise in the classroom. Teaching and learning activities are also recorded using videotape. The recordings are used to clarify the events that occur in learning activities with the results obtained in the observation guidelines and field notes. In learning activities, the observed teachers use their own designs and learning artifacts without intervention or request from the researcher. Thus teaching and learning take place naturally in accordance with the habits of teaching in class. It should be noted that the terms “conceptions” and “beliefs” are used interchangeably in this research.

The CTLQ is a simple survey instrument developed by Chan (2001) to measure teachers’ beliefs about teaching. The CTLQ is a two-factor 30 items questionnaire with a Likert-type scales ranging from 5=Strongly Agree to 1=Strongly Disagree. The questionnaire contains two subscales. The first 18-items subscale measures traditional conceptions while the second 12-items subscale measures constructivist conceptions.

The ATI, initially developed by Trigwell, Prosser and Ginns (2005), is a 22-items scale in which teachers are asked to respond a five-point Likert scale of (1 = “only rarely” to 5 = “almost always”). The ATI is divided into two 11-item subscales. The first subscale represents the traditional/teacher centered approach and the second subscale is the constructivist/student centered scale. The data collected were computed and analyzed and the relationship was examined using Pearson correlation coefficients.

4. Results and Discussion

This study was intended to explore secondary teachers’ conceptions of teaching and learning and their teaching approach preferences. The data collected through questionnaires were analyzed and the results are presented as follows.

Teachers	Traditional Conceptions		Constructivist Conceptions	
	Mean	SD	Mean	SD
A	2.22	1.13	3.58	0.95
B	2.55	1.21	3.08	1.03
C	2.61	1.25	3.83	1.14
D	3.72	0.93	2.25	1.29
E	3.94	0.84	1.83	0.89
F	3.83	0.95	2.56	1.11
G	3.55	0.95	2.25	1.01
H	3.61	0.95	2.5	1.04
I	3.77	0.97	2.41	1.18
J	3.72	0.73	2.08	1.03
N=10	3.35	0.60	2.63	0.61

Table 1: Teachers’ Traditional and Constructivist Conceptions of Teaching and Learning

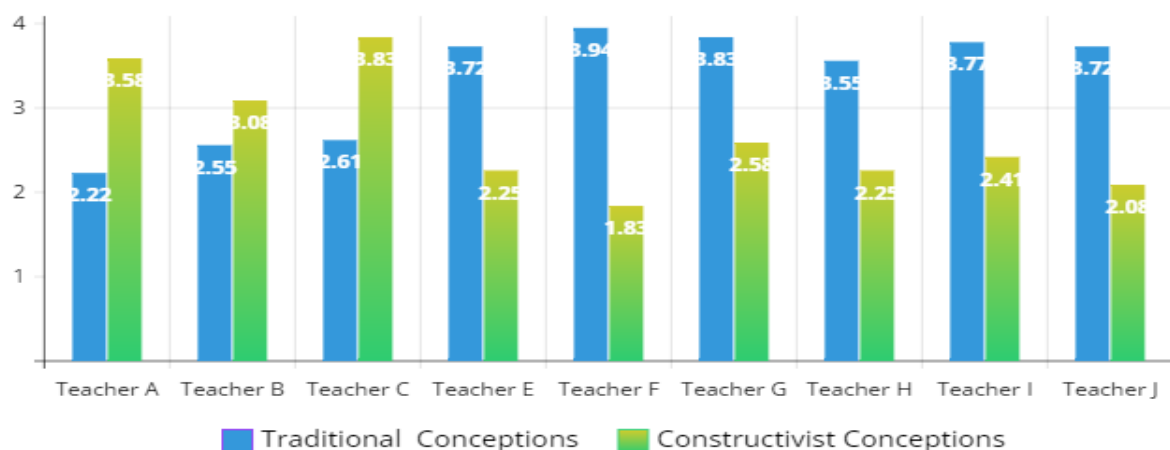


Figure 1: Teachers' Traditional and Constructivist Conceptions of Teaching and Learning

