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REFLECTING ON TEACHING: INTERACTIVE THOUGHTS AND DECISIONS OF EXPERIENCED AND NOVICE EFL TEACHERS

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ÖZET

ÖĞRETMENLERİN KENDİ ÖĞRETİMLERİ ÜZERİNE GÖRÜŞLERİ: DENEYİMLİ VE DENEYİMSİZ ÖĞRETMENLERİN ETKİLEŞİMLİ DÜŞÜNME VE KARAR VERME SÜREÇLERİ

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Bu çalışma öğretmenin öğretimsel hareketlerinin kendi düşünce ve yargılarından etkilendiği varsayımına dayanmakta olup deneyimli ve deneyimsiz öğretmenlerin ders sırasında almış oldukları etkileşimli kararları karşılaştırmaktadır. Ayrıca bu çalışma öğretmenlerin etkileşimli kararlar verirken neler düşündüklerini ve hangi faktörlere öncelik verdiklerini araştırmayı da amaçlamaktadır. Bu sebeple bu çalışmada bilişsel ve yorumsal bir yaklaşım izlenmiştir.

Veriler, derslerin video kameraya çekilmesi, çağrışım tekniğine dayalı görüşme, yarı yapılandırılmış görüşme, ders planı, sınıf oturma planı ve *snake* tekniği kullanılarak toplandı. Bu çalışma Çukurova Üniversitesi Yabancı Diller Eğitim Merkezinde (YADIM) uygulandı. Dört deneyimli ve dört deneyimsiz İngilizce öğretmeni çalışmaya katıldı. Her katılımcı öğretmenin kendi sınıfında vermiş olduğu dersin tamamı (45 dakika) sistematik bir biçimde aynı dönem içerisinde üç kez video kamerayla kaydedildi. Aynı gün ya da bir sonraki gün yapılan çağrışım tekniğine dayalı görüşmede öğretmene kendi dersi izletilerek vermiş olduğu etkileşimli kararlar ve bu kararların dayandığı olası sebepler hakkında yorumlar yapması istendi. Elde edilen veriler hem nitel hem de nicel olarak analiz edilip yorumlandılar.

Araştırma sonuçlarına göre, öğretmenlerin düşünme faaliyetlerinin karmaşıklık derecesi deneyim seviyelerine göre değişmektedir. Buna paralel olarak, deneyimsiz öğretmenlerle karşılaştırıldığında, deneyimli öğretmenlerin etkileşimli karar verme süreçlerinin daha karmaşık bir yapıda olduğu görülmüştür. Bu çalışmaya katılan hem deneyimli hem de deneyimsiz öğretmenlerin sınıf içinde karşılaştıkları öğrenci performans göstergeçlerini (ipuçlarını) tanıyabildikleri saptanmıştır. Ayrıca, bu çalışma, deneyimli öğretmenlerin öğrenci performans göstergeçlerine karşılık verirken daha fazla ve değişik öğretimsel hareket kullandıklarını da ortaya koymuştur. Diğer yandan, deneyimsiz öğretmenlerin sınıf yönetimi ve idaresi ile ilgili sorunlarla daha çok ilgili oldukları ve buna paralel olarak bu tip sorunlarla uğraşmak için değişik çözüm yolları ve teknikler geliştirmiş oldukları saptanmıştır.

Çalışmadan elde edilen verilere dayanılarak hem deneyimli hem de deneyimsiz öğretmenler için etkileşimli karar verme modelleri geliştirilmiştir. Çalışma sonuçları, sadece hizmet içi öğretmen eğitimi programları için değil aynı zamanda öğretmen yetiştirme programları içinde bir takım değişiklikler ve yenilikler önermektedir. Ayrıca, bu çalışmada yöntem, teori ve katılımcı açısından etkileşimli karar verme süreci üzerine yapılabilecek başka çalışmalardan da bahsedilmektedir.

ANAHTAR KELİMELER:

Etkileşimli Karar
Deneyimli Öğretmen
Deneyimsiz Öğretmen
Çağrışım Tekniğine Dayalı Görüşme
Öğrenci Performans Göstergesi (İpucu)

ABSTRACT

**REFLECTING ON TEACHING:
INTERACTIVE THOUGHTS AND DECISIONS OF
EXPERIENCED AND NOVICE EFL TEACHERS**

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This study is mainly concerned with the instructional decisions EFL teachers make in the class (i.e., interactive decisions). It aims to contribute to our understanding of what teachers are thinking about when they make a particular interactive instructional decision. The ultimate purpose is to investigate and compare the interactive thinking and decision making process of experienced and novice teachers. The underlying assumption is that teachers' behavior is guided by their reason based thoughts, judgments, and decisions. Therefore, the study adopts a cognitive and interpretative approach.

Four novice and four experienced EFL teachers participated in the study. The data were collected through videotaping procedure, stimulated recall technique, semi-structured interviews, lesson plans, classroom maps, and *snakes*. The study was conducted at YADIM (i.e., Center for Foreign Languages), Çukurova University. In the study, each teacher was videotaped three times in her regular classes, and then she was invited to comment on her in-class behaviors and interactive decisions at the stimulated recall interviews. The findings were analyzed and interpreted both quantitatively and qualitatively.

The results indicate that the complexity of teachers' thinking process change in regard to their expertise level. In line with this finding, the interactive decision making process of the experienced teachers is seen to be much more complicated than that of the novices in the study. Moreover, the experienced teachers are observed to employ a wider set of instructional actions in response to the student performance cues. However, both the experienced teachers and the novices are able to recognize student performance cues they observe in the class. Another finding indicates that the novice teachers are much more concerned with the classroom management related issues especially with student off task behavior and develop a good repertoire of coping strategies to deal with such behaviors. In addition, interactive decision making models are proposed for both the experienced and novice teachers throughout the study.

The results of the study suggest some significant implications not only for in-service teacher training programs but also for pre-service teacher training programs. Besides, the study also covers some methodological and theoretical implications for future research.

KEY WORDS:

Interactive Decision
Experienced Teacher
Novice Teacher
Stimulated Recall Technique
Student Performance Cue

Affectionately dedicated to my family

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CHAPTER 1

INTRODUCTION

1.1. An Introduction to Teacher Decision Making Behavior

The classroom is the crucible place- where teachers and learners come together to initiate learning process. Both teachers and learners do not, however, enter the class empty-handed: students bring with them their whole experience of learning and of classroom life together with their reasons for being there and their own particular needs which they hope to be satisfied. The teacher also brings his or her experiences of learning, teaching and of life, too. No matter what they bring, everything depends on how they react to each other when they all interact in the class. Even though teachers use the same materials, give the same lessons, or even sometimes do the same exercises, there seem to be some basic differences about what is really going on in those classes. On the surface, the textbook item seems to constitute the lesson but real learning takes place as a result of the interactions among the students and teacher. What happens in the classroom will certainly determine what learning opportunities learners will get (Allwright & Bailey, 1991; Gaies, 1980; Woods, 1991, 1996).

Hunter (1982) claims that teaching is now defined as a constant stream of professional decisions made before, during, and after interaction with the students. Decisions which, when implemented, increase the probability of learning. Stevick (1980) has also talked about teaching as the making of 'informed choices' or 'changing among options'. Similarly, Shavelson (1973) asserts that any teaching act is the result of a conscious or unconscious decision, which the teacher makes after the complex cognitive processing of available information.

Freeman (1989) believes that teaching is a dynamic decision-making process. In line with this belief, Shavelson (1983) claims that decision making is integrated into teaching in a way that it is described as the most important professional activity a teacher does every day while planning the lesson, teaching in the class, and evaluating the lesson. That is to say, instructional decisions constantly operate before, during, and after teaching, respectively as pre-active, interactive, and post-active decisions

A teacher plan is like a road map describing where the teacher intends to go in a lesson, taking the students along. The importance of planning can not be overestimated because the decisions made during planning have a profound influence on a teacher's instructional behaviors and the nature of teaching outcomes students receive. These decisions made before the lessons, while planning the instruction are called as *pre-active decisions* (Bailey, 1998; Richards & Lockhart, 1994; Westerman, 1991).

Lesson planning helps the teacher to reduce uncertainty and provide confidence in his or her instructional behavior; This is only one side of the picture; the other side is covered by *interactive decisions* since what gets planned will not always equate with what gets taught. Moreover, we, as teachers, do not usually do our business as usual because a lesson is actually co- produced by the teacher and the learner. That is to say, we may change our instructional behavior in the classroom due to some reasons such as student expectations, student behavioral cues (i.e., errors, questions, etc.), teachers' prior teaching experiences, and so forth (Artiles, Mostert, & Tankersley, 1994; Borko & Shavelson, 1990; Johnson, 1992; Nunan, 1988, 1991; Shavelson, 1983).

Decisions teachers make while interacting with their students in a classroom atmosphere may be called with differently such as in-flight, in class, on line, and/or interactive decisions since these decisions are mostly spontaneous and intuitive. Interactive decisions are also defined as conscious choices between continuing to behave as planned and behaving in a different way (Artiles et al., 1994; Bailey, 1996; Borko & Shavelson, 1990; Johnson, 1992; Shavelson, 1983).

The last category, *post-active decisions* (i.e., evaluative) are made after the lesson. Teachers make these decisions about the effectiveness of the lesson and the way to plan the following lessons (Richards & Lockhart, 1994; Westerman, 1991).

Nevertheless, teacher decision making, either pre-active and interactive or post-active, is not so easy to analyze because the decisions teachers make certainly vary in magnitude, complexity, the degree of self consciousness, and pre planning. In other words, decisions may be either micro decisions such as sitting or standing at a particular juncture in the lesson or macro decisions such as deciding about content, methodology, or classroom dynamics (Fogarty, Wang, & Creek, 1983). Freeman (1989) also proposes that the decision remains constant as a component of teaching although its contents are continually changing.

In addition, Clark and Peterson (cited in Noakes, 1995) suggest that teachers' interactive decisions often appear to be a mixture of partially articulated theories, beliefs, and values about their roles and about dynamics of teaching and learning processes. They further assert that how teachers name and frame critical variables in their environment are based on their background and experience as well as their knowledge. However, most of the studies have not differentiated the level of teacher expertise, which is very important especially in employing routines to cope with unexpected classroom events.

Regarding all these claims and suggestions stated above, the present study is based on *the following assumptions* emerged from *previous research* into interactive decision making behavior of the teachers:

* Teachers are professionals who make reasonable judgements and decisions in a complex and uncertain environment in which there are no answers and no absolutes.
* There is a relationship between thought and action: teachers' behavior is guided by their reason based thoughts, judgements, and decisions.
* Expertise is an important factor in decision making behavior of teachers in terms of making use of routines and knowledge and recognizing student behavioral cues.

(Borko& Shavelson, 1990; Farrell, 1998; National Institute of Education [NIE], 1975; Noakes, 1995; Sendan, 1992).

It seems that a description of teachers' thoughts, decisions, and judgements, and an understanding of how these cognitions are transferred into action are two essential criteria to understand the teaching process. Therefore, in this study, a cognitive and interpretative approach is adopted to uncover teacher thoughts about how they act in the class and why they act in that way.

1.2. Background to the Study

Shavelson and Stern (1981), and Clark and Peterson (cited in Richards, 1998) identify interactive decision making as the key dimension of teachers' thought process. They have developed a model of teacher decision making process in which teaching is viewed as a type of improvisational process. In this model, while teaching, the teacher fills out and adapts the lesson based on students' responses and reactions. Lesson plan provides a framework for approaching a lesson; in the course of teaching, this framework may be revised continually so that the teacher can respond to students' understanding and participation and redirect the lesson in midstream appropriately. It is clearly evident that not all decisions result from systematic and organized planning. Rather they may emerge out of personal interactions each day. Due to rapid pace of classroom teaching and learning, decisions are made intuitively; teachers depend on their experiences and quick thinking to provide the most appropriate instructional technique (Orlich, Harder, Callahan, & Gibson, 1998).

Most of the research on teachers' decisions comes from general education. For example, Westerman's (1991) study, on the differences between novice and experienced teachers' interactive decisions, shows that experienced teachers are more aware of the students in the pre-active phases. Moreover, experienced teachers are found to monitor more often for student cues such as student errors or questions during the interactive phase.

In recent years, researchers have begun to focus on teachers' decisions in language classes. Johnson (1992) investigates interactive decision making process of six pre-service ESL teachers' through stimulated recall and retrospective writing. She finds out that the teachers made use of instructional routines to cope with misbehaviors of the students and maintain the flow of instructional actions. She also suggests that pre-service teachers must recognize the routines and patterns which experienced teachers rely on to lessen the number of conscious decisions necessary during instruction.

Woods (1989, 1996) also analyzes decision making and proposes a model covering two types of decisions: *sequential decisions and hierarchical decisions.* Sequential decisions occur when one decision follows another in a sequence, but not as part of the previous decision. Hierarchical decisions, on the other hand, occur when decisions are carried as a means of achieving the previous decision. Woods (1989, 1996) concludes that teachers' interactive decisions are not only sequentially but also hierarchically related.

In his study, Nunan (1992b) focuses on the decisions teachers made in planning and implementing their plans. Nunan (1992b; 1996), in his observation of nine Australian ESL teachers in the mid –range of experience, has noted that 30 % of their decisions involve management, class organization, and vocabulary followed by pronunciation and grammar. He also claims that what gets planned will not always equate with what gets taught and that what gets taught will not always equate with what gets learned. Parallel to these findings, Carter and Doyle's (1987) study yields that most of the decisions teachers take in the classroom are concerned with management rather than instructional actions.

Similarly, Bailey (1996), in her study on the interactive decisions of six experienced teachers, uses observation, field notes, follow up interviews, and recall techniques. The participants were questioned about the typicality of the lesson plan, what had preceded and would follow this lesson, their perceptions of the lesson, how well the lesson fit in time available, and whether they were aware of any departures from the lesson plan. Finally, they were requested to articulate the principles guiding their decisions. At the end of the study, she categorizes the common reasons the teachers give for their interactive decisions as follows: (1) Serve the common good, (2) Teach to the moment, (3) Further the lesson, (4) Accommodate students' learning style, and (5) Distribute the wealth.

Moreover, Peterson and Clark (cited in Borko & Shavelson, 1990) suggest that pre-active and interactive decisions increase with experiences and that experienced teachers are more capable of coping with unexpected events they come across in the classroom because they have a well established set of teaching routines which novice teachers usually lack. In another study, Borko, Livingston, McCaleb, and Mauro (1988) examine the relationship between teacher preparation programs and student teachers' thinking. They find out that student teachers lack a well established repertory of routines for classroom management and the organization of instructional activities.

Some other studies are conducted to summarize a number of patterns that emerge from the studies conducted on teachers' interactive thinking and decisions. They state that novice teachers are more concerned with behavior and classroom management, whereas experienced teachers focus more on instructional information and hence instructional behavior. Automaticity is found to be more associated with experienced teachers; that is, they respond to a greater number of classroom events without conscious awareness. Most of these findings are seen to be parallel to the differences reported in other areas of expertise such as chess playing and physics problem solving (Borko & Shavelson, 1990).

1.3. Statement of the Problem

The central focus of research in the area of language learning / teaching has shifted over the years, from the method of teaching to the learner and learning processes, and more recently to the classroom setting in which formal learning is taking place. What the teacher brings to the learning experiences of the students in both EFL and ESL classes have been neglected or disregarded. In 1960s, for example, it was believed that teachers do not make any difference in school learning; however, after conducting process product research on teaching, both educators and researchers have agreed that teachers did make a difference. To orchestrate the classroom life, a teacher should be aware of the variables which affect the classroom milieu and the dynamic interplay of these variables during classroom teaching (Woods, 1991).

