

4 Teacher beliefs and decision making

Conceptualizations of the nature of teaching determine the way the process of teacher education is approached. As was illustrated in Chapter 2, 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 research findings, 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. In recent years, an alternative metaphor has emerged within the field of teacher education and is now making its way into SLTE. This is the notion of teaching as a thinking activity, which 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). Calderhead points out that interest in teachers' thinking was a response to dissatisfaction with behaviorist approaches to the study of teaching in the 1970s:

Ideologically, viewing teachers as active agents in the development of their own practice, as decision-makers using their specialist knowledge to guide their actions in particular situations, underlined the autonomous, responsible aspects of teachers' work, and provided an appealing rationale for considering teaching as a worthy, complex, demanding profession, especially when contrasted with the previously dominant view of teaching as the mastering of a series of effective teaching behaviours. (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 that underlie 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 that involves the teacher in actively constructing a personal and workable theory of teaching. Burns comments:

Interest in the relationships between classroom behavior and teacher thinking and decision-making is partly the result of an acknowledgement that the enactment of the curriculum is not the linear "ends-means" process of discrete sequential stages, suggested by earlier curriculum theorists. Rather,



Perspectives on teacher thinking

it is grounded in personally evolved theories or sets of beliefs about teaching and learning. (1992: 57)

This orientation to teaching is the focus of this chapter, which seeks to clarify the concept of teaching as a thinking process, to describe research on second language teachers that has been carried out from this perspective, and to examine implications for the field of SLTE.

Any attempt to characterize the thinking processes underlying a process as complex and multifaceted as teaching is fraught with difficulties. Fortunately, several scholars have tried to tease apart some of the issues that are involved (e.g., Calderhead 1987; Clark and Peterson 1986; Clark and Yinger 1979) and reveal something of what Clark and Peterson refer to as the "cognitive psychology" of teaching. In their survey of teachers' thought processes, Clark and Peterson (1986) identify three major categories of teachers' thought processes: (a) teachers' theories and beliefs; (b) teachers' planning or preactive decision making; and (c) teachers' interactive thoughts and decisions. This chapter focuses on teachers' theories and beliefs and their interactive thinking. (Preactive decision making is the focus of Chapter 5.) While research on teachers' theories and beliefs tries to identify the psychological contexts underlying 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. In studying the knowledge and cognitive skills used by teachers, a variety of different research approaches has been employed, including questionnaires, interviews, think-aloud procedures (in which teachers verbalize their thoughts while engaged in tasks such as lesson planning), planning tasks, stimulated recall (in which teachers examine a videotape or audiotape of a lesson and try to recall their thought processes or decisions at different points in the lesson), as well as written accounts of teaching, such as case studies, journals, and narratives. While data obtained from such sources provide only indirect evidence of teachers' thought processes during teaching, they can serve to broaden our understanding of the role of beliefs and decision making in teaching.

The nature of teachers' belief systems

A primary source of teachers' classroom practices is belief systems – the information, attitudes, values, expectations, theories, and assumptions about teaching and learning that teachers build up over time and bring with them to the classroom. Shavelson and Stern (1981) suggest that what teachers do is governed by what they think, and that teachers' theories and beliefs serve as a filter through which a host of instructional judgments and decisions are made (see Chapter 1). Teacher beliefs form



Teacher beliefs and decision making

a structured set of principles that are derived from experience, school practice, personality, education theory, reading, and other sources. Cummings points out:

The kinds of practical knowledge which teachers use in teaching, appear to exist largely in very personalized terms, based on unique experiences, individual conceptions, and their interactions with local contexts. It tends to have a personal significance which differs from prescribed models of educational theory. (1989: 46–7)

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, 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. In comparing English and Chinese, most of the teachers felt that English has more grammar rules than Chinese; most disagreed that English has a larger vocabulary or more colloquial expressions or more flexibility in communication than Chinese. When asked what they thought was the best way to learn a language, they said that learners should expose themselves to the language as far as possible, interact with native speakers, and read books in English. They did not believe that either studying the rules of the language or repeating and memorizing chunks of language was helpful. Compared with the experienced and trained teachers, inexperienced and untrained teachers were more likely to think that grammatical theories of language are useful to language teaching, and believe more strongly in the value of requiring students to memorize dialogues. The teaching methods they thought most useful were identified as a grammar-based approach, a functional approach, and a situational approach. 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.

