

Teacher Thinking and Foreign Language Teaching

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In language teaching, the conceptualizations we have of the nature of teaching have a significant impact on our work. For example, if teaching is viewed as a science, scientific investigation and empirical research are seen as the source of valid principles of teaching. Good teaching involves the application of the findings of research and the teacher's role is to put research-based principles into practice. Alternatively teaching may be viewed as accumulated craft knowledge, and the study of the practices of expert practitioners of their craft may be seen as the primary data for a theory of teaching (Freeman and Richards 1993). In recent years an alternative metaphor has emerged--the notion of teaching as a thinking activity. This has been characterized as "a common concern with the ways in which knowledge is actively acquired and used by teachers and the circumstances that affect its acquisition and employment." (Calderhead 1987: 5)

The teacher-as-thinker metaphor captures the focus on how teachers conceptualize their work and the kinds of thinking and decision-making which underlies their practice. Rather than viewing the development of teaching skill as the mastery of general principles and theories that have been determined by others, the acquisition of teaching expertise is seen to be a process which involves the teacher in actively constructing a personal and workable theory of teaching.

This is the orientation to teaching which I want to explore in this paper, which seeks to clarify the concept of teaching as thinking, to describe research on second language teachers which has been carried out from this perspective, and to examine implications for the field of SLTE. In their survey of teachers' thought processes., Clark and Peterson (1986) focus on three major categories of teachers' thought processes: a) teachers' theories and beliefs, b) teachers' planning and preactive decision-making; c) teachers' interactive thoughts and decisions. While research on teachers' theories and beliefs tries to identify the psychological contexts which underlie teacher thinking and decision-making, research on teachers' preactive and interactive thinking seeks to identify the thinking and decision-making employed by teachers before and during teaching.

The nature of teachers' belief systems

A primary source for teachers' classroom practices is teachers' belief systems--the information, attitudes, values, theories and assumptions about teaching and learning which teachers build up over time and bring with them to the classroom. Teacher beliefs form a structured set of principles that are derived from experience, school practice, personality, educational theory, reading, and other sources. For example, in a questionnaire study of the beliefs of English teachers in Hong Kong schools, Richards, Tung and Ng (1992) found that the 249 teachers sampled held a relatively consistent set of beliefs relating to such issues as the nature of the ESL curriculum in Hong Kong, their views of the role of English in society, differences between English and Chinese, the relevance of theory to practice, the role of textbooks, and their own role in the classroom. Differences in their beliefs however resulted from the amount of teaching

experience they had and whether they subscribed to a primarily functional or grammar based orientation to teaching.

A number of studies have also sought to investigate the extent to which teachers' theoretical beliefs influence their classroom practices. Johnson (1991) in a study of this kind, used three measures to identify ESL teachers' beliefs: a descriptive account of what teachers believe to constitute an ideal ESL classroom context; a lesson plan analysis task; and a Beliefs Inventory. In the sample of teachers studied she identified three different methodological positions: a skills-based approach which views language as consisting of four discrete language skills; a rules-based approach which views language as a process of rule-governed creativity; and a function-based approach which focuses on the use of authentic language within situational contexts and which seeks to provide opportunities for functional and communicative language use in the classroom. The majority of the teachers in the sample held clearly defined beliefs which consistently reflected one of these three methodological approaches. Teachers representing each theoretical orientation were then observed while teaching and the majority of their lessons were found to be consistent with their theoretical orientation. A teacher who expressed a skill-based theoretical orientation generally presented lessons in which the focus was primarily on skill acquisition. A teacher with the rule-based orientation tended to employ more activities and exercises which served to reinforce knowledge of grammatical structures. She constantly referred to grammar even during reading and writing activities, for example by asking students to identify a key grammatical structure and to explain the rule which governed its use. The function-based teachers, on the other hand, selected activities which typically involved the learners' personal expression, teaching word meaning and usage through a meaningful context, reading activities which focused on the concepts or ideas within the text, and context-rich writing activities where students were encouraged to express their ideas without attention to grammatical correctness.