Since the 1950s classroom research has focused on what is observable in the classroom, namely the language used by the teacher and learner or the patterns of classroom interaction. Above all, in all these studies, the analysis is made from an observer's perspective without any attempt to see what is going on inside the participants' minds. Therefore, such studies put less emphasis on the unobservable dimensions of classroom interaction. Yet, accessing what is going on in teachers' mind certainly provides a better understanding of the complexities in classroom processes (Halkes & Olson, 1984). For this reason, recently, we, as teachers and researchers, have begun to employ ethnographic approach to investigate classroom events from the participants' perspectives rather than the observers' perspectives. In other words, we have tried to look "at the other side of the desk" (Savignon, 1976).

In line with these claims, Bailey (1998) proposes that the most professional and frequent activity of an EFL teacher is decision making. She further suggests that teachers are constantly engaged in this process and that there is a dynamic tension between the plans teachers make and the adjustments to those plans which they decide to make during class. Therefore, as Nunan (1991) claims, we can not assume that planning equals teaching and teaching equals learning. Scriviner (1994) also says that a teacher has options at every point in the lesson: to say something or to say something different; to tell of a late comer or to welcome him; to take three minutes to deal with a question or to go on with what you planned previously. These options emerge as the lesson progresses, and each given decision will certainly take the teacher on his or her particular route. Therefore, teachers should be acknowledged that there is no best way to behave in the class and that they should learn how to apply their knowledge to make decisions so that they can continually act appropriate to the dynamic moment to moment complexity of the classroom teaching and to improve student performance. (Dembo, 1977; Scriviner, 1994).

As Johnson (1993) remarks, the teachers, especially novice teachers, should understand the relationship between their own planning and teaching so that they can /should adjust their lesson plans according to what actually occurs during a lesson. In other words, novice or student teachers should become aware of the instructional options open to them and the principles by which they can reevaluate their teaching alternatives. Only then can they improve their teaching practice and be responsible and powerful in working out where to begin, how to shape the lesson, and when to depart from the lesson plan. (Dembo, 1977; Schon, 1987).

In addition to these views, Zeichner (1983) suggests that teachers should not only be concerned with what actually happens in the classroom but also be able to discuss what should be dealt with and why. Teachers must also be able to look at and explain their actions. Moreover, Ebraheem and Botros (2002) claim that much of what happens in teaching is unknown to the teacher. That is to say, teachers are often unaware of the kind of teaching they do.

1.4. Aim and Scope of the Study

Nowadays, there has really been precious little research on what teacher brings to the process of second language education. There is no right way to teach and there are no simple answers to the complexities of teaching since teaching is a very indeterminate practice. Furthermore, a teacher knows what to do in the class on the bases of a wide range of considerations. The ways teachers think about these considerations are centered at the core of understanding teaching. In teaching, there is a wide choice of ends to put into action. Moreover, many decisions made in the class are not simple matters in which teachers identify a situation, recall, and apply the correct course of the action. Teaching judgements and decisions can not be made on an individual basis since every dealing of the teacher with one student will certainly affect the other students in the class in one way or another, which increases the complexity and stress of the situation (Johnson, 1999; Halkes & Olson,1984; Pratte, 1986).

Therefore, this particular study is conducted to explore the nature of teacher decision making in the EFL classes from the teachers' perspective. The ultimate purpose is to identify and compare the interactive thoughts and decisions of experienced and novice language teachers, focusing on possible reasons underlying their interactive decisions.

We also hope that the study can act as an *awareness-raising tool* especially for the novice teachers in terms of the relationship among the three stages of decision making : Pre-Active (i.e., planning process), Interactive (i.e., what actually occurs in a language classroom), and Post-Active (i.e., evaluative process) Decisions.

1.5. Research Questions

The following research questions constitute the basis of the study:

1. Are there any differences between experienced and novice teachers in their interactive decisions?

    a. Do experienced teachers respond to certain types of student behavioral cues in the same way as novice teachers do?

    b. Do experienced teachers make the same type of interactive decision (i.e. reflective, immediate, and routine) as novice teachers?

    c. Do experienced teachers consider more instructional alternatives (i.e., goals) while making interactive decisions?

    d. Do experienced teachers make more interactive hierarchical decisions than novice teachers?

    e. Do experienced teachers approach (i.e., feel about) their interactive decision making behavior more positively than novice teachers?

2. What are the possible reasons (i.e., context, materials, prior knowledge, etc.) underlying the interactive decisions of experienced and novice teachers?

3. What classroom incidents cause the most frequent discrepancies between the lesson plan and the actual lesson?

1.6. Operational Definitions (In Alphabetical Order)

Action: The activities, performances, behaviors, the observable physical or speech acts of teachers and students (Shulman, 1986).

Anchoring Routines: Routines which are used to link the present subject material with the previously learnt material (The University of Kansas Center for Research on Learning [UKC], 2002).

Anecdotal Records: Quickly written notes about students, student behavior, interactions with students, or other aspects of the teaching and learning in the class which seem compelling and related to the inquiry (Freeman, 1998; Samway, 1994).

Attitude: An inter play between externally oriented behavior and perceptions and internal intrapersonal dynamics, feelings and reactions; the observable personal characteristics demonstrated during the class itself (Freeman, 1989; Lake, 2002).

Awareness: Becoming aware of how much knowledge one possesses, how well skilled one is, to account for why teachers grow and change (Freeman, 1989).

Capacity: The relatively stable and enduring characteristics of ability, knowledge and capable of change through either learning or development (Schulman, 1986).

Classroom -Centered Research: Research centered on the classrooms distinct from, for instance research that focuses on the inputs to the classroom such as the syllabus or on the outputs from the classroom such as students' scores. Instead, classroom research simply focuses on what is actually happening inside the classroom (Allwright & Bailey, 1991).

Classroom Management: Refers to the ways in which student behavior, movement, and interaction during a lesson are organized and controlled by the teacher to enable teaching to take place most effectively (Richards, 1990b; Stevick, 1998).

Cognition: Related to the various thinking processes characteristic of human intelligence (Costa & Presseisen, 1991).

Concept Mapping: In this method, participants are asked to brainstorm about a particular topic such as group work to produce a list of terms and then arrange them so that their connections are demonstrated. On some occasions, these relationships are labeled (Morine-Dershimer, 1993).

Content: Is the substance of the discipline, the facts, principles, concepts (Grossman, Wilson, & Shulman, 1989).

Convergent Thinking: Requires a single correct answer to a problem or question (Costa & Presseisen, 1991).

Creative Thinking: The formation of possible solutions to a problem or possible explanations of a phenomenon. Critical thinking is the testing and evaluation of these proposed solutions. (Moore, Mccann, & Mccann, 1985).

Critical Thinking: Is also known as directed thinking: Using basic thinking process to analyze arguments and generate insight into particular meanings and interpretations (Costa & Presseisen, 1991).

Decision: Teachers are frequently confronted with a range of alternatives and are asked to choose among these options the ones they think are best suited to a particular goal. The option the teacher selects is known as decision (Richards and Lockhart, 1994).

Decision Making: The process in which one of several options is selected after considering possible alternatives, facts, ideas, personal values, and probable consequences (Costa & Presseisen,1991).

Diary: A first person account of a language learning or teaching experience, documented through regular, candid entries in a personal journal and then analyzed for recurring patterns or salient events (Bailey, 1990).

Direct Instruction: Refers to academically focused, teacher directed classrooms using sequenced and structured materials (Richards, 1990b).

Divergent Thinking: Requires generating many different responses to the same question or problem (Costa & Presseisen, 1991).

Education Beliefs: Are required beliefs about the nature of knowledge, about causes of teachers or students' performance, about specific subjects or disciplines, about factors affecting student and teacher performance, and about perception of self and feelings of self worth (Dunne, 1993; Yero, 2002).

Elaborate: To expand on concepts or ideas; to give an idea or object greater detail (Costa & Presseisen, 1991).

Elicited Response: The response students give to the teacher when s/he tries to get an answer or reaction from the student.

Espoused Theory of Action: This is the theory that encompasses our aims and intentions and is easy to articulate. These are the theories "that we use to explain or justify our behavior" When people are asked about their behavior in a certain situation, most people respond with their espoused theory of action for that situation (Argyris, Putnam, & McLain Smith, 1985; Schulman, 1987).

Ethnographic Research: Research investigating classroom events from the participants' rather than from the observer's perspective, looking at these events in their naturalistic settings and in their entire context (Tsui, 1998).

Experienced Teachers: In this study, the teachers who have been teaching at least for five years are considered to be experienced.

Experiential Knowledge: The knowledge that a teacher gets from her or his experiences of teaching. Johnson (1999) defines it as the accumulation of our real life experiences, which shape who we are and how we perceive and respond to the world around us.

Flexibility: The ability to take alternative points of view; try several different approaches; apply concepts, ideas, or rules to a variety of situations (Costa & Presseisen, 1991).

Heuristic: A general strategy or rule of thumb that is used to solve problems and make decisions. While it does not always produce a correct answer, it is usually a helpful aid (Costa&Presseisen, 1991).

Immediacy: Refers to the rapid face of classroom events (Doyle, 1984,1986).

Instruction: The purposeful direction of the learning process and is one of the major teacher class activities along with planning and management. Instruction is complex and can take many forms. It is a vitally important classroom activity which must be considered in the light of such factors as measures of desired learning, controlling student behavior, individual differences among students and school processes and characteristics (Huit, 1994).

Instructional Decision: In this study instructional decisions are considered to be any kind of decision a teacher makes in relation to teaching process either at the pre-active or interactive phase.

Instructional Process: A wide concept including all the important components taking place in classroom instruction as well as the steering factors defined in the curriculum (Kansanen, 1993).

Interactive Decisions: Decisions which teachers make in relation to the specific dynamics of the lesson they are teaching. These decisions generally do not involve thinking, reflection, or additional information. Interactive decisions are also called as *real time*, *in-class, on-line*, or *in-flight decisions* (Johnson, 1992; Shavelson, 1983).

Interviewer: The person who probes the subject's thinking during the stimulated recall, stopping the tape at appropriate points in the encounter (Barrows, 2000).

Judgement: The process of forming an opinion or evaluation based upon a value (Costa & Presseisen, 1991).

Knowledge: What is being taught, to whom it is being taught, and where it is being taught. (Freeman, 1989).

Lesson: Some time bound unit of instruction, often structured around thematic units such as vocabulary items or literary selections. The term also reflects the concept of structuring when the teacher's intentions are clear and instructional activities are sequenced according to a logic and structure that students can perceive (Bailey, 1996; Richards, 1990b).

Lesson Planning: All preparations teachers make (i.e., selecting materials, activities, etc.) to guide their instructional action in a particular lesson (Yinger, 1980).

Microteaching: Presenting structured mini-lessons using specific strategies and techniques (Richards, 1990b).

Multidimensionality: Refers to the large quantity of events and tasks in the classrooms (Doyle, 1984).

Novice Teachers: In this study, the teachers who have been teaching English for two years or less are considered as being novice teachers.

Planning: A basic psychological process in which teachers visualizes the future, inventories means and ends, and construct a framework to guide their future actions-what Yinger (1980) calls thinking in the future tense.

Policy Capturing (=Hypothetical Situations): This is a kind of reflective data collection technique which entails giving the participants descriptions of hypothetical students or teaching situations. Then, the participants are asked to make judgements or instructional decisions about each description. Then these judgements are rated on a Likert scale (Fang, 1996).

Post-Active (=Pro-Active or Evaluative) Decisions: Decisions which a teacher must make after the lesson about its effectiveness and what the follow up to the lesson will be (Richards & Lockhart, 1994).

Practical Reasoning: A conceptual framework in which beliefs, desires, emotions, experiences with particulars, intentions, and knowledge of universals of teachers interact in a reasoning process leading to the conclusion to act (Noel, 1993).

Practical Theories: Practical theories of teachers are notions about how to teach which have been gathered by individual teachers from their own experiences of teaching to suit their own particular work settings. They are personalized, context specific, implicit, and also intensely practical (Marland, 1998). Handal and Lavuas (1987) define this term as a person's private, integrated but ever changing system of knowledge, experience and values relevant to teaching practice at any particular time.

Practice Teaching (= Practicum): Participating in a variety of teaching experiences that are closely supervised by a skilled teacher (Richards, 1990b).

Pre-Active Decisions: These are the decisions taken before the lesson begins. Since these decisions are made in planning the instruction, they are also called as planning decisions. Contrary to interactive decisions, pre-active decisions are generally reflective in nature (Richards & Lockhart, 1994).

Process-Product Research: Research which investigates the behaviors of effective teachers and the relationship between teacher behavior and student learning in the class. The older research program has often been linked with the behaviorist paradigm; however, the newer research program is linked with the cognitive paradigm (**Berliner, 1990;** Richards, 1990a).

Process Tracing: A general term which describes a group of verbal report methods in which participants are asked to engage in such activities as making decisions and judgements about a task. Think aloud, retrospective interview, stimulated recall, and journal keeping are the most common examples of policy tracing (Fang, 1996).

Professional Development: A variety of activities in which teachers are involved to be able to improve their teaching practice (Arechaga, 2001).

Propositional Structures: Include teacher knowledge about components of teaching and learning process such as students, their classrooms, the subjects they teach, and the teaching methods they use (Anderson, 1984; Borko & Shavelson, 1990).

Recall Enhancement and Clarifying Routines: Routines that are used to help students remember information and understand the terms better (UKC, 2002)

Reflection: A learning process in which a teacher critically recalls, considers, and evaluates her or his teaching regarding different models of the nature, aims, and context of teaching(i.e., in relation to a broader purpose). This kind of reflection acts as a basis for evaluation and decision making and as a source for planning and action (Schon, 1983, 1987).

Reflection-for-Action: Teachers undertake reflection to guide their future instructional actions: Reflective-for-action is pro-active in nature (Farrell, 1998).

Reflection-in-Action: Teachers think about what they are doing (i.e., their teaching) in the classroom while they are doing it. This thinking serves to reshape what they are doing in the classroom: Dealing with on-the spot professional problems as they occur (Schon, 1983, 1987).

Reflection-on-Action: After the class, teachers recall and think back on what they have done (i.e., their teaching) in the class: They give reasons for their instructional actions in the class. This includes reflecting on our reflecting-in-action (Schon, 1983, 1987).

Reflective Decisions: These decisions are taken both in planning and implementing the plan in the class. They involve much thinking and evaluation (Shavelson, 1983).

Reflective Thought: The careful, persistent examination of an action, proposal, or belief and the analysis or use of knowledge in light of grounds that justify it and its probable consequences (Dewey 1933 & Black, 2001).

Routines: Well established teaching behaviors that are performed automatically to cope with the classroom events especially with unexpected events. Routines have become an ordinary part of everyday teaching and they are usually employed without conscious thinking. Moreover, routines have the function of minimizing conscious interactive decisions (Leinhardt, 1983).

Scenes: Include knowledge about people and objects involved in classroom interaction such as group work and individualized learning (Anderson, 1984; Borko & Shavelson, 1990).

Schemata: The body of general knowledge a teacher possesses, including a network of related facts, concepts, generalizations, and experiences that help teachers to comprehend events, student actions, and so on (Borko & Shavelson,1990).

Scripts: Knowledge structures that include everyday activities which become automatic after a while and can be observed as routines (Borko & Shavelson, 1990).