Burns (1992) investigated the beliefs of six ESL teachers and identified a core of underlying beliefs that appeared to influence their approach to language teaching and their instructional practices. These beliefs related to:

- the nature of language as it relates to beginning language learning
- the relationship between written and spoken language in beginning language learning
- the nature of beginning language learning and the strategies relevant to language learning at this stage
- learners, their ability to learn, and their ability to learn English
- the nature of the language classroom and the teacher's role within it



Perspectives on teacher thinking

Of the latter belief, Burns comments:

The establishment of positive and non-threatening classroom "dynamics" was considered to be a crucial element of the language classroom. Teachers saw themselves as having a central role and responsibility in facilitating good relationships among students and between themselves and their students. This represents "the mirror image" of the concern with affective learning factors and is viewed as an essential contribution to such things as building confidence, making learners feel "comfortable" and "at ease," lessening their passivity and helping them to relate positively to each other. (1992: 62)

Teachers' beliefs may differ significantly from those of their learners, leading to misperceptions about various dimensions of teaching. Brindley (1984) points out that beliefs held by many Western language teachers can be stated as:

- Learning consists of acquiring organizing principles through encountering experience.
- The teacher is a resource person who provides language input for the learner to work on.
- Language data is to be found everywhere in the community and in the media as well as in textbooks.
- It is the role of the teacher to assist learners to become self-directed by providing access to language data through such activities as active listening, role play and interaction with native speakers.
- For learners, learning a language consists of forming hypotheses about the language input to which they will be exposed, these hypotheses being constantly modified in the direction of the target model.

(1984:97)

Learners' beliefs, however, particularly if they come from an Asian cultural background, are more likely to be these:

- Learning consists of acquiring a body of knowledge.
- The teacher has this knowledge and the learner does not.
- It is the role of the teacher to impart this knowledge to the learner through such activities as explanation, writing and example.
- The learner will be given a program in advance.
- Learning a language consists of learning the structural rules of the language and the vocabulary through such activities as memorisation, reading and writing.

(Brindley 1984: 97)



Teacher beliefs and decision making

Here there is a clear basis for a conflict between the teachers' and the learners' views about the nature and value of teaching and learning activities.

A number of studies have sought to investigate the extent to which teachers' theoretical beliefs influence their classroom practices. K. E. Johnson (1991), in a study of this kind, used three measures to identify ESL teachers' beliefs: a descriptive account of what teachers believe constitutes 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 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 that 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 that 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 that governed its use. The function-based teachers, on the other hand, selected activities that typically involved the learners' personal expression, teaching word meaning and usage through a meaningful context, choosing reading activities that focused on the concepts or ideas within the text, and using context-rich writing activities that encouraged students to express their ideas without attention to grammatical correctness.

In exploring the relationship between teachers' beliefs and classroom practices, Woods (1991) carried out a longitudinal study of two teachers with different theoretical orientations who taught the same ESL course in a Canadian university (see Chapter 3). According to Woods, one teacher had a "curriculum-based" view of teaching and the other a "student-based" view. A curriculum-based view of teaching implies that decisions related to the implementation of classroom activities are based primarily on what is preplanned according to the curriculum. Student-based teaching, on the other hand, implies that decisions are based primarily on factors related to the particular group of students in the classroom at that particular moment. Woods found that for each teacher there was strong evidence that:



Perspectives on teacher thinking

- 1. The decisions made in planning and carrying out the course were internally consistent, and consistent with deeper underlying assumptions and beliefs about language, learning and teaching; yet
- 2. Each teacher's decisions and beliefs differed dramatically from the other along a number of specifiable dimensions.

(Woods 1991: 4)

For example, the teacher with the "curricular" view of teaching explained her goals and evaluated her teaching in terms of planned curricular content. Although she often mentioned the students in talking about her lessons, they were not typically for her a starting point in making instructional decisions. She tended to evaluate her teaching in terms of how successfully she had accomplished what she had set out to do according to the curriculum. When there was a choice between following up something that developed in the course of a lesson as opposed to keeping to her plan, she invariably followed her plan. The second teacher, on the other hand, was guided much more by student responses. He was much more prepared to modify and reinterpret the curriculum based on what the students wanted.