As the data in table 1 and graph 1 show most teachers in the sample were found to possess higher traditional conceptions of teaching and learning ($M=3.35$, $SD=0.60$) than the constructivist conceptions ($M=2.63$ and $SD= 0.61$). They believed that it is very important to keep students confined to the textbooks and keep quiet following the teacher's instruction because learning takes place through drill and practice. Teachers transmitted information by lecturing, instructing and explaining whilst learners' primary role was tailored towards absorbing as much information as possible.

Teachers with constructivist conceptions, however, believed that learning is an active process wherein learners play a major role. Teachers with constructivist teaching and learning conceptions regarded it very important to understand learners' feelings and needs. They thought that it is essential to encourage learners to take part in building their knowledge. This can be achieved by providing learners with opportunities where they can ask, enquire, criticize, explore, discuss and share their ideas.

Teachers	Traditional Approach		Constructivist Approach	
	Mean	SD	Mean	SD
A	2.09	1.37	4.09	0.99
B	2.45	1.37	3.45	1.49
C	2.27	1.21	3.63	1.29
D	3.36	1.49	2.27	1.21
E	3.54	1.23	2.72	1.60
F	3.81	0.93	2.45	1.07
G	3.90	0.99	2.18	1.19
H	3.63	1.49	2.54	1.15
I	3.72	1.42	2.63	0.48
J	3.90	1.23	2.36	0.77
N=10	3.26	0.67	2.83	0.62

Table 2: Teachers' Teaching Approach Preference

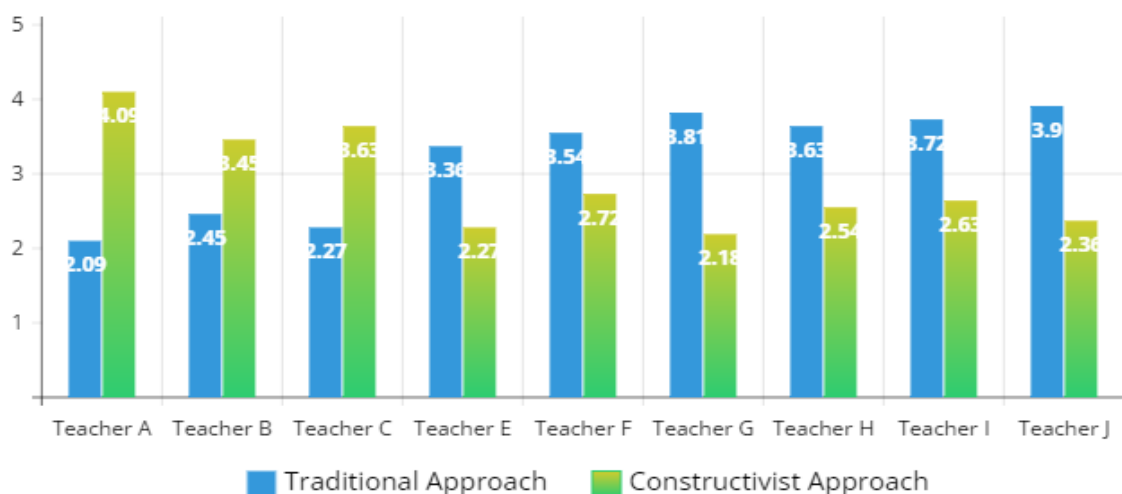


Figure 2: Teachers' Teaching Approach Preference

The obtained results revealed that the prevailing teaching approach is the traditional approach. As shown in table 2 and graph 2, the majority of teachers ($M = 3.26$, $SD = 0.67$) preferred the traditional teaching approach with traditional classroom practices in contrast to the constructivist approach ($M = 2.83$, $SD = 0.62$). This implies that most teachers preferred to focus on information transmission, lesson presentation and assessment.