Second (=Foreign) Language Classroom Research: Research that is carried out in the language classroom for the purpose of answering important questions about the learning and teaching of foreign classes. It focuses on teachers or students, or on the interaction between students and teachers (Nunan, 1990).

Self Concept: The picture each person has of the kind of the person he or she is (Kagan, 1992).

Simultaneity: Refers to the fact that a teacher must continually monitor a large number of events, many of which occur at the same time (Doyle, 1984).

Skill: What a teacher is able to do such as presenting the material, correcting errors, managing classroom interaction, etc. (Freeman, 1989).

Spontaneous (=Immediate) Decisions: Immediate decisions made in the class in response unexpected situations. Therefore, these decisions are said to be based on immediate thinking and snap judgements rather than reflective thinking or evaluation (Shavelson, 1983).

Student Behavioral (=Performance) Cues: Students, consciously or unconsciously, signal whether they are learning the subject matter well or having troubles by using some cues such as asking questions, errors, deficient responses, unexpected responses, or initiation. Teachers tend to rely on these signals they receive from the students in order to direct their further teaching appropriately in the class. These signals are referred as student behavioral cues in the literature (Fogarty et al., 1983; Johnson, 1992, 1999).

Task (=Activity Structure): Refers to activities that teachers assign to attain particular learning objectives. A piece of classroom work which involves learners in comprehending, manipulating, producing or interacting in the target language while their attention is principally focused on meaning rather than form (Richards, 1990a; Nunan, 1993).

Teaching: An interpersonal and interactive process typically involving verbal communication, which is undertaken for the purpose of helping one or more students learn or change the ways in which they can or will behave. Instruction is an inclusive of teaching (Anderson & Burns, 1989).

Teaching Expertise: Teaching expertise includes the knowledge about how to adapt planned instruction to environmental conditions and student learning states (i.e., adaptive instruction practices) (Borko & Shavelson, 1990).

Teaching Portfolio: A collection of documents that represents the best one of one's teaching and provides one with the occasion to reflect on his\her teaching with the same intensity devoted to research (Murray, 1994; Bastidas, 1996).

Theories-in-Use: The tacit theories that underpin practice and determine actions. Theories-in-use exist predominantly as tacit knowledge, that is knowledge we hold but cannot articulate easily (Shulman, 1987).

Thought: The cognitions, meta-cognitions, emotions, purposes (Shulman, 1986).

Triangulation: Is a means of checking the data against two or more other methods of data collection, such as interviews, documents, or other observations of the same event (Cohen & Manion, 1994; Freeman, 1998).

1.7. Abbreviations

BAK: Belief, Assumption and Knowledge

EFL: English as a Foreign Language

ELT: English Language Teaching

ESL: English as a Second Language

S: Student

SS: Students

T: Teacher

YADIM: Center for Foreign Languages (the research context)

In this chapter, we have provided some background information about teachers' thinking and decision making processes. Moreover, we have stated our problem and research questions which will be explored throughout the study. The next chapter reviews the relevant literature in regard to teachers' thinking process and decision making behavior, types of decisions, decision making models, approaches to teaching, and reflective data collection tools.

CHAPTER 2

REVIEW OF LITERATURE

In this chapter, the relevant literature is reviewed to provide background information about teaching conceptions, approaches to teaching and teacher thinking, decision making process of teachers, with specific reference to interactive decision making. Then, a selective overview of the studies conducted on interactive decision making is given. Finally, the historical development and functions of the data collection tools are summarized to decide on their reliability and validity in the study.

2.1. Teacher and Classroom Teaching

Teaching covers the processes of knowing and establishing knowledge in which teachers focus on the learning of students. Teachers are viewed as –and principally see themselves- as consumers but not as producers of knowledge. The knowledge always changes in the implementation. For example, when you cook from a recipe, the food you cook will always be unique in some ways. Similarly, when teachers use an exercise from a textbook, they transform each activity from something that exist in a limbo outside of time and put it in the concrete messiness of their classrooms. Teachers always redefine the received forms in smaller or larger ways in particular classrooms at a specific time for a group of learners (Freeman, 1998). As Stevick (1980) says, teaching and learning are concerned with what goes inside and between people.

Schon (1983) claims that professionals in their own areas are valued for their capabilities to inquire, apply the known to the new, novel, or unknown. However, this process is reversed in teaching: Teachers are valued as professionals only when they know what to do. Moreover, Freeman (1998) claims that teachers usually face new, novel, or unknown events in the classroom with no adequate time, support, or preparation to investigate it. Teaching has two sides: On one side, they teach a process in which they manage the class and deliver the content; on the other side, the wondering and speculating, the doubting and having hunches, the puzzling and questioning appear. Therefore, recently, ongoing instructional decisions teacher make in the class have received increasing attention in educational research. In this sense, teachers should be considered as clinical diagnosticians who are expected to monitor the students' individual learning needs and make either preplanned or on the spot decisions in response to those needs. Freeman (1989) also asserts that a skilled teacher is able to make rapid on-line decisions, to explain their decisions, and to articulate principles which underlie the decisions they make.

McMeniman, Cumming, Wilson, Stevenson, and Sim (2000), on the bases of the research findings, represent the current view of teacher practitioner mediating a propositional knowledge base and interacting with a variety of research informed sources and formal research (Figure 2.1).

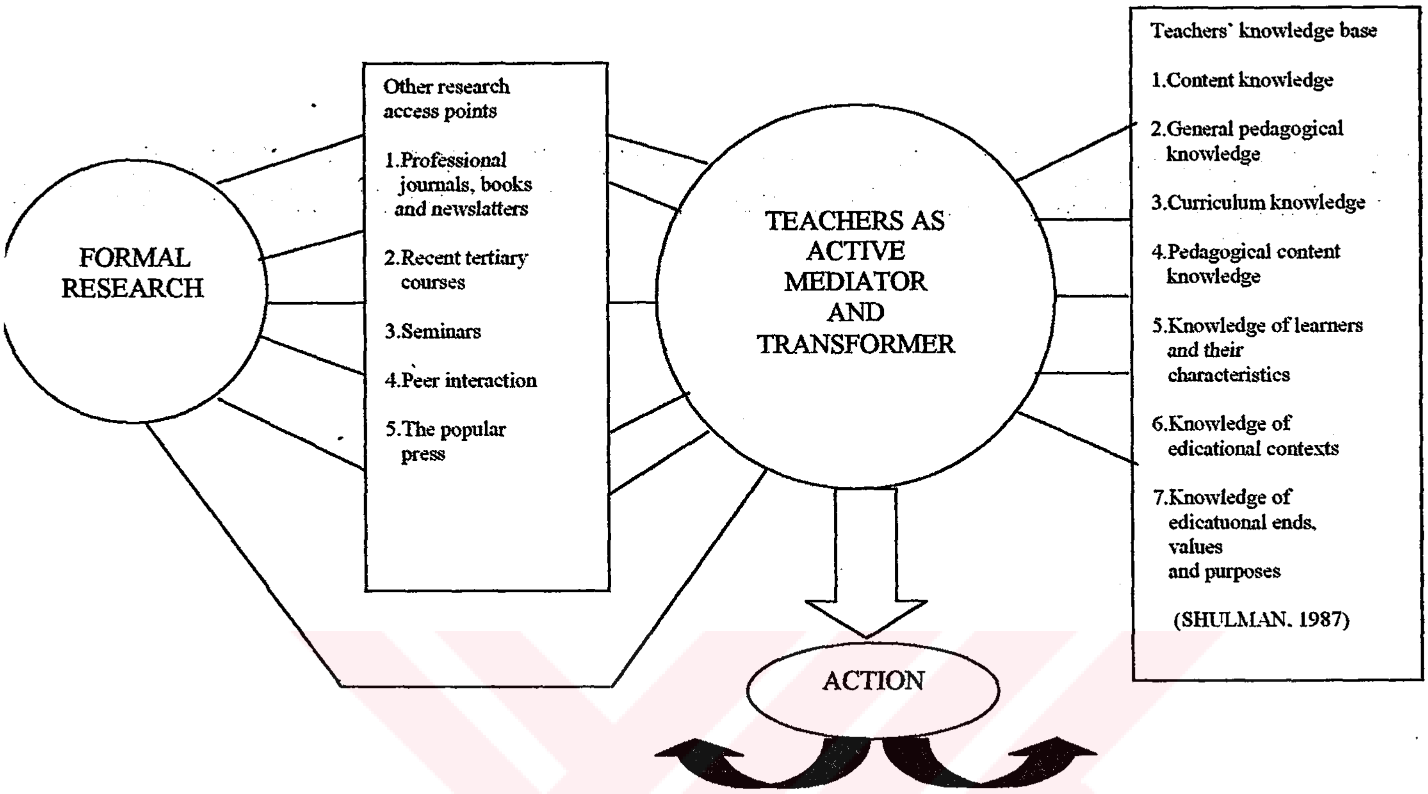


Figure 2.1. Theoretical model of teachers' knowledge in action and the influences of research (From McMeniman et al., 2000).

Figure 2.1 construes the teacher as an active mediator and transformer of knowledge creating new meanings and understandings to inform classroom action. The research points proximal to the teacher are given under the title of other research access points. The teacher accesses formal research either directly or through these proximal research access points. As in the relevant literature, the teacher in the role of a reflective practitioner is informed by action, which is displayed by the two arrows at the bottom of the diagram. The teachers' knowledge categories in Figure 2.1.are quoted from Shulman (1987).

The actual process of teaching is defined by Leinhardt and Greeno (1986) as follows:

> A complex cognitive skill requiring the construction of plans and making rapid on-line decisions. The task of teaching occurs in a relatively ill-structured, dynamic environment. Goals and problem-solving operators are not specified definitely, the task environment changes in a way that is not always under control of teachers' actions, and information appears during the performance that is needed for successful completion of the performance. (p.75)

Therefore, teachers are said to have a complex knowledge structure referred as schemata. These schemata includes global teaching activities such as checking homework and some smaller units of activity such as distributing paper to the class.

Parallel to this claim, Doyle (1986) asserts that classroom teaching, regardless of level, is a complex cognitive activity having three important aspects or dimensions. simultaneity, multidimensionality, and immediacy (i.e., unpredictability). Simultaneity refers to the fact that a teacher must continually monitor a large number of events, many of which occur at the same time. Multidimensionality refers to the large quantity of events and tasks in the classrooms. Classroom teaching is multidimensional because demands and aims generally conflict in a teaching context. The last dimension, immediacy refers to the rapid face of classroom events and it is affected by the simultaneity of the classes and the opportunity for unexpected happenings.

Teachers, however, should deal concurrently with a lot of students and these classroom teaching dimensions at one time. Therefore, the research in this area focuses on the complexity of classroom processes, the skillfulness needed by the teacher to deal with such complexity and the ways teachers at different levels focus on different classroom behaviors and events (Caldearhed, 1996; Chaudron, 1988; Freeman, 1998: Fogarty et al., 1983; Nilssen, 1995).

2.2. Reflective Teaching

2.2.1. The Concept of Reflective Teaching

Reflection is at the heart of practice and key component of teacher development. Furthermore, teachers' own reflection on daily classroom activities is the first and most important basis for professional development, which is more than thinking because reflection deliberates on experience, and mirrors experience. Reflective teaching has been credited as a way of developing informed decision making in the classroom. That is to say, while teaching or in retrospect, teachers analyze and become aware of their thoughts, alternatives leading to their final action (Arechaga, 2001; Bartlett, 1990 Black, 2001; Calderhead & Gates, 1993; Florez, 2001; Hole & McEntee, 1999; Laba & Abrams, 1999; Lange, 1990; Pennington, 1992; Richards, 1990a; Spence, 1996; Tripp, 1993; Ur, 1999).

Reflective teaching approaches are associated with the notions of growth through critical inquiry, analysis, and self-directed evaluation; however, the term reflective teaching has been characterized by a vast number of concepts, all of which encompass some notion of reflection: "teacher as researcher", "reflective practice", "inquiry-oriented teacher education", "reflection-in-action", "teacher as decision maker", "teacher as professional", and " teacher as problem solver"(Cabaroğlu, 1999; Sendan, 1995).

Calderhead and Gates (1993) suggest that reflective teaching is not only an attempt to understand what is distinctive about teachers' professional development but also a reaction against increasing centralization in the control of education which views teachers as technicians or deliverer of the curriculum. As Thiel (1999) and Dewey (1933) claim, in reflective practice, teachers are involved in a continuous cycle of self-observation and self-evaluation to understand their own actions, beliefs, and the reactions they prompt in themselves and in learners. Reflection is not conducted for its own sake, rather it is done to improve instructional practice; therefore, teachers must link information and insights gained from the reflective process to changes they are making in the classroom. Furthermore, reflection is always informed by a view of the world which is shaped by our culture, values, and experiences (Leino, 1995; Pennington, 1992; Russell, 1993; Tripp, 1993).

Farrell also (1998) claims that reflective teaching helps teachers avoid the "I do not know what I will do today" syndrome. Moreover, they feel the need to improve their teaching skills beyond their initial survival strategies so that they can reconstruct their own particular theory from their practice. That is to say, reflecting on our teaching experiences certainly helps us to reconstruct our own educational perspective.

Similarly, Black (2001) states that teachers employ spontaneous reflection while they are teaching in the class: When an unexpected event arises in the class, teachers quickly analyze the situation and change plans accordingly. Since reflective teaching emerges from the needs and interests of the teachers, it can address this variety including instructional context, learner groups, curricula, etc. Moreover, new teachers can closely examine their successes and failures in a constructive environment.

The benefits of reflective teaching can be categorized into five groups. Firstly, seasoned teachers further their self-awareness and knowledge through personal experience (i.e:, flexibility). Secondly, in this process, teachers can make connections between what is happening in a specific context and their broader beliefs (i.e., practicality). Thirdly, in terms of professionalism, reflective practice covers ongoing exercise of intellect, responsibility, and professionalism. It promotes deliberate actions not only in planning and implementing instruction but also in ongoing engagement with theory. Therefore, through reflective teaching, teachers are said to improve their ability to react and respond as they are teaching, to asses, revise, implement approaches, and activities on the spot.

Moreover, it creates a cyclical process that allows time for reflection, implementation, and follow up (i.e., sustainability). Challenge is the last category including the fact that it emotionally challenges the teacher since some teachers may not be ready to confront the uncertainty about their teaching philosophies and competence that can be a part of the process. In short, reflective teaching introduces teachers to ways of exploring and reflecting upon their classroom experiences, employing a carefully structured approach to self observation and self evaluation. Therefore, reflective teaching is essential for professional growth.

Reflective teachers monitor the effects of their instructional actions and the cognitive processes they employ in decision making. Furthermore, reflective teachers are able to explain the reasons behind their instructional actions to other professionals. In reflective processes, developing teachers are encouraged to become aware of their own teaching and learning and second, to view the curriculum of schools and its implementation (Black, 2001; Farrell, 1998; Florez, 2001; Thiel, 1999).

Van Mannen (cited in Noakes, 1995) identifies three levels of reflection:

-The first level (technical rationality) is concerned with the efficient and effective application of educational knowledge (i.e., skills and technical knowledge). This level examines teaching act after it takes place. At this level, the institutional contexts of the classroom, school, and community are not treated as problematic.

-At the second level of reflectivity, the dominant concern is practical action and predispositions underlying practical affairs. Every action is viewed as linked to particular value commitments.

-The third level (=critical rationality) integrates moral and ethical criteria into the discourse about practical action. The main focus is on educational goals, experiences and equitable forms of life. At this level both the teaching and the context of teaching are seen as problematic.