Smith (1996), in another Canadian study of ESL teachers in postsecondary ESL classes, found that teachers' instructional decisions were highly consistent with expressed beliefs, and that personal belief systems influenced how teachers ranked their institution's explicit course objectives for the courses they were assigned to teach. Among teachers teaching the same course, those with a structured grammar-based view of language selected different goals from teachers holding a functionally based view of language.

In each of the studies described here, the teachers were relatively free to put their beliefs into practice. However, there are also well-documented accounts of situations where there is not a high degree of correspondence between teachers' expressed beliefs and their classroom practices. Duffy and Anderson (1986) studied eight reading teachers and found that only four of them consistently employed practices that directly reflected their beliefs. Factors cited as likely to prevent teachers from teaching according to their beliefs include the need to follow a prescribed curriculum, lack of suitable resources, and students' ability levels. Hoffman and Kugle (1982) found no significant relationship between teachers' beliefs about reading and the kinds of verbal feedback they gave during reading lessons. Yim (1993) likewise found in studying ESL teachers in Singapore that while they were able to articulate beliefs about the role of grammar teaching from a communicative orientation, these beliefs were not evident in their classroom practices, which were



Teacher beliefs and decision making

driven more by exam-based, structured grammar activities of a non-communicative kind.

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 the profession often serves as a lens through which they view both the content of the teacher development program and their language teaching experiences (see Chapter 1). For example, Almarza (1996) studied a group of four student teachers in a foreign language teacher education program in the United Kingdom, and examined how the relationship between their internalized models of teaching, often acquired informally through their experience as foreign language learners, interacted with the models they were introduced to in their teacher education program. The teachers responded quite differently to the method they were being trained to use in their teacher education program - a modified direct method. One teacher welcomed the structure introduced by the method, because it provided her with a tool to manage her teaching and gave her confidence. She measured her own success in terms of how closely she was able to follow the method. For her, the method superseded any instinctive views she had about the nature of teaching:

"Now having applied it [the method] with . . . both classes and private students, I can see why it's been called the 'miracle' method! Even my least confident students have been speaking the language with good pronunciation and without making mistakes and I know they'll never forget what they've learned. . . . With this method they never hear an incorrect version – so, of course, they don't make mistakes.

The method was without question the decisive factor in my carrying out TP successfully. It gave me absolute confidence and it had a positive attitude on the pupils towards French or Spanish and towards me, as it allowed me, for the first time, to really achieve something in the language and feel that they had achieved something." (quoted in Almarza 1996: 60)

By contrast, others rejected the method because it conflicted with their own theories of teaching. One said she could not believe in a methodology that did not consider the learner as the center of the learning process.

"I feel first that it is not respecting the students' intelligence, in a way. Students may not have the word in the foreign language for a book or a chair, but they know very well that it is a book and a chair and to have to spend 10 minutes arguing or not arguing, but deciding that this is a book and this is a chair, seems to insult the students... The students may not be very motivated by that kind of presentation... Why should the student want to learn, I mean, to learn those items in the first place? ... I am just wondering to what extent, where is the balance on that scale, where can you sort of exert your knowledge as a teacher in order to choose the right kind of input, to guide the students to



Perspectives on teacher thinking

look into, let's say, certain texts, or certain whatever, but at the same time keeping up motivation in the student." (quoted in Almarza 1996: 60)

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 learning.

The ways in which teachers' personal theories influence their perception and evaluation of their own teaching was further illustrated in a study of a group of novice teachers completing an introductory teacher preparation program in Hong Kong, the UCLES/RSA Certificate in TEFLA (Richards, Ho, and Giblin 1996). One of the issues that was studied was the theories of teaching held by each of the teachers in the program. Data were provided by written reports of their planning, classroom observations, interactive and evaluation decisions, as well recordings of discussions with their supervisors. The individual differences in the way the five of them planned, monitored, and described their own teaching suggested different ways in which they conceptualized teaching. These differences can be summarized in the following way.

A teacher-centered perspective sees the key features of a lesson primarily in terms of teacher factors, such as classroom management, teacher's explanations, teacher's questioning skills, teacher's presence, voice quality, manner, and so on. In this view, a lesson is a performance by the teacher. A different view of a lesson, which can be termed the curriculum-centered perspective, sees a lesson in terms of a segment of instruction. Relevant focuses include lesson goals, structuring, transitions, materials, task types, and content flow and development. A third perspective on a lesson can be called the learner-centered perspective. This views the lesson in terms of its effect on learners and refers to such factors as student participation, interest, and learning outcomes. These different perspectives on a lesson are summarized in Table 4.1.