	Traditional Approach	Constructivist Approach
Traditional Conception	0.9431*	-0.9212*
Constructivist Conception	-0.8855**	0.8708**

*Correlation is significant at $p < .01$.

**Correlation is significant at $p < .01$.

Table 3: Correlation between Teachers' Teaching/Learning Conceptions and Teaching Approaches

The relationship between conceptions of teaching and learning and the teaching approach preference of teachers was also examined using Pearson correlation coefficient. As can be seen from Table 3, there is a positive relationship between teachers' beliefs and their classroom practices. High mean score of traditional conceptions is associated with higher mean scores of traditional teaching approach preference ($r = .94$, $n=10$, $p < .01$). In the same vein, data revealed a strong positive relationship between constructivist conceptions and the constructivist teaching approach ($r=.87$, $n=10$, $p<.01$). Accordingly, the teachers' conceptions of teaching and learning were found to positively correlate with their teaching approach.

There are two models of teacher conceptions of teaching and learning, namely traditional and constructivist models (Chan & Eliot, 2004). In the traditional model, the teacher is viewed as a source of knowledge and the one responsible for transmitting information. In such a model, students are passive learners; they receive knowledge from the teacher. In traditional classrooms, therefore, the learning process focuses on receiving information or knowledge from teachers. The Constructivist model, however, emphasizes active learning that is obtained through discovery and collaboration.

Based on Table 1, most teachers hold traditional conceptions of teaching and learning which is translated into traditional teaching approach as shown in table 2. The majority of those teachers presented

the lesson; then, the students recorded what the teacher wrote on the board or tried to answer the teachers' questions and did the assigned activities using their textbooks. Consequently the learning process that took place was basically knowledge transmission from the teacher to the learners.

Most teachers were not experienced and had less than 7 years of teaching. This might explain the reason behind their traditional conceptions of teaching and learning. A good number of pre-service teachers came into the profession of teaching with behaviorist/teacher-centered conceptions of teaching and learning and they maintain the same beliefs while teaching especially when they do not receive professional training (Handal & Herrington, 2003; Gill et al., 2004; Leavy, McSorley, & Bote, 2007; Chai et al., 2009). The participant teachers, with traditional beliefs of teaching and learning, claimed that they did not undergo any professional training. The in-service training they undertook was not enough to deeply understand constructivist learning and know how to implement it in their classes.

Novice teachers tend to teach the way they were taught (Britzman, 1991; Lortie, 1975). In this respect, Guilfoyle et al. (1995) note that pre-service teachers hold mature beliefs about teaching and learning that tend to be more congruent with their past experiences than with the views we are asking them to consider and they most likely to maintain these beliefs during the first years of experience. Put differently, novice teachers who have gone through traditional teaching practice in their educational career tend to consider the teacher as a source of knowledge and believe that they are required to play the same role (Chai, 2010; Trigwell & Prosser, 1996). In contrast, teachers who have been taught in learner-centered classrooms tend to view learning as meaning constructing process wherein teachers are facilitators helping learners to accumulate knowledge by themselves.

The findings show that there is a positive correlation between teachers' conceptions of teaching and learning and their teaching approach. The consistency of the relationship explains the influence of the teaching conceptions on the teaching practices (Trigwell & Prosser, 1996; Pepin, 1999; Devlin, 2006; Benken & Brown, 2008). Since teaching is often shaped by one's own prior learning experiences, it is more likely to expect teachers' teaching practices on the basis of their educational experience. In other words, the traditional didactic experience of these secondary school teachers has shaped their actual preferences and dictated the way they implement the Competency based Approach (CBA) regardless to its grounding principles. Hence, it can be argued that if pre-service and in-service teachers are exposed to a learning environment that encourages self-discovery, reflection and critical thinking and undergo professional training that allows for deep understanding of CBA and qualified pedagogical mastery of the teaching learning process, they are more likely to adopt the same teaching practice in their classrooms.