2.2.2. Approaches to Reflective Teaching

2.2.2.1. Cognitive, Critical, and Narrative Reflection

Reflective teaching has been parsed into three approaches as Cognitive, Critical, and Narrative. The cognitive approach to teacher reflection is rooted in information processing and covers reflection as analysis and decision making, which is also named as technical or empirical-analytical. This approach is heavily relied on empirical research and psychologically oriented theories of learning and teaching to guide decision making (Sparks-Langer, Colton, Pasch, & Starko, 1991).

The critical approach involves the experiences, values, sociopolitical implications, and goals of teachers. Critical reflection implies that teachers at least should be aware of their belief systems and constantly monitor how far their actions reflect their beliefs or are keeping with them (Brookfield, 1995). Richards (1990a) claims that critical reflection is also a response to a past experience and requires conscious recall and examination of the experience, which becomes a basis for evaluation, decision making, planning, and action. As Bartlett (1990) claims, the word critical does not mean criticizing or being negative: It refers to situations in which teachers see their actions in relation to the historical, social, and cultural context where their teaching is actually rooted.

In the narrative approach, reflection is integrated in the context of teachers' work and teachers' own voices. The main emphasis is on teachers' own descriptions of the circumstances in which they make instructional decisions. Therefore, local relevance and meaningfulness is more important than generalizability in the evaluation of the research results. In this sense, research is anthropological, literary, and collaborative.

All these approaches to teacher reflection constitute an important whole in exploring and understanding the process of teacher thinking and these are mutually exclusive (Sparks-Langer et al., 1991).

2.2.2.2. Research-Based Knowledge and Knowing-in-Action

Schon (1987) differentiates between two kinds of professional knowledge: Research-based knowledge and knowing-in- action. The former covers facts, data and theories that usually stem from some kind of research. Therefore, it is called 'theory-then-practice' approach. The other type of knowledge is the tacit knowledge one can only learn through his or her practice and experiences.

Schon (1987) proposes that we reveal this knowledge in our intelligent action, and we can not characteristically make it verbally explicit. In other words, our knowing precedes our thinking about our knowing, and tacit knowledge precedes articulated knowledge. For that reason, this kind of tacit knowledge can be discovered by observing and reflecting on our spontaneous actions, which requires a process including the sequences of operations and the rules we follow such as values, strategies, and assumptions which form our theories of action (Dewey, 1974; Ethel & McMeniman, 2000; Olson, 1992; Schon 1987).

Knowing-in-action is dynamic, but facts, procedures, rules, and theories are static. For example, Schon (1987) describes this term with an example from daily life:

> When we know how to catch a ball, for example, we anticipate the ball's coming by the way we extend and cup our hands and by the online adjustments we make as the ball approaches. Catching a ball is a continuous activity in which awareness, appreciation, and adjustment play their parts. (p.25)

Schon (1983) also claims that knowledge-in-action is at the center of professional practice, teaching:

> ....the workaday life of the professional depends upon tacit knowing –in action. Every competent practitioner can recognize phenomena- families of symptoms associated with a particular disease, peculiarities of a certain building site, irregularities of materials or structures- for which he can not give a reasonably accurate or complete description. In his day-to-day practice he makes innumerable judgments of quality for which he can not state adequate criteria, and he displays skills for which he can not state the rules and procedures. Even when he makes conscious use of research-based theories and techniques, he is dependent on tacit recognitions. Judgments are skilful performances. (pp.49-50)

2.2.2.3. Application of Reflection

2.2.2.3.1. Reflection-in-Action

Our spontaneous knowing-in-action gets us through the day. Moreover, knowing-in-action is tacit, spontaneously delivered with no conscious deliberation; however, in some cases it does not. For example, when a familiar routine results in an unexpected outcome or an error stubbornly resists correction which does not fit into the categories of our knowing-in-action, we feel something odd about these situations and begin to look for new ways. Actually, we are surprised by all such pleasant or unpleasant experiences. In such cases, we may respond to our surprise by reflection and brush knowing-in-action aside and thus surprise leads to reflection within action-present which is called as reflection-in-action in relevant literature (Schon, 1983, 1987).

The most commonly discussed approach is Schon's (1987) notion of reflection-in-action: In this process, teachers are required to identify and solve problems through the consideration of alternative modes of framing or viewing a professional situation. Reflection-in-action has a critical function in the way that it questions the assumptional structure of knowing-in-action. In this type of reflection, we critically think about the thinking which directed our actions and restructure strategies of action, understand the phenomena or ways of framing problems. On the spot, experiments emerge from reflection. Reflection-in- action can be differentiated from other types of reflection by its immediate significance for action because teachers think about what they are doing in the classroom while doing it and thus reshape what they are doing (Schon, 1983; 1987).

Similarly, Smyth (1987) asserts that when we engage in reflection-in-action, we begin to act reflectively and turn thought back on action. Generally, reflection-in-action occurs as a response to some puzzling, troubling or perplexing situation with which we are struggling. We may pause in the midst of an action to make a reflection, which Arendt (1971) calls stop and think. In either case, our reflection is not directly connected to present action. Furthermore, we may reflect in the midst of an action without interrupting it.

2.2.2.3.2. Reflection-on-Action

In reflecting on our action, we do not immediately reflect on the present action, but we think back on what we have done previously to see how our knowing-in-action may have contributed to an unexpected outcome. That is after the fact (Hatton & Smith, 1995; Schon, 1983, 1987). In such cases, reflection can not have an immediate effect on the action since there is big time gap between the action and the reflection process. However, in reflection-in-action, our reflection can still make a difference to the situation at hand. Actually, reflection-on-action covers both reflection-in-action and thinking about the way we think, but of course it is different from reflection-in-action.

In order to become reflective practitioners, teachers should reflect on their teaching critically and plan their further teaching taking the outcome of such reflection into consideration. The process of reflection-in-action requires the application of theories which underpin each professional's own unique way of working instead of externally imposed knowledge or theories. Therefore, we should make this tacit knowledge explicit by reflection-on-action by continually generating questions and checking our emerging theories with both personal past experiences and with the reflections of others (Schon, 1983, 1987).

2.2.2.3.3. Reflection for Action

In addition to the categories cited above, Farrell (1998) adds a new category: Reflection for action. This type of reflection is different from the previous notions of reflection because it is pro-active in nature. In other words, reflection for action covers reflecting on one's experience to revisit the past or to become aware of the meta-cognitive process s/he is experiencing to guide her or his future action. Farrell (1998) also states that the notion of reflection for action is connected to action research. It is a kind of self-reflective enquiry conducted by teachers in their classes to improve their teaching practices and to understand both these practices and the situations in which these practices are carried out.

Johnson (1999) introduces a new term- reasoning teaching as a kind of cognitive activity which underlies teachers' practices. This reasoning directs teachers' actions. Reasoning teaching is said to represent the complex ways in which teachers conceptualize, construct explanations for, and respond to the social interactions and shared meanings that exist within among teachers, students, parents, and administrators inside or outside of the classroom. Johnson (1999) prefers to use the term reasoning in order to expand the traditional concept teacher thinking from the one that covers what teachers think about before, during, and after they teach to one that describes how teachers think about these things within the context of the classroom.

2.3. Cognitive Models of Decision Making Process

Language teaching can be viewed as a decision making process based on four constituents: knowledge, skills, attitude, and awareness, regarding current research literature on teachers' interactive decision making (Freeman, 1989).

Fogarty et al. (1983) summarize the characteristics of the classroom instructional process revealed by the models of teacher thinking and decision making:

a.) Knowing when to apply an effective instructional action in response to an environmental cue is a basic teaching skill,

b.) Interactive teaching often covers testing cue information against stored knowledge about students, subject matter, and teaching principles,

c.) It is not so easy to preplan strategies for effective achievement of instructional goals since most of the strategies depend on the nature of environmental cues that emerge during the lesson.

Most of these cues are student performance cues which emerge during the class. Therefore, teaching is defined as improvisational performance since the teacher fills out and adapts his or her lesson plan regarding students' reactions to the lesson (Richards, 1994).

Studies on novice and experienced teachers show that experts are more able to think quickly through a situation than novices are (Borko & Livingston, 1989). Two explanations are provided by the cognitive psychology: First, information is organized into a network of related facts, concepts, experiences, and generalizations. In decision making studies, experts are observed to have richly connected schemata to be utilized while making decisions, whereas novices' schemata are less elaborate (Anderson, 1984).

Second is related to automaticity: Experienced teachers store automatic scripts to handle common routines without any conscious thought. A decision making schema acts as a reasonable professional process of making important decisions such as selecting textbooks, pacing work and changing routines during instruction (Anderson, 1984).

2.3.1. The Interactive Decision Models

Shavelson and Stern (1981) proposed a model of teachers' interactive decision with regard to many of the research findings and conclusions discussed till that time. Shavelson and Stern (1981) in their model, assert that overriding concern of teachers in their decision making is to maintain the flow of the lesson and the use of routines during interactive teaching. They have characterized teachers' interactive decisions as reflecting well established routines. Once the instructional tasks become routinized, they are typically played out.

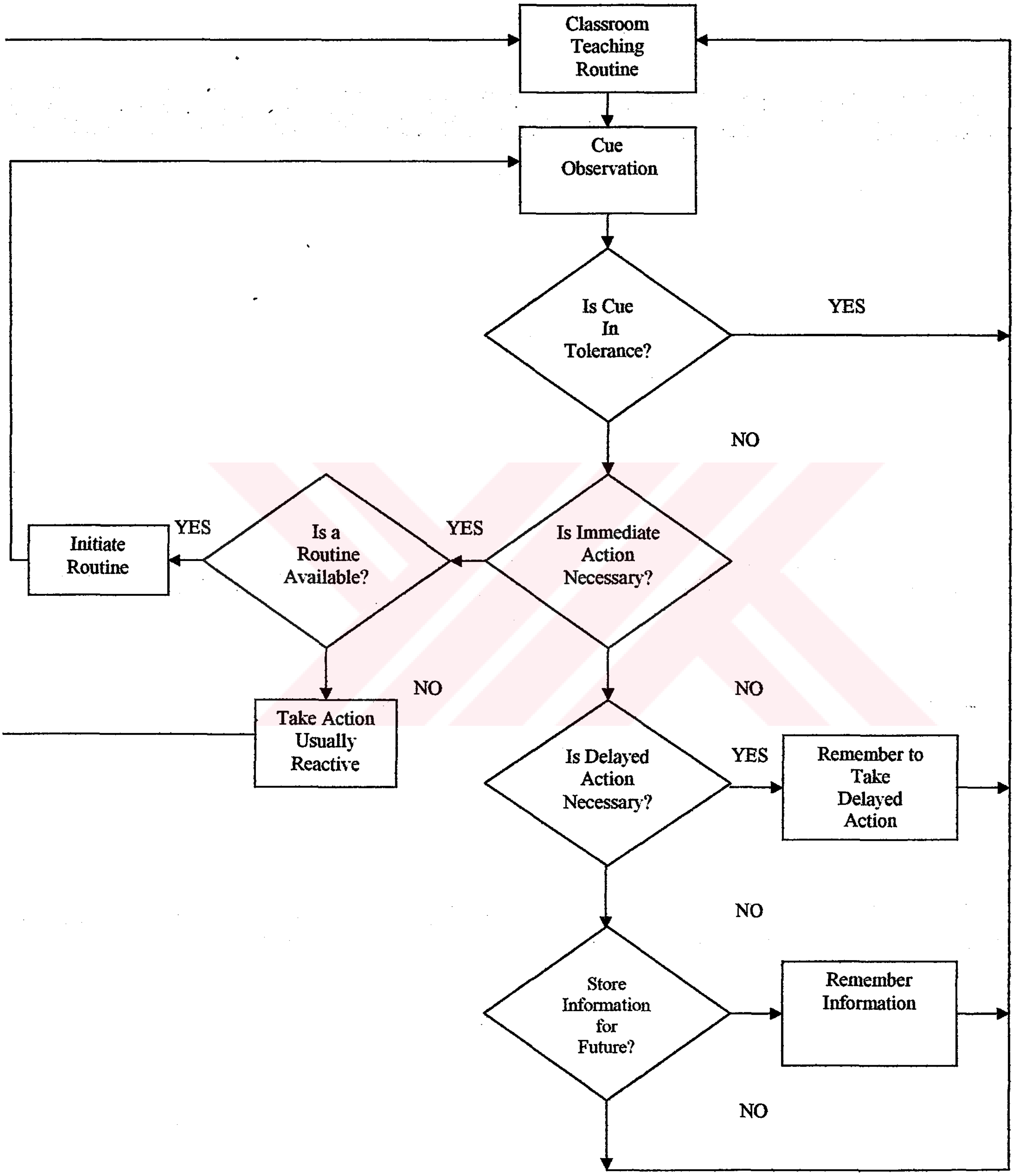


FIGURE 2.2. Model of teachers' decision making during interactive teaching
(From Shavelson & Stern, 1981, p. 483)

As seen in Figure 2.2, teachers' interactive teaching is best described as the carrying out of well established routines because interactive decisions usually arise when the teaching routine is not going as planned: While making use of the routines in the class, the teacher monitors the classroom, looking for the cues to see if a routine is going as planned or not. When the teacher realizes that a cue such as unacceptable student behavior is outside the range of tolerance (i.e., unacceptable behavior such as lack of student involvement), s/he should decide whether an immediate action is necessary. If an action is immediately needed, then teacher tries to find an available routine for handling the problem. If there is an available routine, it is initiated. If not, some other instructional actions are carried out to correct the situation. If immediate action is not required, the teacher considers whether or not delayed action is needed. If the delayed action is called for, the teacher makes a mental note and continues teaching. If the delayed action is not necessary, s/he decides whether to remember the information and continues teaching (Shavelson & Stern, 1981).

The model in Figure 2.2. focuses on student behaviors and characteristics as the cues which the teacher monitors throughout the lesson in the class. However, the model should not only cover observing student cues but also monitoring other aspects of the lesson such as time and instructional materials because such aspects could also show whether the lesson is not proceeding as planned. This model is criticized in the way that it acts as a threshold mechanism whereby observed cues lead to the development of the interactive decision making process only when they are judged to be outside of the teachers' tolerance (Borko & Shavelson, 1990).

Moreover, as Clark and Peterson (cited in Borko & Shavelson, 1990) claim, no research has been done to find out whether this model is at the center of interactive decision making. Some in-class decisions are triggered by unexpected events which fall outside the range of the teachers' tolerance, but other decisions may be part of the normal enactment of routines (i.e., selecting student respondents during the interactive teaching). Moreover, the model may display many of the research findings about teachers' interactive decisions; however, it may not accurately summarize all types of decisions or all cases in which decisions are carried out.

Peterson and Clark (cited in Hayes, 1999) suggest another model in which cue observation is considered to be the most significant factor in the interactive decision making process. Teachers constantly try to interpret signals from what is happening in the classroom and respond appropriately. Moreover, this model clarifies the importance of knowing how effective cue interpretation evolves; for example, whether through trial and error, or through a combination of factors.

Apart from the complete decision making models, Shavelson (1983) summarizes some techniques that teachers apply with regard to students' performance cues they observe throughout their in-class teaching. One principle is compensation by which teachers try to compensate the shy or low achieving students in their classes. The second is strategic leniency which entails being lenient with a student who is in need of special attention. A third principle is power sharing by which teachers exert their influence. Progressive checking is the fourth technique, where the teacher checks student progress throughout the lesson. Lastly, suppressing emotions which helps the teacher to systematically suppress their emotions in front of students since their emotions may cause them to harm students' self concepts or treat different students unjustly (Shavelson, 1983).