Any lesson can be conceptualized in terms of any or all of these perspectives. In the study, although each of the teachers (Teachers A, B, C, D, and E) referred to all three aspects of lessons in describing their teaching, Teacher A's focus of awareness was more consistently on teacher factors than other dimensions of her lessons. Teacher B included all three perspectives in her discussions of her lessons and moved throughout from one perspective to another, though the role of the teacher was a recurring focus. For Teacher C, the learner perspective had priority. For Teachers D and E, lessons were discussed more frequently from the teacher's point of view and in terms of the design of the lesson. In discussing each other's teaching in group sessions, these different perspec-



Teacher beliefs and decision making

TABLE 4.1. DIFFERENT PERSPECTIVES ON A LESSON

Teacher-centered focus	The teacher is the primary focus; factors include the teacher's role, classroom management skills, questioning skills, presence, voice quality, manner, and quality of the teacher's explanations and instructions.
Curriculum-centered focus	The lesson as an instructional unit is the primary focus; factors include lesson goals, opening, structuring, task types, flow, and development and pacing.
Learner-centered focus	The learners are the primary focus; factors include the extent to which the lesson engaged them, participation patterns, and extent of language use.

tives often emerged. For example, Teacher B, commenting on one of A's lessons, described it from the "curriculum" perspective:

"You did a good job on building it up, starting with revision. You didn't waste any time on setting up the lesson. It flowed through beautifully."

Teacher A herself, however, commented on her lesson from the teacher's perspective:

"I thought the lesson deteriorated as it got to the end. I wasn't happy with the drilling. I didn't give myself enough time to do it properly."

Teacher C commented on the same lesson from the learners' perspective:

"I liked the way your lesson went at the end. The students were being expressive. They put feeling into it."

The differences in the individual teachers' views of a successful lesson can be seen by listing the three different perspectives according to the priority of each teacher (Table 4.2).

Interactive decision making

While teachers' belief systems shape the way teachers understand teaching and the priorities they accord to different dimensions of teaching, the thinking that teachers employ during the teaching process itself is also crucial to our understanding of the nature of teaching skills. In classic articles on educational research, Clark and Yinger (1979), Shavelson and



Perspectives on teacher thinking

TABLE 4.2. PRIORITIES FOR EACH TEACHER ACCORDING TO THEIR PRIMARY FOCUS OF CONCERN

	1 (highest priority)	2	3 (lowest priority)
Teacher A	teacher	curriculum	learners
Teacher B	teacher and learners		curriculum
Teacher C	learners	curriculum	teacher
Teacher D	curriculum	teacher	learners
Teacher E	teacher	curriculum	learners

Stern (1981), and Clark and Peterson (1986) identified interactive decision making (decisions teachers make while teaching) as constituting a key dimension of teachers' thought processes. According to their model of teacher decision-making processes, teaching is a type of improvisational performance. During the process of teaching, the teacher fills out and adapts the lesson outline based on how the students respond to the lesson. While the teacher's planning decisions provide a framework for approaching 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 (see Chapter 6).

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 by 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 behavioral 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, to 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



Teacher beliefs and decision making

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.

Novice teachers, by comparison, lack a repertoire of routines and scripts; creating them and mastering their use occupies a major portion of their time during teaching (Fogerty, Wang, and Creek 1983). In the study of teachers completing the RSA Certificate program discussed earlier, for example, a recurring concern of the teachers was the use of such basic techniques as eliciting, drilling, checking concepts (i.e., checking that students understood new teaching points), monitoring (i.e., attending to student performance and giving feedback on errors), and how to use the overhead projector and the white board. Discussion of how to carry out these procedures effectively occupied a substantial portion of time in group feedback sessions with their tutors.

This 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. . . .