5. Pedagogical Implications

Based on the study's findings, we may say that teachers' beliefs about teaching and learning shape their instructional decisions in the classroom. Therefore, the implications of this study would be threefold. The training program should target the teachers' deep-seated conceptions by exposing them to a constructivist learning environment that challenge and deconstruct the existing beliefs. In other words, any pedagogical innovation should consider teachers' beliefs and try to adapt these beliefs as a pre-requisite for implementing successful educational reforms in Algeria. So, before speaking about CBA implementation, we need to think about what teachers believe about teaching because this is what shapes their classroom practices. Thus, there is an imperative need to better understand teachers' beliefs and gain insight into changes of beliefs in order to improve both teacher education and classroom practice (Richardson, 2003).

The researcher's major aim is not to preach for implementing the constructivist approach, rather, teachers' training programs should model the kind of interactive teaching they are calling for and to create

opportunities for the trainees (pre-and in-service teachers) to experience it as learners (Darling- Hammond, 2006; Richardson, 2010; Hogg & Yates, 2013). If teachers observe constructivist teaching strategies modelled within their own classrooms, they will be more comfortable with constructivist-based teaching principles and more likely to use them in their future classrooms (Andrew, 2007; Loughran, 1996). That is, it is not enough to teach, how to make a lesson active and interactive instead actual experience of such lessons is required (Martell, 2014; Loughran, 1996). The exhibition of constructivist teaching should be done in a way that is observed, understood and experiential across real teaching and learning contexts in different observable forms. In this vein, the results of this study indicate that the in-service teachers' meetings with the inspectors are not sufficient to successfully change or modify teaching practices. There is a need for specialized training and practical workshops where those teachers understand their conceptions of teaching and learning and realize the constant relationship between these conceptions and the teaching approach.

Teachers should be provided with opportunities where theory and practice are linked. In such context, they will be able to develop skills and strategies; and promote habits of analysis and reflection. Within the training program, teachers need to reflect on their own teaching experiences and the different instructional experiences they have gone through, then, think critically about any issues or problems related to their adopted teaching approach. After that, they will be invited to rethink their traditional approach and compare it with the constructivist instructional approach. In this respect, Lin and Chan (2007) think that the series of micro-lessons are good means of exposing pre- and in-service teachers to constructivist learning theories and environments and make them reflect upon their prior experiences as students.

Furthermore, decision makers or syllabus designers may sort to an ample of evaluative studies that compare between pre-service and in-service teacher's conceptions of teaching and learning, so that to investigate the change, maturity and development in teachers' beliefs after real classroom teaching experience. Based on the findings of such studies, decision makers and educationalists can decide on the teachers' education programs that, for instance, students at Teachers' Training Schools are following in addition to the content of the different workshops teachers have with inspectors. It is very important also to examine whether the current pre-service-teacher education program is reflective to what teachers are expected to encounter in the real instructional situations and provide remedial intervention accordingly.

Hence, Educational reforms need to consider teachers' beliefs and conceptions in order to succeed in making sustainable positive change in the teacher's classroom practices. Teachers' beliefs act as filters through which all relevant information used to prepare teachers to act in the classroom is influenced (Brown, Lake & Matters, 2009; Lopez-Iniguez & Pozo, 2014). Consequently, addressing teacher beliefs must necessarily be the first step, if any endeavour to change current teaching practices is to be attempted (Cheng et al., 2016; Richardson, 1997).

6. Conclusion

The success of educational reforms is partly determined by the way teachers implement the desired change in their classrooms. Implementing the innovative measures of the reform is doomed to failure if teachers do not hold beliefs that are compatible with the principles underpinning the educational innovation. Therefore, the conceptions teachers hold about teaching and learning have paramount importance as they inform policy makers and curriculum designers about the educational program pre- and in-service teachers need to take to achieve the target of the reform.