Teacher belief systems have also been studied in terms of how they influence the thinking and practice of novice teachers. The belief system of novice teachers as they enter teaching often serve as a lens through which they view both the content of the teacher development program and their language teaching experiences. For example, Almarza (1994) studied a group of four student teachers in a foreign language teacher education program in the UK, and examined how the relationship between the teachers' internalized models of teaching, often acquired informally through their experience as foreign language learners, interacted with the models of teaching they were introduced to in their teacher education program.

Almarza's study shows that while a teacher education program might be built around a well-articulated model of teaching, the model is interpreted in different ways by individual trainee teachers as they deconstruct it in the light of their teaching experiences and reconstruct it drawing on their own beliefs and assumptions about themselves, language, teaching learners and learners.

Teachers' preactive decisions

An issue that has long been of interest in understanding how teachers conceptualize their work has been the question of teacher planning. The planning of a lesson is a complex problem-solving task, involving thinking about the subject matter, the students,

the classroom and the curriculum, during which the teacher transforms and modifies an aspect of the curriculum to fit the unique circumstances of his or her class (Clark and Peterson 1986). But how does this process occur and what kinds of thinking are involved? And do experienced and novice teachers differ in the thinking they bring to this process?

In an influential paper, Shulman (1987) characterized these processes as pedagogical reasoning. Shulman describes the process in these terms:

I begin with the assumption that most teaching is initiated by some form of "text": a textbook, a syllabus, or an actual piece of material the teacher or student wishes to have understood. The text may be a vehicle for the accomplishment of other educational purposes, but some sort of teaching material is almost always involved.

Given a text, educational purposes, and/or a set of ideas, pedagogical reasoning and action involve a cycle through the activities of comprehension, transformation, instruction, evaluation, and reflection.

One approach to exploring teachers' pedagogical reasoning is to give teachers with different degrees of experience and expertise identical tasks to perform, and then to examine differences in how they go about completing the tasks (Berliner 1987). For example, I recently compared two groups of teachers--a group of student teachers in the second year of a pre-service TESL degree, and a group of experienced teachers who had several years teaching experience and Masters degree in TESL. Their task was to plan a reading lesson for an ESL class at lower secondary level around a short story called "Puppet on a String".

In examining the lesson plans prepared by the two groups, those produced by the student-teachers devoted much of the lesson plan to trying to communicate the linguistic content of the text to the students. Many used a modal format for a reading lesson studied in a methodology class--with a sequence of pre-reading, while-reading and post-reading activities built around the story. The main problems the student-teachers anticipated had to do with the vocabulary load of the story.

The experienced teachers offered a much greater variety of approaches to developing a lesson around the text. These included dividing the text in sections and having students predict outcomes, working from titles and headings to anticipate the story before reading it, small group discussion of issues in the story, and writing different versions of the conclusion of the story. Many of the experienced teachers moved quickly beyond the text to explore issues it raised. They saw a much greater variety of issues and problems that the text posed for students and how these needed to be addressed: for example, how the students would see the characters in the story, what the author was trying to communicate, and getting students engaged in the moral conflicts the story poses. They dealt with the text at the level of social meaning rather than at the level of linguistic meaning.

The differences between the two groups of teachers is in line with findings of a body of research on differences between the knowledge, thinking and actions of experts and novices. Experts and novices have been found to differ in the way they understand and represent problems and in the strategies they choose to solve them (Livingston and

Borko 1989). Novices have less fully developed schemata. In this context schemata are described as abstract knowledge structures that summarize information about many particular cases and the relationships among them (Anderson 1984). Studies of expert teachers have shown that they are able to move through the agendas of a lesson in a cohesive and flexible way, compared to the more fragmented efforts of novice teachers.