In the lessons we observed, the success of the experts' improvisation seemed to depend upon their ability to provide examples quickly and to draw connections between students' comments or questions and the lesson's objectives. In terms of cognitive structure, successful improvisational teaching requires that the teacher have an extensive network of interconnected, easily accessible schemata and be able to select particular strategies, routines, and information from these schemata during actual teaching and learning interactions based on specific classroom occurrences. (Livingston and Borko 1989: 36)

Experienced teachers hence have well-developed mental representations of typical students, of typical tasks, and of expected problems and solutions. As Calderhead (1987) points out, experienced teachers



Perspectives on teacher thinking

seemed to know the kinds of home backgrounds of students, they knew what to expect in the way of knowledge and skills in their classrooms, they had an image of the likely number of students who would need help, they had an image of the types of behaviors and discipline problems that could be expected. They knew what the students might possess in the way of previous experience, skills, and knowledge. . . . This kind of pedagogical knowledge is learned from thousands of hours of instruction, and tens of thousands of interactions with students. It is knowledge that influences classroom organization and management and is the basis for intercepting the curriculum. (quoted in Berliner 1987: 64)

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. Teachers' overriding concern, according to Shavelson and Stern (1981), is to maintain the flow of the lesson, and the use of routines during interactive teaching enables activity flow to be maintained. 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. He 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 decisions. K. E. Johnson (1992b) studied six preservice 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%). Reasons for other interactive decisions reported are shown in Table 4.3. 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. (K. E. Johnson 1992b: 129)

Ulichny (1996) describes a case study of an ESL teacher presenting a classroom activity to an ESL class, using a detailed microanalysis of the discourse of the event together with the teacher's own reflections and interpretations of the classroom talk. The teacher in Ulichny's study was an ESL teacher in an American university ESL program, and the teach-



Teacher beliefs and decision making

TABLE 4.3 TEACHER'S REASONS FOR INTERACTIVE DECISIONS

Reason for decision	Percentage of all decisions made
Student understanding	37
Student motivation and involvement	17
Instructional management	15
Curriculum integration	9
Subject matter content	8
Students' language skill and ability	8
Students' language skill and ability Students' affective needs	6

Source: K. E. Johnson (1992b: 127).

ing moment she examines was an ESL reading class for incoming students. The teacher had a well-developed schema for teaching a reading lesson in this situation. The course was content based and included a close reading of a chapter from a sociology textbook. The teacher planned to lead the students through the chapter, section by section, helping them grasp the meaning of the text. She assigned part of the chapter to be read for homework. Ulichny notes: "She has given them a simplified lecture that restated the five main points about why, according to the book, nuclear families are more functional in industrialized societies, and she is planning to have the students locate those five points in the words of the author in the text" (1996: 11). However, once the teacher began her lesson, she discovered that the students' comprehension of her lecture was unclear, and she could not elicit the ideas she was looking for. Thus she rethought her plan and began trying to build up their comprehension of the points of her lecture. Ulichny traces the teacher's thinking through a series of steps, which started with discovering a problem, assessing the problem, and then unsuccessfully attempting to elicit what she was looking for from the students. Then she took over and did the work for the students, modeling and scaffolding the content of the text - a task she had originally planned for the students themselves to do. From her longitudinal analysis of the teacher's evolution of her teaching methodology through interaction with the students, Ulichny concludes:

Teaching is a constant mediation between enacted planned activities and addressing students' understandings, abilities and motivation to carry out the activity. How a teacher determines which activities to engage the class in, how she assesses the students' participation in the task and what she determines are reasons and remedies for lack of adequate participation are the basic units of the teaching moment. The particular construction or sense-making of the moment is a product of an individual teacher's past learning and teaching experiences, beliefs about teaching and learning – from both professional



Perspectives on teacher thinking

training as well as folk wisdom gleaned from fellow teachers – and her particular personality. (1996: 178)

Implications for SLTE practice

The metaphor of the teacher as thinker provides a conceptual framework that offers a rich alternative to behaviorally oriented views of teaching and also provides a useful research agenda. As Freeman observes:

It focuses research on the teacher and recognizes the central importance of his or her cognitive world. It also provides a methodologically accessible architecture which can lend itself to both qualitative and quantitative study. (Freeman and Richards 1996: 362)

Freeman also points out the limitations inherent in this framework, which he ascribes to "the fixed nature of decision-making as an a priori construct, the lack of attention to the context of decision, and the potential to overlook language as both the substance and the research vehicle of decision-making" (Freeman and Richards 1996: 362). Notwithstanding these limitations, the analysis of teaching as an activity that is grounded in the teacher's belief systems and cognitive world offers several important implications for the practice of second language teacher education, and I would like to conclude by examining some of these implications as I understand them.