2.3.2. A Model on the Factors Contributing to Teachers' Decisions

As illustrated in Figure 2.3, Shavelson and Stern (1981) also put forward another model to identify some important factors that may affect teachers' judgments and decisions.

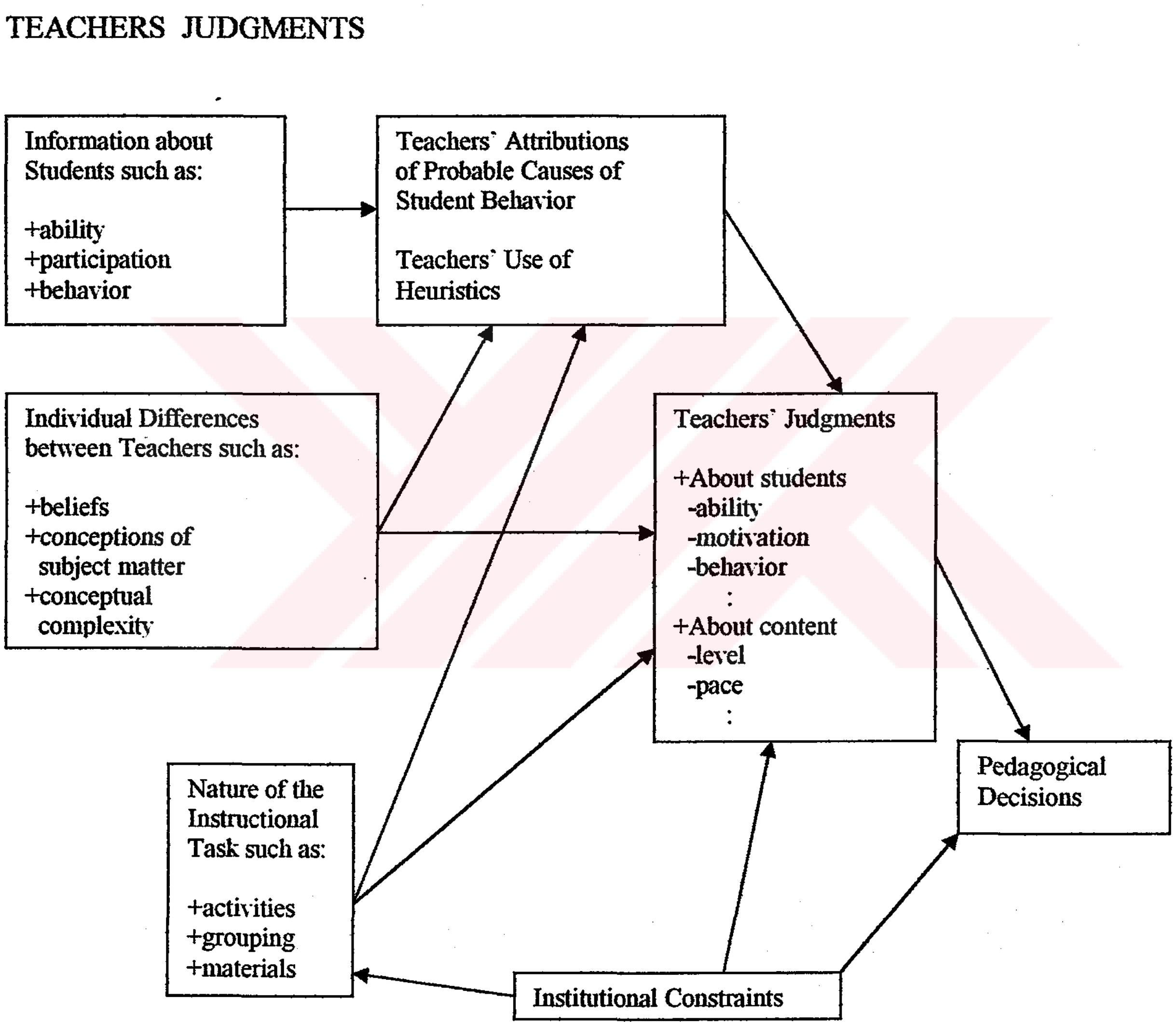


Figure 2.3. Some factors contributing to teachers' pedagogical judgments and decisions (From Shavelson and Stern, 1981, p. 472)

As seen in Figure 2.3., teachers need information about their students' general abilities or achievement, class participation, work habits, classroom behavior, independence, social competence, and self concepts, which can be obtained through many sources such as their own formal observation, anectedol reports of other teachers, and school records. This information is then integrated to make decisions and judgments about students' cognitive, affective and behavioral states, which are then used to make pedagogical decisions appropriately.

Teachers select and integrate information to reach a judgment in part on the bases of a few heuristics and their attributions for the causes of events. Teachers' attributions for the causes of achievement may serve as the basis for teachers' judgments about students, such as student ability and success. Since people can not process simultaneously a large amount of information, they use heuristics for selecting information, judging the probability of an event, classifying objects and people, and revising their initial judgments (Shavelson and Stern, 1981).

2.4. Types of Decisions

2.4.1. Sequential and Hierarchical Decisions

Woods (1991, 1996) and Bailey (1998) believe that decisions were not independent from each other, nor are they randomly related. However, they are continually interwoven. That is to say, they are made in the context of other decisions. In the light of this belief, decisions can fall under two categories regarding the relationship among decisions: sequentially-related decisions and hierarchically-related decisions. The former occur when one decision is made just after another in a sequence but not as a necessary part of the previous decision, while the latter occur when one decision is made as a means of achieving the previous decision (i.e., decisions are made and carried out in support of previous decisions). As Woods (1991, 1996) states, the question word what and the word then (i.e., after or before) as in what did you then led to sequentially related decisions. The question word how as in how are you going to do that activity led to hierarchical decisions.

In sequential decisions, decisions have a coordinate relationship; in the other case, some decisions are subordinate to others. This distinction is seen to be the same for both planning and implementation decisions; nevertheless, decisions are more immediate in implementation. In both cases, previous decisions are observed to limit as well as direct later decisions and actions. Bailey (1998) provides examples for both types of decisions as follows:

> So a teacher may say ' Today we are going to go over the homework, then we'll do some group work to prepare for the newspapers you'll be producing next week, and finally, at the end of the class, we'll have an oral report from Choi's group about their trip to the library.'(This statement about the intended lesson plan reflects sequential decisions.) However, the teacher's further explanation illustrates hierarchical decisions: 'In your newspaper group you need to make sure that the reporters have all gathered their facts and have written the outlines of their stories. Check to see that the main points in the outlines are all supported by examples. Set up a plan for reading one another's draft in class next Monday.' (These are all pre-active hierarchical decisions articulated in support of the plan to produce student newspapers.) (p.1)

2.4.2. Reflective and Immediate Decisions and Routines

Sutcliffe and Whitfield (1979) state that teachers' decisions are based on a wide range of stimuli; some of the decisions are instinctive (i.e., without conscious awareness), and others are based upon a conscious processing of alternative responses. Moreover, Calderhead (1984) suggests that classroom decisions are routines and do not require conscious thought for experienced teachers, but may require such conscious decisions from the novice teachers. Therefore, much of the novices' teaching will be pre-determined.

Hayes (1999) also differentiates between conscious decision making (i.e., rationally derived; after a careful consideration and weighing of alternatives) and subconscious decision making (i.e., spontaneously derived; will just happen without recourse to logic or pre-formulated plans). This means that actions taken in the class may not necessarily be the result of decision making. For example, novice teachers may react spontaneously but they lack the wisdom of experience and the needed sensitivity. Experienced teachers, on the other hand, sense that a more rational approach is necessary and want to take their time deciding.

Similarly, Calderhead (1984) categorizes teaching decisions into three groups as reflective, immediate, and routines. Reflective decisions are taken both in planning and implementing the plan in the class. They involve much thinking and evaluation. Immediate (i.e., spontaneous) decisions, on the other hand, are made in the class in response to unexpected situations. Therefore, these decisions are said to be based on immediate thinking and snap judgments rather than reflective thinking or evaluation.

Routines, the third type, are defined by Leinhardt (1983) as small, socially scripted pieces of behavior that are known by both teachers and students. They provide familiar patterns which offer social secure structures for both students and teachers alike and thus facilitate students' learning. That is to say, the students can follow the instructions and catch up what ever the teacher do in the class easily because of the familiarity of the instructional behavior. Therefore, they have more time to focus on the content of the lesson. For instance, while distributing paper, the teacher usually walks across the front row with a pad of paper and give some sheets to each child in the front row to initiate the routine. Then, the first student takes one piece and passes the rest back through the column. This routine helps the teacher to distribute the paper more quickly and efficiently in several activity structures.

Teachers should deal with a numbers of interacting dimensions of the classroom while teaching such as giving turns, answering the questions, monitoring the students, grading on the spot, making presentations, and so on. Therefore, they should develop and use automatically some routines in the class to cope with these repeated interactions and simultaneous demands on their attention (Roberts, 1998). Moreover, teachers rely on routines to maintain the flow of the activity, create a positive learning environment, and make use of instructional methods effectively throughout the lesson. Routines also reduce both the cognitive load on the teacher and the cognitive complexity of the teaching environment. Besides, they expand the teacher's facility and free the teacher to deal with the unpredictable and the unexpected (Olson, 1992; Roberts, 1998).

One type of routines is verbal routines such as giving response chorally or turn taking without repeated explanation. Intellectual routines are also observed in classroom teaching. They may take the form of turn taking in solving a new type of problem: "Watch and listen! and "Now you try to figure it out"

Leinhardt and Greeno (1986), who have studied the activity structures and routines between experienced and novice mathematics teachers, conclude that experienced teachers have a large repertoire of routines and each routine may appear in several forms during the instruction. These routines are very flexible, their order can be changed, and they can be carried out with little or no explanation. In contrast, novice teachers do not make use of routines and do not recognize routines as desirable or necessary; therefore, each lesson is different from the next one and the novices spend much more time and energy to explain each activity and students' roles in each activity. Similarly, Clark and Yinger (1987) and Barduhn (2000) claim that novices lack the necessary routines to catch up with the dynamic course of the classroom. This means that novices are easily derailed and find it difficult to get back on track.

Routines minimize conscious interactive decisions teachers have to make in terms of timing, sequencing of the activities and student behavior. Moreover, as Bell (1997) asserts, routines are repetitive which occur with little planning, practice, or forethought. Several studies on interactive decisions have revealed the centrality of routines in teachers' interactive routines. Decision making models propose that when teachers have problems, they may call up an alternative routine or react interactively to the situation and they reframe the lesson on the bases of their understanding of the problem and how best to address it. In such a case, it is the teacher who decides whether to persist with the routine, adapt it in some way or abandon it altogether. Actually, it is not so easy to change the established routines and teachers tend to change these routines only in extreme cases (Borko & Shavelson, 1990; Nunan, 1989).

2.4.3. Decisions Before, During, and After the Lesson

Teachers' decisions can also be classified into three main groups in regard to when they are made; before the lesson (pre-active decisions), during the ongoing instruction (interactive decisions), or after the instruction about what the follow up will be (post-active) (Bailey, 1998; Richards & Lockhart, 1994).

2.4.3.1. Pre-Active Decisions

Pre-active decisions are the ones made by the teacher prior to their teaching in the classroom. This type of decisions are usually made in relation to the former history of the class, the characteristics of the students, lesson and unit plans, seating arrangements, instructional materials and some management strategies, students' needs, the most appropriate goals and objectives to meet those needs, and the instructional modes and teaching strategies most suited to the attainment of those goals and objectives. Therefore, these kinds of decisions are pro-active in nature. At this stage, teachers are alone and have time to consider long and short range plans, the students' progress toward objectives, the availability of materials, time constraints, order of tasks, pacing, participation of the students, and etc. (Concord College [CC], n.d.; Cooper, 1986, Richards, 1990b). Plans have such an impact on teachers that they tend not to deviate from them once they have begun teaching (Kansanen, 1993; Shavelson, 1983; Woods, 1996). Furthermore, teachers' planning decisions affect the content, materials, social climate, and activities of instruction (Borko & Shavelson, 1990; Richards, 1994).

Planning Decisions are made after a process of reflection by asking questions of the following nature:

What do I want my students to learn from this lesson?

Why should I teach this lesson?

How well do I understand the content of the lesson?

What activities will be included in the lesson?

The teacher always works in a predetermined context acting according to curriculum and societal factors which directs the curriculum. Planning and the whole pre-active phases of the instructional process are important since the curriculum affects to a great extent the intentions of the teacher which define the intentional situation in the instructional process. The teacher may have different intentions while engaged in teaching and therefore, a teacher should internalize the aims and goals of the curriculum into her or his thinking, hence we can call it pedagogical thinking.

Lesson plans are shaped, at least in part, by factors other than the ones controlled by the teacher. These factors are the sequence of information in the textbook, the content, and administrative time units (i.e., duration and frequency of class periods). Moreover, institutional frames provide the broader conditions under which the teacher's work is taking place. However, the quality and quantity of learners' participation are the most important factors which affect the realization of the plan in the class (Bailey, 1996; Kansanen, 1993).

In the studies on teacher planning, most teachers are found to plan spontaneously throughout the day and never produce written plans (Clark and Yinger ,1987; Yinger, 1980). Teachers' plans, mostly in the form of the mental scripts, greatly influence their interactive decisions. Their mental plans are usually accompanied by the sketchy and typical notes including lists of important points to remember (Borko & Shavelson, 1990).

McCutcheon (cited in Borko & Shavelson, 1990) characterizes mental planning as mental dialogs. The teachers' mental dialogs in her study include a wide range of concerns such as the teaching of particular skills and concepts to individuals and groups, handling of behavior problems, and tying together of different subject matter areas. These mental dialogues are found to help the teachers to articulate and short circuit potential problems, elaborate written plans, learn the subject matter to be presented, and feel more confident about teaching. McCutcheon (cited in Borko & Shavelson, 1990) also remarks that teachers and administrators do not recognize mental planning as an important professional activity since it is not viewed by theoreticians or teacher educators as an important part of planning.

Morine-Dershimer (cited in Shavelson, 1983) differentiates between three types of information processing with regard to the extent of the differences between the lesson plan and interactive teaching in the class: Firstly, if there is little or no discrepancy between teacher plan and classroom reality, teacher information processing is image oriented. In this case, teachers recall previous knowledge about students as the major determinant of their decisions, and they employ established routines while making decisions. Secondly, teacher information processing is named as reality oriented when a minor discrepancy is observed between teachers' plans and classroom reality. In such a case, teachers cope with the situation by interactive decisions. The last category, problem oriented information processing refers to the situation in which a more pervasive discrepancy between teachers' plans and classroom reality is observed. Teachers have to tap a broader spectrum of information about students. In such cases where a large discrepancy exists, decisions are postponed to a later time.

2.4.3.2. Interactive Decisions

Lesson plans may act as the starting point of a lesson, yet they are not the sole determinant of what happens during a lesson. Since lessons are dynamic in nature to some extent unpredictable, and characterized by constant change, teachers have to make decisions continually appropriate to the specific dynamics of the lesson they are teaching, which are called as interactive decisions. Woods (1996) also states that interactive decision making process is complex not only in terms of the type and number of the decisions but also due to the multiplicity of the factors impinging on them.