References

- Anderson, D. & Piazza, J. (1996). Changing beliefs: Teaching and learning mathematics in constructivist pre-service classrooms. *Action in Teacher Education*, 18(2), 51-62.
- Andrew, L. (2007). Comparison of teacher educators' instructional methods with the constructivist ideal. *Teacher Educator*, 42(3), 157-184.
- Baumert, U. & Kunter, M. (2013). The Effect of content knowledge and pedagogical content knowledge on instructional quality and student achievement. In M. Kunter; J. Baumert; W. Blum; U. Klusmann; S. Krauss; and M. Neubrand (Eds.). *Cognitive activation in the mathematics classroom and professional competence of teachers, mathematics teacher education* (pp. 175-205). New York: Springer Science+Business Media
- Benken, B.M. & Brown, N. (2008). Integrating teacher candidates' conceptions of mathematics, teaching, and learning: Across-university collaboration. *IUMPST*, 1, 1-15.
- Britzman, D. (1991). *Practice makes practice: A critical study of learning to teach*. Albany: State University of New York press.
- Brown, G., Lake, R., & Matters, G. (2009). Assessment policy and practice effects on New Zealand and Queensland teachers' conceptions of teaching. *Journal of Education for Teaching: International Research and Pedagogy*, 35(1), 61-75
- Chai, C., Teo, T., & Lee, C. (2009). The change in epistemological beliefs and beliefs about teaching and learning: A Study among pre-Service teachers. *Asia-Pacific Journal of Teacher Education*, 37(4), 351-362.
- Chan, K. W. (2001). Validation of a measure of personal theories about teaching and learning. Paper presented in the AARE 2001 Conference held at Fremantle, Perth, 2-6 December, 2001
- Chan, K.W. & Elliott, R. G. (2004). Relational analysis of personal epistemology and conceptions about teaching and learning. *Teaching and Teacher Education*, 20(8), 817-831.
- Cheng, A., Tang, S., Cheng, M. (2016). Changing conceptions of teaching: A four-year learning journey for student teachers. *Teachers and Teaching*, 22(2), 177-197
- Cheng, M. M. H., Chan, K. W., Tang, S. Y. F., & Cheng, A. Y. N. (2009). Pre-service teacher education student' epistemological beliefs and their conceptions of teaching. *Teaching and Teacher Education*, 25, 319-322
- Conti, G. (2007). Identifying your educational philosophy: Development of the philosophies held by instructors of lifelong-learners. *Journal of Adult Education*, 30(5), 19-34.
- Darling-Hammond, L. (2006). Constructing 21st-century teacher education. *Journal of Teacher Education*, 57 (10), 1-15.
- Devlin, M. (2006). Challenging accepted wisdom about the place of conceptions of teaching in University teaching improvement. *International Journal of Teaching and Learning in Higher Education*, 18(2), 112-119.
- Entwistle, N., & Ramsden, P. (1983). *Understanding student learning*. London: Croom Helm
- Entwistle, N., McCune, V. & Hounsell, J. (2003). Investigating ways of enhancing teaching-learning environments: measuring students' approaches to studying and perceptions of teaching. In E. De Corte, L. Verschaffel, N. Entwistle, J. Van Merriënboer (Eds.), *Powerful learning environments: unravelling basic components and dimensions, advances in learning and instruction series* (pp.89-107). London: Pergamom.
- Gill, M., Ashton, P., & Algina, J. (2004). Changing pre-service teachers' epistemological beliefs about teaching and learning in mathematics: An intervention study. *Contemporary Educational Psychology*, 29, 164-185.