Modeling the cognitive skills of expert teachers

An important goal of preservice experiences for language teachers is to expose novice teachers to the thinking skills of expert teachers in order to help them develop the pedagogical reasoning skills they need when they begin teaching. While many current resource books in SLTE make extensive use of tasks that student teachers carry out at their own level of pedagogical expertise, the value of these activities can be enhanced if they are followed by presentation of expert teachers' solutions of the same tasks, together with the thinking that accompanied them. For example, in my methodology classes with preservice teachers, after assigning students a planning task, such as planning a reading lesson around a short text, feedback on their efforts includes not only peer and instructor responses to their lesson plans but a think-aloud "walk through" of the same planning task, during which I try to model the thinking that an experienced teacher would bring to the task. This strategy is also appropriate for cooperating teachers.

To promote knowledge development in student teachers, we believe that cooperating teachers should be able and willing to explicate the routines and

78



Teacher beliefs and decision making

strategies they use, provide systematic and constructive feedback, and engage with the student teacher in joint problem solving about pedagogical issues. They should also model pedagogical thinking to student teachers by demonstrating and then explaining how they transform subject matter into pedagogically powerful forms. By making their thinking explicit, they reveal the connection between their actions and their knowledge structures. (Livingston and Borko 1989: 40)

Using case studies

Case materials, including both written and videotaped cases, provide another rich vehicle for helping student teachers develop the capacity to analyze situations, to explore how teachers in different settings arrive at lesson goals and teaching strategies, and to understand how expert teachers draw on pedagogical schemas and routines in the process of teaching. In 1986, the report by the Carnegie Task Force on Teaching as a Profession, A Nation Prepared: Teachers for the 21st Century, proposed the use of teacher cases in teacher education, recommending that "teaching cases illustrating a variety of teaching problems should be developed as a focus of instruction" (1986: 76). Case accounts allow access not only to the problems teachers encounter but the principles they bring to bear on their resolution. Information revealed in teachers' case accounts reminds us that teacher education is concerned with far more than preparing teachers in the use of instructional strategies, materials, and methods: It must focus on the beliefs and thinking that teachers employ as the basis for their teaching, how they frame and problematize issues, and the ways in which they draw on experience, beliefs, and pedagogical reasoning skills in teaching. Case-based approaches are widely used in other professions, such as business, law, and medicine, but have only recently begun to be used more generally in teacher education (Shulman 1992). Case reports can reveal ways of thinking about a significant teaching incident, and when accompanied by "deconstruction" through questioning and critical interpretation, can help reveal how the teachers' beliefs, knowledge, personality, and pedagogical reasoning shapes a particular event.

A number of advantages have been suggested for using case studies in this way in teacher education (Kleinfeld 1992):

- 1. Students are provided with vicarious teaching problems that present real issues in context.
- 2. Students can learn how to identify issues and frame problems.
- 3. Cases can be used to model the processes of analysis and inquiry in teaching.
- 4. Students can acquire an enlarged repertoire and understanding of educational strategies.



Perspectives on teacher thinking

5. Cases help stimulate the habit of reflective inquiry.

The building up of a collection of case reports that can be effectively used in this way is invaluable for use in SLTE programs. Examples of two case studies from a collection developed for use in SLTE (Richards, in press) is given in the Appendix. These consist of three parts—the context in which the teacher works, the problem that occurred, and the strategy or solution the teacher put in place to address it.

Providing focused field experiences

The inclusion of goals related to the cognitive and interpretative domain of teaching also suggests a different focus for field experiences such as practice teaching and classroom observation. In practice teaching, for example, providing student teachers with multiple opportunities to teach the same content enables them to develop their schematic knowledge of teaching and to appreciate the effect of context on their understanding of teaching incidents.

The opportunity to repeat and fine-tune instructional strategies and explanations increases the likelihood that novices will incorporate these elements into their cognitive schemata. Similarly, critically analyzing performance and revising it for another session helps novices to elaborate and connect existing knowledge structures. This revision process contributes to the development of pedagogical content knowledge and pedagogical reasoning skills. (Livingston and Borko 1989: 40)

Such experiences can also be linked with the preparation of case reports for use as part of the on-campus program.