Interactive decisions are those that teachers make on the spot in response to situational demands of the classroom. Interactive decisions are improvisational in nature and take into account contextual, theoretical, and practical knowledge. Moreover, interactive decisions are based on a context which is unique to each classroom. Therefore, the thinking and decision making processes of teachers constitute a large part of the context of teaching.

Freeman (1989) also notes that teaching involves decision making which is based on teachers' social practice and their perception of the world around them. Through the decision making process, a teacher should adjust the lesson plan to enrich, extend, reinforce, or teach differentially toward formally stated curricular objectives for both individual students and small groups of students. Otherwise, it would be impossible for the teacher to be able to respond to students' needs. Instructional decisions reflect and recognize that student needs might change from subject to subject over time .Teacher's responsiveness to feedback from learners allows him or her to make on the spot changes and adjustments which might enhance learning conditions, and this shows that the teacher is capable of self evaluation in terms of teaching strategies. Teachers whose teaching is directed solely by a lesson plan and who ignores the interaction dynamics of the teaching learning process is hence likely to respond to students' needs (Ebraheem & Botros, 2002).

Prior knowledge of the teachers is also an important factor affecting teacher classroom decision making. Prior knowledge is meant to be the sums of the knowledge teachers gather from past life experiences in their communities and the schools they attend either as a student or as a teacher. Such knowledge is an integration of the academic, cultural, and social aspects of their experiences (CC, n.d.).

Clark and Peterson (cited in Borko & Shavelson, 1990) in their review of definitions of interactive decisions used by the teachers, conclude that interactive decision is a deliberate choice to implement a specific action. In this way, an interactive decision is a conscious choice between continuing to behave as before and behaving in a different way, which means that teachers do not consider an alternative course of the action. Some researchers, on the other hand, do not agree with them. For example, Warner (1987) claims that the definition of interactive decision should cover two different types of interactive thinking, which should be considered due to their different patterns of occurrence in classrooms. The former refers to the situations in which teachers have alternatives and choose one of the alternatives, which is labeled as interactive decision making. The latter refers to the situations in which deliberate action occurs because the teacher sees a need for some action or response, but considers only one course of action.

Similarly, Casteel and Stahl (1997) differentiate between deliberative and non deliberative (or hasty) decision maker; the former refers to the ones who consider the situation, the available information, possible options, and possible implications of the decisions before making adequate decisions. They also tend to take a serious look at the long and short range consequences of their decisions. The latter ones, on the other hand, do not adequately consider the options available and short and long term effect of their decisions. They focus much more on the immediate making of a choice without any prior considerations. Interactive decisions are made on the spot concerning different aspects of the lesson, many of which had not been planned (Casteel & Stahl, 1997; Richards, 1994; Richards & Lockhart, 1994).

2.4.3.2.1. Alternative Interactive Decisions

Borko and Shavelson (1990) assert that teachers consider a few course of action while making interactive decisions. Similarly, Clark and Peterson (cited in Borko & Shavelson, 1990), in their study on alternative courses of action in interactive decision making, find out that teachers consider alternatives in only 20% to 30% of the cases, across 3 days of instruction. Moreover, they are seen to seek confirmation for their choices but tend not to evaluate alternatives critically. Teachers are also observed to consider only few alternatives.

MacKay (cited in Shavelson, 1983) has proposed that teachers rarely consider more than two alternatives. In another study, Morine and Vallance (cited in Borko & Shavelson, 1990), analyze interactive decisions among 40 teachers and report that the mean number of alternatives considered for each decision is between 2.2. and 3.2.

However, Warner (1987) investigates alternatives from a different perspective: He does not categorize the decision as interactive decision unless alternatives are considered. He also claims that a choice between whether to continue with the lesson and to change the route should not be considered as a choice among alternatives unless the teacher considers more than one alternative. Regarding this criterion, it was found out that teachers rarely consider alternative actions while making choices during interactive teaching. Moreover, they consider instructional alternative actions only when teaching is going poorly. Warner (1987), in his study on alternative instructional actions, notes 21 interactive decisions and 96 deliberate actions.

Similarly, Parker (1983) states that interactive decision making process covers monitoring student behavior, considering alternate teacher behaviors, weighing these alternatives, and electing a teacher behavior.

White (1997) also mentions about different alternative instructional actions when the lesson is going as planned. In such a case, teachers make decisions about

a. Appropriate feedback c. Appropriate questioning behavior

b. Verbal participation d. Monitoring

However, when the lesson is too difficult, teachers make decisions about

Continue lesson? b. Modify lesson? c. Abort lesson?

Peterson and Clark (cited in Bailey, 1996), in their study on decision making among junior high school teachers, employ teachers' self reports of their own cognitive processes as they are teaching and stimulated recall technique. They identify four possible pathways through a lesson: Path 1 is named as business as usual: Everything proceeds well according to the plan, and therefore there is no need for the teacher to change the lesson plan or behavior. In Path 2, teachers are aware of the problems, but since they have no alternatives, especially in the case that they are surprised or powerless, they decide to continue with the plan which apparently does not work.

In Path 3 (the least common) teachers perceive problems and have alternative courses of action available, but stuck with their plans or preplanned behavior. Path 4 is the second most frequent category among the participants and increase with the level of expertise: Teachers perceive problems and have alternatives available, and they choose to change their behavior. Peterson and Clark (cited in Bailey, 1996) conclude that student learning is facilitated in the case that teachers have alternatives for altering the course of lessons. Path 3 is negatively associated with student achievement and attitude, whereas Path 4 is associated with students' learning of higher order ideas and Path 1 is concerned with learning of facts.

To sum up, interactive decisions are pointed in two different directions: It has its background in the origins of its purposes and its future in its results. Time is important in this process because planning and evaluation always precede and follow the interactive teaching in an instructional process (Kansanen, 1993).

2.4.3.3. Post-Active Decisions

Teachers' post-active decisions are rooted in and consistent with the assumptions and beliefs about language learning and teaching which underlie their actions in the class. These post-active decisions are also named as retro-active or evaluative decisions in relevant literature (Woods, 1991).

Richards, Ho, and Giblin's study (1992) on evaluative decisions among teachers in training indicates that as teachers gain more experience and develop a deeper conceptualization of teaching, their criteria in evaluating teaching change to reflect their new assumptions, beliefs, and level of awareness. Moreover, they add the fact that these teachers use these evaluative decisions act as the input to their subsequent planning decisions. Planning, interactive and evaluative decisions of teachers are found to be interconnected (Richards & Lockhardt, 1994).

Evaluative decisions arise from asking questions about a lesson such as follows:

Was the lesson successful? Why or why not?

Did the students learn what they were intended to learn?

What were the main strengths and weaknesses of the lesson?

At the reflective stage, a teacher make decisions about evaluation of instruction, appropriate connective and supportive feedback, reports to parents, value of results of a lesson, why successful or unsuccessful a lesson has been. While evaluating the instruction, teacher decides whether they have progressed to the next level, and they should give additional support. Moreover, teachers should be aware of the level of mastery and strengths and weaknesses of the students while providing appropriate feedback (White, 1997).

2.5. Instructional Decision Making and Teacher Competence

During the post-active stage, a reflective analysis takes place in which decisions are modified (CC, n.d.) As Cooper (1986) suggests, at this stage, teachers examine the results of their teaching and see whether they were successful in accomplishing their objectives. On the bases of such evaluation, teachers decide to adjust their planning, implementation, or evaluation or to continue on the same bases.

The teacher as a decision maker is illustrated in Figure 2.4. as a way of conceptualizing the instructional role of the teacher. It may simplify what actually occurs in teaching; however, it is useful in the way that it helps us to clearly see the forest without being confused by the trees.

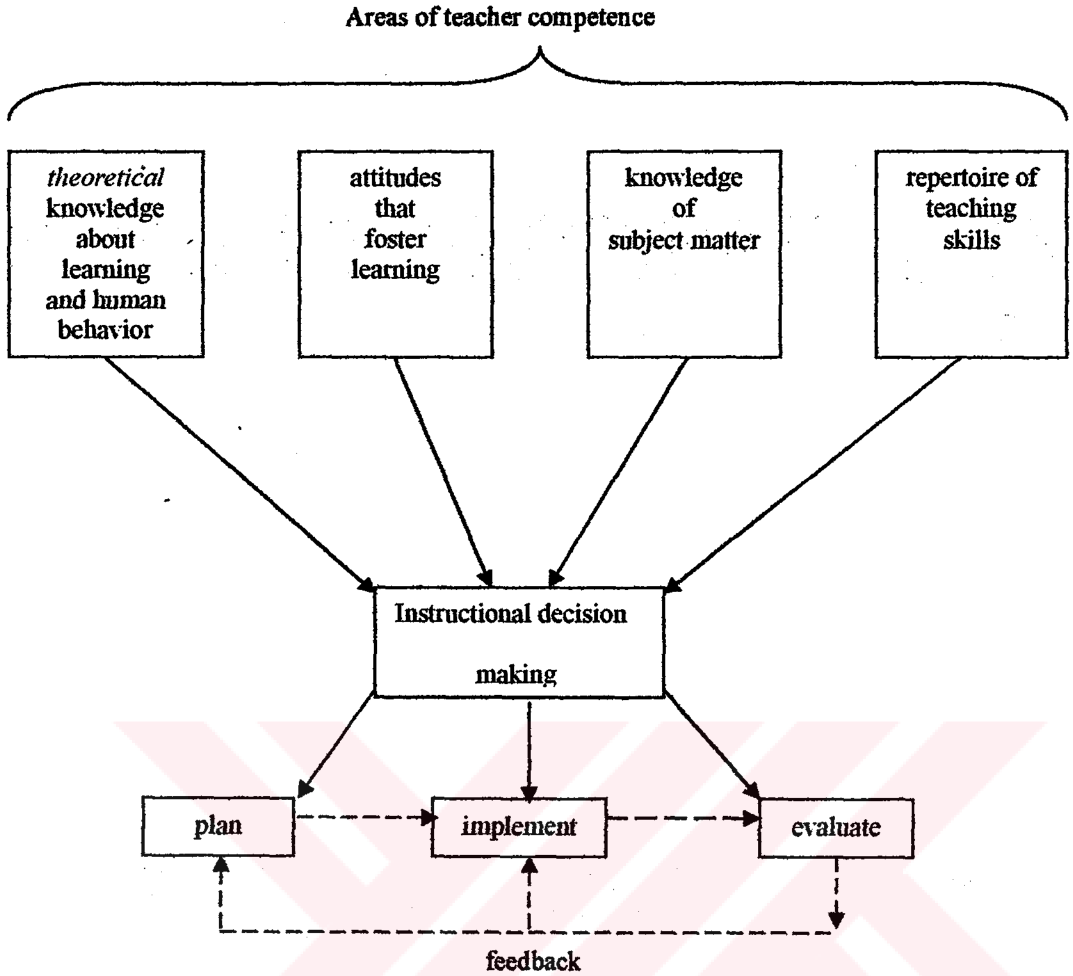


Figure 2.4. Relationship of teacher-competence areas to process of instructional decision making (Cooper, 1986, p.10)

The model presented in Figure 2.4. is simple and has the power of capturing the essence of what teachers do in the instructional process. It is based on several assumptions: First, teaching is goal based and directed, seeking some change in the thinking and behavior of the students. Second, the model assumes that teachers actively shape their own behavior. That is to say, they continually make plans, implement them, and adjust them to new information concerning the effects of their actions. Third, teaching is assumed as a rational process which can be improved by examining its components analytically. The model also puts forward that teachers can control the feedback process by deciding on the amount and kind of feedback to use. Lastly, it assumes that teacher actions can affect students' observable behavior and learning (Cooper, 1986).

In the model provided in Figure 2.4., the feedback dimension refers to examining one's own teaching and its results so that the teacher can decide how adequately s/he handled each of these three functions. Only then can s/he determine whether s/he has succeeded in attaining the objectives or whether s/he needs to make new plans or try different implementation strategies. Therefore, feedback is the new information a teacher processes into his/her decision making to adjust his/her planning, implementation, or evaluation functions or to continue on the same bases. In other words, feedback is the decision-making system's way of correcting itself.

The model also covers the four general areas of teacher competence, which represent the broad categories of preparation. These categories enable teachers to make intelligent and effective decisions. Thus, these four areas provide teachers with the appropriate tools necessary to make and implement professional judgments and decisions (Cooper, 1986).

2.6.The Source of Decisions

McMeniman et al. (2000) and Waller and Travers (1963) summarize the source of the teacher's decisions that have emerged throughout the research on teacher as follows:

Own learning,

Intuition (seeming naturally to do),

Personal Characteristics of the Teacher,

Peer Influence,

Self Motivation,

Initial Training (pre-service teacher education), Critical Others (being influenced by a specifically identified person such as a principal or an academic or a researcher),

Professional Reading (journals, other media including the Internet),

In-service Studies (through professional workshops and conferences),

Formal Postgraduate Studies (completed through tertiary institutions),

Traditions of Teaching,

Social Learning (imitating master teachers),

Philosophical Traditions,

School and Community Conditions and Pressures,

The Teacher's Own Needs,

Teacher as a researcher in the form of data collector or participant in formal studies.

Moreover, as decision makers, teachers' experiences are based on field and university experiences (i.e., sequential and comprehensive). Field based experiences include early field experiences, part time participation, observation in real classrooms, etc. University based experiences , on the other hand, include continued tasks and activities, scaled down versions of actual teaching experiences such as peer teaching, role playing, tutoring, classroom volunteering, and micro teaching, practice of discrete skills relevant to instruction, and reflective criticism of method of instruction (Greenwood & Fillmer, 1997; White, 1997).

Although we, as teachers, make decisions, it is not possible for each of us to make the same decisions, even in nearly identical situations. Our current needs, our relevant information, degree of objectivity, our perceived focus, etc. will certainly affect our decision making process.

2.7. BAK- Beliefs, Assumptions, and Knowledge- and Interactive Decisions

2.7.1. Beliefs

Teachers' belief system is a primary source for teacher classroom practices, which teachers build up over time and bring with them to the classroom. Teacher beliefs consist of a structured set of principles derived from their experience as language learners, educational theory, reading, and experience of what works best, established (i.e., school) practice, personality factors, and principles derived from an approach or method and other sources. Furthermore, beliefs include a cognitive, affective, and behavioral component, and they affect what one knows, feels, and does. Therefore, teachers' beliefs are considered to have a filtering effect on teachers' thoughts, judgments, and decisions (Davies, 1996; Ebraheem & Botros 2002; Johnson, 1993; Kagan, 1992; Marland, 1998; Moore et al.,1985; Murphy, 2000; Richards,1994, 1998; Shavelson, 1983; Shavelson & Stern, 1981;Woods, 1996; Yero, 2002).

The relationship between interactive decisions and underlying beliefs gradually becomes evident in studies on decision making using stimulated recall interviews. In such studies, teachers comment on their intentions and evaluate what has happened. Personally held theories, values and beliefs may serve as an organizing and functioning factor in underlying teachers' classroom decisions and behaviors. Moreover, beliefs affect not only what teachers recall but also how they recall it. Some critics suggest another perspective to better understand teacher behaviors- focusing on the things and ways that teachers believe. This suggestion is based on the assumption that beliefs are the best indicators of the decisions people make throughout their lives (Richards, 1994, 1998; Shavelson, 1983; Shavelson & Stern, 1981; Woods, 1996; Yero, 2002).

Moreover, teachers interpret and understand new teaching experiences on the bases of their current beliefs and values; however, most of these beliefs remain only partially articulated. Therefore, teachers should involve themselves in a continuous process of personal reflection to understand their own implicit theories, and how these theories affect their classroom teaching (Kansanen, 1995; Schon, 1987; William & Burden, 1997).