- Handal, B. & Herrington, A. (2003). Mathematics teachers' beliefs and curriculum reform. *Mathematics Education Research Journal*, 15(1), 59-69.
- Hogg, L. & Yates, A. (2013). Walking the talk in initial teacher education: Making teacher educator modeling effective. *Studying Teacher Education*, 9(3), 311-328.
- Johnson, K. (1992). The relationship between teachers' beliefs and practices during literacy instruction for non-native speakers of English. *Journal of Reading Behaviour*, 24(1), 83-108.
- Karen Guilfoyle, K. (1995). Self-Study and Living Educational Theory. *Teacher Education Quarterly*, 22(3), 11-26.
- Kember, D. & Kwan, K. (2000). Lecturers' approaches to teaching and their relationship to conceptions of good teaching. *Instructional Science*, 28, 469-490.
- Kember, D., & Gow, L. (1994). Orientations to teaching and their effect on the quality of student learning. *Journal of Higher Education*, 65(1), 59-74.
- Lam, B. & Kember, D. (2006). The relationship between conceptions of teaching and approaches to teaching. *Teachers and Teaching: Theory and Practice*, 12(6); 693-713.
- Leavy, A., McSorley, F., & Bote, L. (2007). An examination of what metaphor construction reveals about the evolution of pre-service teachers' beliefs about teaching and learning. *Teaching and Teacher Education*, 23, 1217-1233.
- Lim, C. P., & Chan, B. C. (2007). Micro lessons in teacher education: Examining pre-service teachers' pedagogical beliefs. *Computers & Education*, 48(3), 474-494
- López-Íñiguez, G. & Pozo, J. (2014). Like teacher, like student? Conceptions of children from traditional and constructive teachers regarding the teaching and learning of string instruments. *Cognition and Instruction*, 32(3), 219-252.
- Lortie, D. (1975). *Schoolteacher: A sociological study*. Chicago: University of Chicago Press.
- Loughran, J. (1996). *Developing Reflective Practitioners: Learning about teaching and learning through modeling*. London: Falmer Press.
- Nespor, J. (1987). The role of beliefs in the practice of teaching. *Journal of Curriculum Studies*, 19(4), 317-328.
- Pepin, B. (1999). Epistemologies, beliefs and conceptions of mathematics teaching and learning: The theory, and what is manifested in mathematics teachers' work in England, France and Germany. *TNTEE Publications*, 2(1), 127-146.
- Prosser, M., & Trigwell, K. (1999). *Understanding learning and teaching: the experience of higher education*. Buckingham SRHE & Open University Press.
- Richards, J. (1996). Teachers' maxims in language teaching. *TESOL Quarterly*, 30(2), 281-296.
- Richards, J. C., & Lockhart, C. (1994). *Reflective teaching in second language classrooms*. Cambridge: Cambridge University Press
- Richardson T. (2010). Approaches to studying, conceptions of learning and learning styles in higher education. *Learning and Individual Differences*, 21, 288-293.
- Richardson, V. (1997). Constructivist teaching and teacher education: Theory and practice. In V. Richardson (Ed.), *Constructivist teacher education* (pp. 3-14). London: TheFalmer Press.
- Richardson, V. (2003). Constructivist pedagogy. *Teachers College Record*, 105(9), 1623-1640.
- Rollnick, M; Bennett, J; Rhemtula, M; Dharsey, N; Ndlovu, T. (2008). The place of subject matter knowledge in pedagogical content knowledge: A case study of South African teachers teaching the amount of substance and chemical equilibrium. *International Journal of Science and Education*, 30(10), 1365-1387
- Samuelowicz, K. & Bain, J. (2001). Revisiting academics' beliefs about teaching and learning. *Higher Education*, 41, 299-325.
- Trigwell, K. & Prosser, M. (1996). Changing approaches to teaching: A relational perspective. *Studies in Higher Education*, 21(3), 275-284.

- Trigwell, K., Prosser, M., & Ginns, P. (2005) Phenomenographic pedagogy and a revised Approaches to Teaching Inventory. *Higher Education Research and Development*, 24, 349- 360
- Vermunt, D. & Verloop, N. (1999). Congruence and friction between learning and teaching. *Learning and Instruction*, 9, 257–280.

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