A focus on interactive decision making also provides a rationale for a different focus to classroom observation. During observations, student teachers can be engaged in watching how an experienced teacher uses routines and scripts in teaching and how the teacher's improvisational performance helps resolve problems that occur during a lesson. Such activities can help novice teachers understand the interpretative nature of teaching and realize the conceptual basis for such interpretation.

Conclusion

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 second language 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



Teacher beliefs and decision making

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 1996b). 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 practice and more concerned with providing experiences that facilitate the development of cognitive and interpretative skills, which are used uniquely by every teacher.

Appendix: Examples of teacher case studies*

Dealing with Different Learning Styles by Al Bond

CONTEXT

The EAP program (English for Academic Purposes) in which I teach is located at a large urban university in the heart of a thriving city in the southeastern United States. As in many larger cities in the U.S., there is an ever-growing international population, including a large number of students interested in studying at American universities. My class was an academic writing class, designed as the first in a series of 3 writing courses in a full reading, writing, grammar, and oral skills program preparing EAP students for university work here, or at whichever university they might decide to attend. Students entering this program test into levels 1 through 5 in each area and then work their way up. The writing classes here start at level 3, because at levels 1 and 2 the writing and grammar classes are combined. After level 5, the students can enter normal university classes:

I had lived abroad for 13 years and done a lot of English tutoring and language learning of my own, but this was my first teaching experience in which I had a full class of students. My writing class met each Tuesday and Thursday from 7:45 to 10:00 for a total of 19 class meetings during that quarter. The class had 15 members, of which 7 were women. There were 4 Vietnamese, 3 Russian, 2 Chinese, 2 South American, 2 African, 1 Indian, and

^{*}The case studies in this Appendix are from "Using Authentic Materials in China," by Rodney Jones and from "Dealing with Different Learning Styles," by Al Bond. Both studies are in *Teaching in Action: Case Studies from Second Language Classrooms* (forthcoming). Copyright 1997 by Teachers of English to Speakers of Other Languages, Inc. Used with permission



Perspectives on teacher thinking

1 French student in the class. Their ages ranged from 18 to 35. The writing assignments and tests in the course were based on reading assignments in an American history textbook in order to give them an academic focus.

PROBLEM

The problem I was having in my class had to do with my attempt to do group (mostly pair) writing in class and with the fact that with such a diverse group of students it did not always run smoothly. We did a good deal of writing and editing in pairs. We called these sessions "writing workshops." Students generally read each other's plans for an essay or one of the drafts of an essay they had worked on in class or at home. They then edited each other's work by writing or making comments about the content (facts), organization (logical progression), or English (complete sentences, etc.) of the work. My main reason for this pair work was that I wanted to help the students to get ideas from and function as models for each other by reading each other's work and by getting feedback about their own work. I also wanted students to get into the habit of reading critically, so that this critical reading might be used to better write and edit their own work.

Some students seemed very positive about group writing and editing in class. One Vietnamese student wrote in her evaluative essay of the class, "reading other people's essay has really helped me to improve grammar and also helped me to see other people's errors. . . . After I finished writing my essay, I usually check . . . But I could not find any error even I read all my composition over several times." Students like this were very enthusiastic any time they found out that we were going to do group writing in class. Other students, such as one Russian student who wrote, "Also, I prefer to work in class by myself. I don't like to work with someone," were much less enthusiastic and showed little cooperative spirit in such groups.

Whether this lack of enthusiasm on the part of some students was due to the great variety of cultural backgrounds in the class, or simply was the result of differences in personal learning styles present is difficult to say. What concerned me was that often these learners with completely different types of learning styles would be paired together if I did the pairing randomly. It did neither learner any good when one who was very enthusiastic about working with others and hoped that it would help a great deal with his or her writing was paired with another student who believed that the best way to improve writing was concentrated personal effort, and thought that group work was mostly distracting and a waste of time. The result of this kind of combination was simply two very frustrated learners.

SOLUTION

The solution I came up with was to give them a choice in how things were to function in order to get them more invested in the class. I let the students decide on their own partners. I did not disagree with the students about what was best for them as far as learning strategies went. They may have known



Teacher beliefs and decision making

themselves and their own learning styles better than I did. By this time, most students had, at some point or another, worked with most of the other students in the class. So now they were at a point when they could select permanent partners for the rest of the quarter.