Kindsvatter, Wilen, and Ishler (1992) divide the personal belief system into two categories: the intuitive and the rational. The former is rooted in our personal needs and tradition, whereas, the latter may be founded on our pedagogical principles, research findings, scholarly contributions, and examined practice. The intuitive beliefs may affect our lives outside the classroom, while the rational beliefs are directly related to classroom practice and may develop only in the context of classroom teaching. Both groups of beliefs are referred as general beliefs about teaching and learning in the relevant literature (Dunne, 1993; Woods, 1996; Yero, 2002).

Smith (1996), in her qualitative study on the nature decision making of ESL teachers from their own perspectives, is concerned with how the contextual factors and teachers' personal beliefs about L2 teaching and learning affect their planning and interactive decisions. She collects the data, using video-taped observations accompanied with observational notes, post observation (i.e., video-taped conference) and interviews. She concludes that teacher beliefs about language teaching and learning emerge as a critical factor affecting the decisions teachers made not only in planning the instruction but also in implementing the plan in the class. Among the contextual factors, student characteristics are seen to have the most impact on decision making of the teachers especially at the lesson level.

2.7.2. Assumptions

Assumptions give meaning and purpose to who we are and what we do. Assumptions about language play an important role in a language course because language is both the means by which the subject matter is taught and the subject matter itself. Teachers hold assumptions about the nature of language learning, which are equally complex and related to the assumptions they have about language. However, assumptions about teaching are more complex than the previously mentioned ones because the assumptions about learning will certainly the way we assume we should teach the material. Similarly, the assumptions about language determine what the material is. Therefore, it can be said that teachers crucially depend on their own assumptions about language, learning, and teaching in structuring the classroom teaching (Woods, 1991).

Brookfield (1995) distinguishes between three types of assumptions: Paradigmatic, Prescriptive, and Casual.

Paradigmatic assumptions refer to the structuring assumptions by which we order the world into fundamental categories. We do not recognize them as assumptions. We insist that they are just one part of the reality. For instance, adults are self-directed learners.

Prescriptive assumptions are the ones about what we think should be happening in a particular situation. For example, how teachers should act in the class, or what obligations students and teachers owe to each other. These assumptions are the extensions of our paradigmatic assumptions. If a teacher believes that adults are self directed learners, then s/he assumes that the best teaching is the one which encourages students to take control over designing, conducting, and evaluating their own learning.

Casual assumptions are concerned with how different parts of the world work and about the conditions under which these can be changed. These assumptions are usually expressed in predictive terms. An example for this type of assumption is that if we, as teachers, make mistakes in front of students, and this will create a trustful learning environment in which students feel free to make errors without any fear of censure or embarrassment. Of these assumptions, casual ones are the easiest ones to cover, whereas paradigmatic ones are the hardest to cover (Brookfield, 1995).

2.7.3. Knowledge

Teachers bring and make use of different knowledge types in a teaching and learning environment; therefore, teachers can be said to have an interrelated system of knowledge bases (Cutter, 2002; Roberts, 1998; Shulman, 1986, 1987):

- Content Knowledge covers teachers' knowledge of target language systems, their analytic knowledge, target language competence, factual information, organizing principles, central concepts, and so on. There is evidence that knowing about a subject, and knowing how to teach it are not two distinct processes; rather how you would teach a subject is determined by what you know about it. Shulman (1987) claims that teachers' knowledge of the content affects both what teachers teach and how they teach it. Moreover, teachers' view of teaching affects what they think worth knowing, and teachers' experience of subject matter shapes how they organize, plan, and teach their courses (Bartels, 1999; Bennett, 1993).

- Pedagogical Knowledge covers the knowledge of language teachers need to teach such as the problematic aspects of the target language for our learners and the teaching order of the aspects of the target language in deciding what to teach now and leave for later. Shulman (1987) puts forward that 'pedagogical content knowledge' lies at the heart of teaching since it "blend[s] academic content with teaching methods, organize instruction, and unite all these elements with the interests and abilities of the students in their class" (p. 8).

- General Pedagogical Knowledge is a huge term covering principles and strategies for classroom management, monitoring and feedback, formal assessment of learning, the use of aids and resources, and a repertoire of language learning activities regarding different learning situations.

- Curricular Knowledge includes information about the official language curriculum and available resources. Moreover, the nature of examinations is another concern.

- Contextual Knowledge creates awareness among teachers towards the characteristics of learners and schools. Furthermore, it deals with the expectations and accountability regarding the wider system, community.

- Process Knowledge, the last category, refers to a set of skills which help the teacher to develop him or her self: academic study skills, collaborative skills such as teamwork, inquiry skills such as observation and self evaluation, and meta processing skills such as self awareness and self management.

Wallace (1991) adds two types of knowledge development: Received Knowledge and Experiential Knowledge. Received Knowledge can be learned from theoretical academic courses. Experiential Knowledge, on the other hand, can be defined as the accumulation of one's real –life experiences, which shapes who s/he is and how one perceives and responds to the world around him or her. That is to say, what teachers know about teaching is insuperable from who they are as people and what they do in the classrooms. Therefore, teachers' knowledge is recognized as largely experiential, that is the knowledge is socially constructed out of the experiences and classrooms from which teachers have come and in which they teach. This knowledge is based on teachers' prior learning and teaching experiences to a great extent (Connely & Clandinin, 1988; Elbaz, 1983).

Teachers consider all sort of things as they teach: their subject matter content, their students, their own teaching and strategies etc. How teachers think about all these factors is affected by their experiential and professional knowledge and beliefs and by the professional landscapes in which teachers live and work. How they think about their own teaching is based on their own prior learning and teaching experiences, their image of themselves as teachers, how they make sense of their teaching, and the expectations they have for themselves and their teaching, and for their students within their own classrooms. Teachers bring their both experiential and professional knowledge to the classroom, even though they do not articulate it, and employ the knowledge to make sense of their own and students' actions (Freeman, 1996a; Johnson, 1999; Kolb, 1984; Schon, 1983, 1987).

Research on experienced-novice differences among teachers shows that experienced teachers have a special kind of knowledge about classrooms which is different from that of novices. That is to say, the knowledge of novice related to classroom practice is rather disorganized, scant, and not readily related to action, whereas the expert's knowledge is more systematically organized and related to classroom practice. Besides, experts draw more inferences and make use of domain specific knowledge to understand the classroom, and they tend to use higher order cognitive systems to categorize the problems they encounter. Moreover, they are seen to be more concerned with students' needs and employ continuous, in-class assessments to direct their pedagogical practice and the essential information for planning the next lesson. Novice teachers, on the other hand, are seen to primarily focus on subject matter activities while organizing their classes. All these characteristics of knowledge structure suggest that experienced and novice teachers reflect upon teaching in different ways (Leinhardt & Greeno, 1986; Nillsen, 1995; Noakes, 1995; Schempp, Tan, Manross, & Fincher, 1998).

2.8. Teacher Thinking

The concept- teacher thinking covers how teachers' conceptualize their work and the kinds of thinking and decision making process underlying their practice. Teacher thinking research has significantly contributed to our understanding of teacher planning, teacher decision making and reflection and teacher experience as well as teachers' practical and pedagogical content knowledge (Calderhead, 1987a, 1987b, 1990, 1991; Munby, 1982; Schon, 1987). Teachers and researchers, therefore, should study teachers' thinking- their planning and interactive decisions in order to investigate what is uniquely human about the process of teaching (Borko & Shavelson, 1990; Shavelson, 1983).

A wide diversity of key terms and definitions in teacher thinking research has been used in the studies conducted, which are defined differently. Due to the diversity of issues in the content of teacher thinking research, different methods of inquiry have emerged. This diversity leads to some variation in research focus and approaches in the area of teacher thinking. Such differences in both research focus and approaches result in differences in the terminology used: "teachers as action researchers", "teachers as problem solvers", "teachers as reflective practitioners", "teacher as decision makers", " teachers as critical thinkers", "teachers as improvisers", and "teachers as scholars teachers" (Cabaroğlu, 1999; Sendan, 1995)

This diversity is also seen in referring to teachers' knowledge about learning and teaching such as teachers' practical knowledge (Elbaz, 1983), content knowledge (Shulman, 1987), practical theories, personal practical theories (Clandinin & Connely.1987), implicit theories (Munby, 1982), and perspectives (Diamond, 1991). Sendan (1995) and Cabaroğlu (1999) provide more information on the diversity of the terms used in the field of teacher thinking.

2.8.1. Teachers' Schemata

Teachers' interactive decisions and thoughts can be best described and analyzed using concepts in cognitive psychology. The concept of schema is at the core of cognitive analysis of teaching: Anderson (1984) defines the term as an abstract knowledge structure that summarizes information about many particular cases and the relationships among them. Three types of cognitive schemata characterize teacher thinking: scripts, scenes, and propositional structures (Borko & Shavelson, 1990).

A script is a knowledge structure including information about familiar and everyday experiences. Experienced teachers are found to have scripts for common class activities such as conducting class discussions and correcting homework. When these scripts become automatic, they turn into routines.

The second component, scenes, refers to teachers' knowledge of people and objects in common classroom events. On the bases of these schemata, experienced teachers are able to store a great deal of information about the relationship among people and objects in recurring classroom activities, and thus they can rapidly recognize common activity structures (Anderson, 1984; Borko & Shavelson, 1990).

The third category, propositional structures, is the part of the teachers' factual knowledge about the teaching and learning process such as the knowledge about the students in their classrooms, the subjects they teach and the teaching methods they use. For instance, experienced teachers store mental representations of student ability knowledge, motivation, and behavior pattern in their propositional structures (Anderson, 1984; Borko & Shavelson, 1990).

A common assumption underlies all these differences between experienced and novice teachers' cognitive schemas: cognitive schemata change in predictable ways as teachers develop their expertise throughout their teaching practice. Regarding these three knowledge components, Borko and Livingston (1989) claim that experienced teachers have more elaborate, more complex, more interconnected, more sophisticated, and more accessible cognitive schemata than novices. Therefore, experienced teachers can instantly access a bigger and better reportier of facts, principles, and experiences as they plan, act, reflect, or engage in pedagogical reasoning (Nilssen, 1995; Woods, 1991).

Experienced teachers also have a good range of repertoire of explanations, demonstrations, and examples to communicate the subject matter to students easily. Furthermore, experienced teachers have well developed mental representations of typical students, of typical tasks, and of expected problems and solutions. This difference emerges between the novice and experienced teachers because novices are found not to have the propositional structures for pedagogical content knowledge which enables them to construct representations on the spot (Barduhn, 2000; Bell, 1997; Borko & Livingston, 1989; Dewey, 1974; Livingston & Borko, 1990).

2.8.2. Research Paradigms on Teacher Thinking

2.8.2.1. The Behaviorist Research Paradigm

This paradigm was popular around 1970s and focused on the observable behaviors of teachers in the classroom and the influences of these behaviors on the learning of students. This approach developed under the influence of behavioristic psychology which aims at producing prescriptive knowledge (Williams & Burden, 1997). That is to say, it aims to define what teachers do in the classroom and what happens to their students (i.e., what students do or learn) and the relationships between the two. Most of the classroom research in this approach adopted a general view of process product research to relate the teacher behavior to the success of students. Therefore, teaching is evaluated, explained, and measured through defined standards in quantitative terms. For example, researchers were interested in the connections between the length of wait time and the type and accuracy of student answers (Allwright, 1988).

In the current state of education, teaching is viewed as doing, and doing means taking care of learners. Some critics argue that such a view contributes directly to de-skilling of teachers because this view will break teaching down into routinized activities, and teachers become like the repetitive performers of routine tasks (Apple & Jungck, 1990; Shulman, 1986). This view also tends to simplify the teaching process which is actually an extremely complex process by not considering the role of teachers and learners as thinking people. Moreover, behaviorism fails to recognize the mutual constructions of teachers and students in the class and the influence of the situation on teacher performance. Therefore, this approach tends to explain teaching in behavioral and impersonal terms which are beyond the contexts in which it occurs.

In this sense, teaching becomes a collection of behaviors and a landscape of activities, isolated from the world in which it takes place and the person who does it. However, soon it became obvious that this was far from the whole picture since this paradigm did not consider the multitude of unpredictable spontaneous decisions that teachers make during each class nor the pro-active thinking and planning which take place before the class begins. These limitations recognized in the behaviorist approach led to a shift towards cognitive psychology on teaching (Brown, 1987; Freeman, 1996a; Lowyck, 1990; Shulman 1986).

2.8.2.2. The Cognitive Research Paradigm

The emergence of the teacher thinking paradigm in the mid 70s leads some fundamental changes in the field of teacher research. First, this new approach focused on the mental lives of teachers which had not been studied before. The focus of the research on teachers changed from studies on observable teacher behavior to the internal dimensions of teaching underlying their decisions and actions in the class: "What is it that teachers know? How is that knowledge organized? How does it inform their actions? Second, as a result of the studies conducted on teacher thinking, new insights, which contravene and over tune the existing conventions and assumptions related to research, knowledge, and the production of knowledge for teaching, have emerged (Marland, 1998; Williams & Burden, 1997).

Researchers have begun to recognize that teachers are intentional agents who have beliefs, desires, emotions, intentions, and goals enabling them to make up their aims and actions in their teaching. Thus, a new domain of educational inquiry known as teacher-cognition research emerged, which locates teachers' perceptions- their reasoning, beliefs, and intentions at the center of their research. By 1988, teacher thinking was the dominant theme of the whole conferences, journals, and books. New societies concerned with teacher thinking were created and new journals were born (Kansanen, 1995; Noel, 1993; Olson, 1992).

The metaphor of the teacher as thinker yields a conceptual framework which provides a rich alternative to behaviorist paradigm. This metaphor, as claimed by Freeman (1996a, 1996b) and Richards (1994, 1998), focuses research on teachers and emphasizes the central importance of teachers' cognitive world. Thus, a more wholistic and abstract view of teaching has become dominant which mainly aims to provide a full description of cognitive aspects teaching. Moreover, Maminta (1999) explains that cognitivism values the teachers' own perspectives and understanding of teaching and learning.

The cognitive perspective combines thought with action. In other words, teaching covers the crucial cognitive and affective dimensions which accompany and indeed shape the classroom behavior of both the teacher and students. The theory underlying cognitive studies is that teachers consciously follow some rules to process the information they receive from the teaching environment (Kansanen, 1995; Olson, 1992). Therefore, Freeman (1996) suggests that we should combine thinking and activity in context while framing our teaching view, which he names as knowing what to do.

This approach also maintains that teaching is a thoughtful process of decision making with the focus on the teacher as the ultimate decision maker. Therefore, research on teachers' decision making deals with the cognitive information processing that teachers employ to identify problems, attend to classroom routines, formulate plans, make interactive decisions, and evaluate alternative courses of action.