The cognitive schemata of experts typically are more elaborate, more complex, more interconnected, and more easily accessible than those of novices. Therefore expert teachers have larger, better-integrated stores of facts, principles, and experiences to draw upon as they engage in planning, interactive teaching, and reflection. (Livingston and Borko 1989: 36)

Teachers' interactive decisions

A parallel line of inquiry in the study of teachers' thinking has investigated the interactive decisions teachers employ while they teach. A metaphor used to describe this dimension of teaching is teaching as improvisational performance. During the process of teaching, the teacher fills out and adapts his/her lesson outline based on how the students respond to the lesson. While the teachers' planning decisions provide a framework with which he or she approaches a lesson, in the course of teaching the lesson, that framework may be substantially revised as the teacher responds to students' understanding and participation and redirects the lesson in midstream.

How does this reshaping and redirection come about? Shavelson and Stern (1981) introduced the metaphor of "routines" to describe how teachers manage many of the moment to moment processes of teaching. Teachers monitor instruction looking for cues that the students are following the lesson satisfactorily. They teach using well-established routines. Berliner has commented on "the enormously important role played by mental scripts and behavioural routines in the performance of expert teachers" (1987: 72)

These routines are the shared, scripted, virtually automated pieces of action that constitute so much of our daily lives [as teachers]. In classrooms, routines often allow students and teachers to devote their attention to other, perhaps more important matters inherent in the lesson. In [a study] of how an opening homework review is conducted, an expert teacher was found to be brief, taking about one-third less time than a novice. She was able to pick up information about attendance, and about who did or did not do the homework, and identified who was going to get help in the subsequent lesson. She was able to get all the homework corrected, and elicited mostly correct answers throughout the activity. And she did so at a brisk pace and without ever losing control of the lesson. Routines were used to record attendance, the handle choral responding during the homework checks, and for hand raising to get attention. The expert used clear signals to start and finish lesson segments. Interviews with the expert revealed how the goals for the lesson, the time constraints, and the curriculum itself were blended to direct the activity. The expert appeared to have a script in mind throughout the lesson, and she followed that script very closely. (Berliner 1987: 72)

Novice teachers by comparison lack a repertoire of routine and scripts and mastering their use occupies a major portion of their time during teaching (Fogerty, Wang and Creek 1983)

Decision-making models of teaching propose that when problems arise in teaching, a teacher may call up an alternative routine or react interactively to the situation, redirecting the lesson based on his or her understanding of the nature of the problem and how best to address it. This process has begun to be examined in the context of second language teaching.

Nunan (1992) studied the interactive decisions of nine ESL teachers in Australia by examining with teachers a transcription of a lesson they had taught and discussing it with each teacher. Nunan found that the majority of the interactive decisions made by the teachers related to classroom management and organization, but also that the teachers' prior planning decisions provided a structure and framework for the teachers' interactive decision. Johnson (1992) studied six pre-service ESL teachers, using videotaped recordings of lessons they taught and stimulated recall reports of the instructional decisions and prior knowledge that influenced their teaching. Johnson found that teachers' most frequently recalled making interactive decisions in order to promote student understanding, (37% of all interactive decisions made) or to promote student motivation and involvement (17%).

Johnson comments:

These findings confirm previously held characterisations of pre-service teachers' instructional decisions as being strongly influenced by student behaviour. In addition these findings support the notion that pre-service teachers rely on a limited number of instructional routines and are overwhelmingly concerned with inappropriate student responses and maintaining the flow of instructional activity. (Johnson 1992: 129)

Conclusions

While a focus on cognitive processes is not new in applied linguistics and TESOL, as seen in a growing literature on learning strategies and the cognitive processes employed by L2 writers and readers, interest in the cognitive processes employed by second language teachers is more recent. At present, the conceptual framework for such research has been borrowed wholesale from parallel research in general education and only recently have attempts been made to incorporate a language or discourse orientation into that framework (see Freeman 1994). The cognitive analysis of second language teaching is, however, central to our understanding both of how teachers teach as well as how novice teachers develop teaching expertise. There is an important message in this research which can be expressed (with slight overstatement) in the following way:

There is no such thing as good teaching. There are only good teachers.

In other words, teaching is realized only in teachers. It has no independent existence. Teacher education is hence less involved with transmitting models of effective teaching practice and more concerned with providing experiences that facilitate the development of cognitive and interpretive skills which are used uniquely by every teacher.

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