Students generally chose partners whom they had enjoyed working with previously, and these were generally partners who had the same style of pair participation. Some of these new pairs enjoyed pair work a great deal and did every step of the way together, using a great deal of discussion (in English) to get their writing done. Others tended to work alone on some parts and simply to do final readings of each other's work at the end of each stage of a first writing or a rewrite and then to make corrections and offer suggestions. I encouraged these learners to work together and learn from each other as much as possible. They agreed that in some parts of each task "two heads are better than one," but their ideas of which parts this was true of was more limited than that of other pairs. In the end, each pair found a workable and time efficient arrangement, and there were a number of different levels of "pair participation."

Working together with partners who had similar styles of learning seemed to generate a great deal less anxiety and frustration both for those who liked to work alone better and for those who preferred to work in groups. In this way, during these sessions, the students in each pair could choose to what extent they wished to communicate, based on what each student thought was to his or her advantage. I think students felt more in control of their learning situations and were more motivated because of this.

Using Authentic Materials in China by Rodney Jones

CONTEXT

Luoyang is a small industrial city in central China. It's situated on the banks of the Yellow River in Henan Province about 70 km east of Xian. Most of the "work units" in the city (including factories, schools, and hospitals) come under the auspices of the Ministry of Machine Building. In 1985 when I taught there the reforms that were taking hold in the coastal cities and the more open attitudes towards Western ideas and education that generally accompanied the reforms still had not reached the inland provinces. The people in Luoyang were, at that time, mostly conservative, provincial, and suspicious of foreigners. Western goods, and even goods manufactured in Shanghai and Guangzhou, were very scarce in Luoyang. There was one Foreign Language Bookstore which actually stocked no foreign language books except for a few musty simplified versions of Jane Eyre.

I was employed to teach young teachers of technical subjects at the Luoyang Institute of Technology. The students were ostensibly learning English so they could cope with technical documents in their respective fields, but most of them also saw improving their English proficiency as way to gain a better posting in a larger city, and so they were highly motivated and keen to develop their speaking skills.



Perspectives on teacher thinking

PROBLEM

The problem I encountered teaching these young teachers was one of both materials and methods. The English Training Program they were enrolled in predictably stressed reading. The texts available, however, were severely limited. The students were using English for Today (Alexander). When I arrived, they had already worked through Books 1 and 2 and were about halfway through Book 3. The English Department stocked no other texts, and showed no willingness to order more resources. Unfortunately, most of the essays in English for Today were neither relevant nor challenging to these learners; they bore little resemblance to the technical texts the students had to deal with in their work, and the topics they covered were remote and boring to these young men and women, whose interests ran more towards contemporary issues, politics, economics, and science. Attempting to find alternate texts was extremely frustrating. At first I suggested that the students bring in English books from their own fields to work with, but even those were extremely rare and usually could not be taken out of the library or laboratories where they were stored. I had brought a few things with me, and more arrived later in care packages from home, but the institute had no xerox facilities. Anything I wanted duplicated I had to type onto carbon stencils for mimeographing, and the result was often unreadable.

What the students were reading was only half the problem; the other half was how they were reading. In the past the course had been taught as an intensive reading course. Students read and analyzed passages from the textbook, checking their dictionaries and writing Chinese translations in the margins. In class they were meant to answer the lecturer's questions regarding lexis and grammatical structures and possibly to recite portions of the text from memory. This method was clearly doing nothing for their proficiency, as they hardly had any time to attend to meaning or speak spontaneously. The strategies they were using were making them into slow, laborious readers who were capable of diagramming sentences without an inkling of what they meant, and awkward, reluctant speakers, hesitant to utter anything they hadn't first committed to memory.

SOLUTION

The solution to the problem of materials presented itself when I noticed that when my students visited me at my residence they were fascinated by the magazines and newspapers I had received in the post. I had thought of using articles from them as reading texts but dismissed the idea because of the problem of reproduction. It then occurred to me that there was no reason why everyone in the class had to read the same thing, and a single magazine contained enough material for every one in the class to have at least one article. So I gathered together all the copies of *Time* and *Newsweek*, *Scientific American*, and *The China Daily* that I had and brought them into the class along with scissors, glue, and a stack of heavy file folders. I told the students that we were going to construct a classroom library, divided them into groups, and gave each group a stack of magazines. Their first task was to search for