With the development of cognitive psychology, another shift occurred in the research methodology: The methodology has changed from a prescriptive approach to a more descriptive, naturalistic design, and qualitative data collection. Since teacher thinking is investigated only through asking them about their thinking process, many kinds of questioning techniques have become popular (Freeman, 1996b; Kansanen, 1993, 1995). Researchers have begun to adapt some research methods to access to the often covert thinking and knowledge of teachers, which had not previously been regarded as valuable data collection tools in serious scientific research (Marland, 1998). Therefore, verbal reports and conversational tools have become popular in collecting the data instead of questionnaires or standard tests. These techniques are concept maps (see Morine-Dershimer, 1993; Tankersley,1992), stimulated recall (Alexandersson, 1994; Calderhead, 1981a, 1981b; McMenimann et al., 2000; Nunan, 1989, 1992a; Şire, 2001b), think aloud, structured or unstructured interview (Cohen & Manion, 1994; Şire, 2001a). McDonough & McDonough,1997; Mischler, 1986; Nunan, 1989) learner reports, observations, oral or written critiques of video-taped teaching episodes, diaries/ journals, logs, ethnographic research (Bailey, 1990; Burns & Hood, 1995; Chapman, 2000; Day, 1990; Jarvis, 1992; McDonough & McDonough, 1997; Nunan, 1989, 1992a ; Seliger & Shohamy, 1989; Tsui, 1998; Wallace, 1998; Woodward, 1991), video and audio-tapes (Day, 1990; Van Lier, 1988) biographies and autobiographies, repertory grids (Kelly, 1955a, 1955b ; Sendan, 1995; Solas, 1992), anecdotal notes (Samway, 1994), teaching portfolio (Bastidas, 1996; Murray,1994), scripted writing, critical incident technique, and structured tree approach (Calderhead, 1990), and *snakes* (Cabaroğlu, 1999; Denicolo & Pope, 1990).

2.8.2.3. Knowing What to Do: The Interpretivist View

Teachers constantly interpret their world. They interpret the content, the classroom context, and the people in it. These interpretations lie at the core of their thinking and behavior. Classrooms, aside being settings for teachers to implement ideas, serve as interpretation frameworks which teachers use for knowing: Knowing how and when to act and react, what information to present or explain, how and when to respond or correct students and how to asses and reformulate what they have just learned. In this view, teachers' statements reflect the highly complex and interpretive nature of the knowledge teachers use while teaching. In this approach, knowing involves understanding how teachers interpret their worlds. Therefore, researchers involved in this kind of studies encourage their participants to articulate their perspectives and voices (Freeman, 1996a; Woods, 1996).

Moreover, knowing how to teach goes behind behavioral knowledge of how to do particular things in the classroom. Instead, it involves a cognitive dimension combining thought and action within an embedded context, interpretive process of knowing what to do. Teachers learn this contextual know-how through experience. Since knowing the story of teaching covers all these elements, telling the story of teaching is more complicated than simply reporting on how things are done in the class or even providing theoretical, personal or other reasons underlying their actions in the class (Freeman, 1996a; Woods, 1996).

2.9. Research on Interactive Decision Making

The research on teacher decision making illustrates the complexity of interactive decision making in instructional settings. Interactive decisions and thoughts are studied in relation to their content and the processes involved. That is to say, some researchers are concerned with what teachers are thinking about while teaching, whereas, others investigate how teachers are thinking about teaching related issues. Actually, interactive decision making process is complex not only in terms of the type and number of the decisions but also due to the multiplicity of the factors impinging on them. Moreover, these factors operate simultaneously in dynamic interactions with other individuals such as the learner and other teachers and produce a range of short and long term consequences (Bullough, 1992; Woods, 1989, 1991, 1996).

2.9.1. Teachers' Expertise and Interactive Decisions

Nowadays, most of the teacher's research has focused on the differences between experienced and novice teachers. Studies investigating such comparisons have revealed that teachers differ in their thinking and decision making processes. In these studies, researchers make use of the language and findings of the cognitive psychology to contrast the cognitive processes of experts and novices. Gage and Berliner (1984), for example, state that novices lack meta-cognitive and monitoring skills because of their less elaborated schemas. In contrast, experienced teachers have information-rich schemas that aid them in problem solving and decision making during teaching.

Fogarty et al. (1983), in their study on interactive decision making of novice and experienced teachers, analyze and describe components of component classroom decision making and classroom teaching. They also aim at improving both pre-service and in-service teacher training programs regarding classroom decision making processes of teachers. The data collection procedure comprises video-tapes and interviews. The study reveals that experienced teachers pursue a greater variety of instructional goals and implement larger variety of instructional actions in response to student performance cues in the class. Moreover, novice teachers are claimed to have less tendency in considering prior knowledge about pedagogical principles, subject matter content, and student history during the classroom teaching. Lastly, experienced teachers are found to have more complex links between specific categories of instructional actions and categories of instructional actions.

Similarly, Berliner (cited in Sendan, 1992) explores the differences between novice and experienced teachers' professional thinking. He mainly focuses on the effects of classroom teaching experience on teachers' thought and action, using stimulated teaching tasks regarding the information about students provided by the previous teacher and the slides of the lessons. Parallel to the findings reported by Fogarty et al. (1983), Berliner (cited in Sendan, 1992) concludes that experienced teachers have a well established set of instructional routines, and they are more able to understand and deal with managerial and instructional issues appear in the class. Moreover, they are also found to be more concerned with what students already know and their capabilities. On the other hand, novice teachers are seen to be more dependent on the textbook, the comments of previous teachers about students, and what and how teachers had taught the particular class.

A further group of studies employing observations and subsequent stimulated recall interviews suggest that inexperienced teachers make decisions mostly regarding the management and organization of the classroom, teacher talk, language, tasks, and affective factors rather than the difficulties of individual students. They also claim that management considerations rather than instructional aspects of teaching direct their instructional decisions, whereas students' needs primarily direct instructional decisions of experienced teachers while making interactive decisions. Moreover, these studies show that experienced teachers perceive anomalies, or atypical events, better than less experienced teachers and that experienced teachers have better formulated instructional strategies in response to these events. Another finding indicates that novice teachers do not want to take a risk and depart from the lesson plan so easily (Berliner, 1990; Bromme, 1987; Carter & Doyle 1987; Housner & Griffey,1985; Nunan, 1991; Okan, 1999).

Another researcher, Elliot (1993) investigates interactive decision making of teachers from another perspective. He examines situational and non-situational factors among novice and experienced teachers teaching children. Non-situational factors exist regardless of context (e.g., when a child comes to class hungry, the effect of hunger on the student will be the same regardless of the lesson or teacher), while situational factors relate to the particular lesson context (e.g., a child behaving inappropriately because of the formal approach employed by the teacher in a lesson, may be dealt with in a collaborative problem solving activity). He also continues to state that novice teachers are less likely to be aware of non-situational factors; nevertheless, they can not decide appropriately about which ones are significant at the time they are making decision about taking a particular course of action.

2.9.2. Pre-Service Teachers and Interactive Decisions

Johnson (1992) examines the instructional decisions and actions of pre-service ESL teachers during their initial teaching experiences through video-taped observation, stimulus recall reports, and written retrospective accounts. Her research identifies eight categories of instructional considerations which teachers thought while teaching in the class: student motivation and involvement, Instructional management, curriculum integration, student affective needs, subject matter content, student understanding, student language skill and ability, and appropriateness of teaching strategy. The study also shows that it is not what the students say or do in the class which affects teachers' interactive decisions, but how teachers interpret what the students do or say influences their interactive decisions and ultimately their classroom practice.

In their study, Borko et al. (1988) also investigate planning and post-lesson reflections among pre-service teachers as one part of their student teaching experience. They aim to identify factors that influenced their teaching through observation and audio-taped interviews. The study indicates that student teachers focus on similar elements of teaching and learning during planning and post-lesson reflections, regardless of the content area and grade level of the class. Nevertheless, the participants tend to differ in the nature of their comments and in the emphasis they put on these classroom elements. Moreover, student teachers are found not to have developed repertoires of routines for classroom management and the organization of instructional activities, which is generally counted as one of the characteristics of experienced teachers.

Some other studies are conducted to explore the relationship between pre-service teachers' conceptions of planning, their instructional behaviors in the classroom, and pupil responses to lessons. These studies have shown that around one-half of decisions occur in response to student performance cues in the class; the other half is rooted in antecedents originating in the student as a person or the environment in which the decisions occur. The studies also indicate that the planning conceptions of the pre-service teachers are congruent with the kind of interactive behaviors they display in the classroom (Artiles et al., 1994; Kwo, 1994).

2.9.3. Teachers' Perceptions of Classroom Events and Interactive Decisions

Another difference in the scope of interactive decisions of teachers is related to the meaning they bring to the analysis of classroom situations. Studies comparing expert and novice thoughts and actions have shown that experienced teachers perceive classrooms in different ways. They can see more complex patterns in their immediate surrounding and develop a set of principles and procedures to respond to these complex patterns in making instructional decisions. Moreover, experienced teachers can draw upon their personal knowledge of classrooms and students while discussing their classroom experiences. Therefore, they can predict, identify, and deal with classroom events and problems more quickly and routinely than novices can (Winitzky, 1991, Borko & Shavelson, 1990).

Calderhead (1981b), for example, investigates the differences between experienced teachers, first year teachers, and student teachers in terms of their perceptions of teachers. He finds out that experienced teachers use a large quantity of knowledge about children and that experienced teachers in a sense know their new class even before they meet it.

In another study, Sabers, Cushing, & Berliner, (1991) investigate differences between experienced and inexperienced secondary science teachers in their perception, monitoring, and understanding of classroom events. Their study is designed as one part of a larger research project to identify differences in pedagogical knowledge among experienced and inexperienced teachers. In line with the other findings in the area of expert and novice teachers, they note that experienced teachers focus their attention more than the novices while observing the classroom events. Moreover, novices' pedagogical reasoning skills are seen to be less developed.

2.9.4. Relationship between Pre-Active, Interactive, and Post-Active Decisions

Westerman (1991) examines the thinking and decision making of expert and novice teachers before, during, and after teaching process, using audio-taped planning interviews, video-tapes of lessons, post teaching interviews, stimulated recall interviews, and delayed self-reports. Integration of knowledge, student behavior, and interaction among three stages of decision making are seen to be the most notable differences between novice teachers and expert teachers. She also concludes that during teaching, expert teachers respond to students' cues more frequently to satisfy their needs when necessary. Novices, on the other hand, represent a more linear trend during the instruction: they plan the lesson, they teach what ever they have planned, and then evaluate them. That is to say, they just follow the plan closely, ignoring student needs in the class. Moreover, expert teachers are observed to integrate present learning with the students' prior knowledge, whereas novices just jump into the subject matter of the day without recalling students' prior knowledge (Westerman, 1991).

Westerman (1991) introduces a model of expert and novice teachers' decision making which covers all the three stages: Pre- active, Interactive, Post-active, in the hope that they will contribute to our understanding about experience and novice differences. The model developed for the expert teachers' decision making is presented in FIGURE 2.5. below:

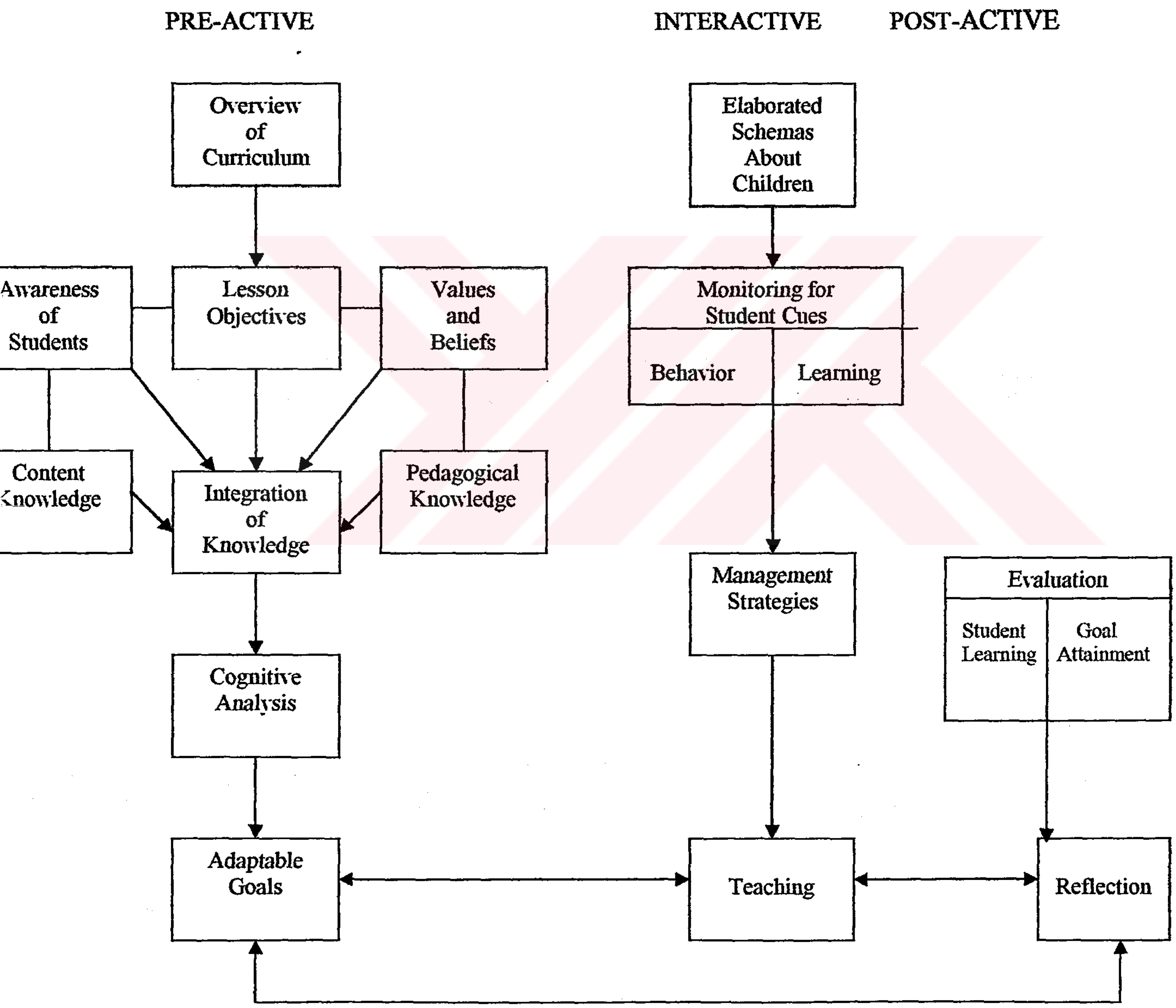


Figure 2.5. Expert teachers' decision making (From Westerman, 1991, p. 300).

The model illustrated in Figure 2.5 is dynamic because all information processing is dynamic. As seen in the model, the components of three decision making stages, pre-active, interactive, and post-active, are seen to be interrelated. Nevertheless, this model is criticized in some ways. For example, Berliner (1990) suggests that teachers have enough pedagogical and content knowledge; however, it is not enough to become an expert teacher since these two knowledge categories should interact with one another in teaching process.

Similarly, the model presented in Figure 2.5. is not a good account of expertise in teaching since novices may have a great deal of knowledge but can not teach effectively; therefore, it is information rich components and the interaction among the components which account for expertise. For example, during planning, expert teachers shape their goals on their understanding of the learning task. Nevertheless, during interactive teaching, they shape and tailor these goals according to what is happening in the class so that they accommodate student needs, which many novices, even the ones having a high degree of content knowledge in the area, are not able to do. Moreover, the elaborate schemas of the experts help them to weigh information quickly, which is very important in the complex and unpredictable class teaching process (Westerman, 1991).

In contrast, Westerman (1991) claims that decision making of novices is more linear than dynamic across the three stages as presented in Figure 2.6. As seen in Figure 2.6., novices consider a limited number of factors in teaching area and know only few teaching strategies or alternatives while making decisions. The dotted lines in Figure 2.6. show that the components of the novice teachers' decision making model are not rich as much as those of the experts.

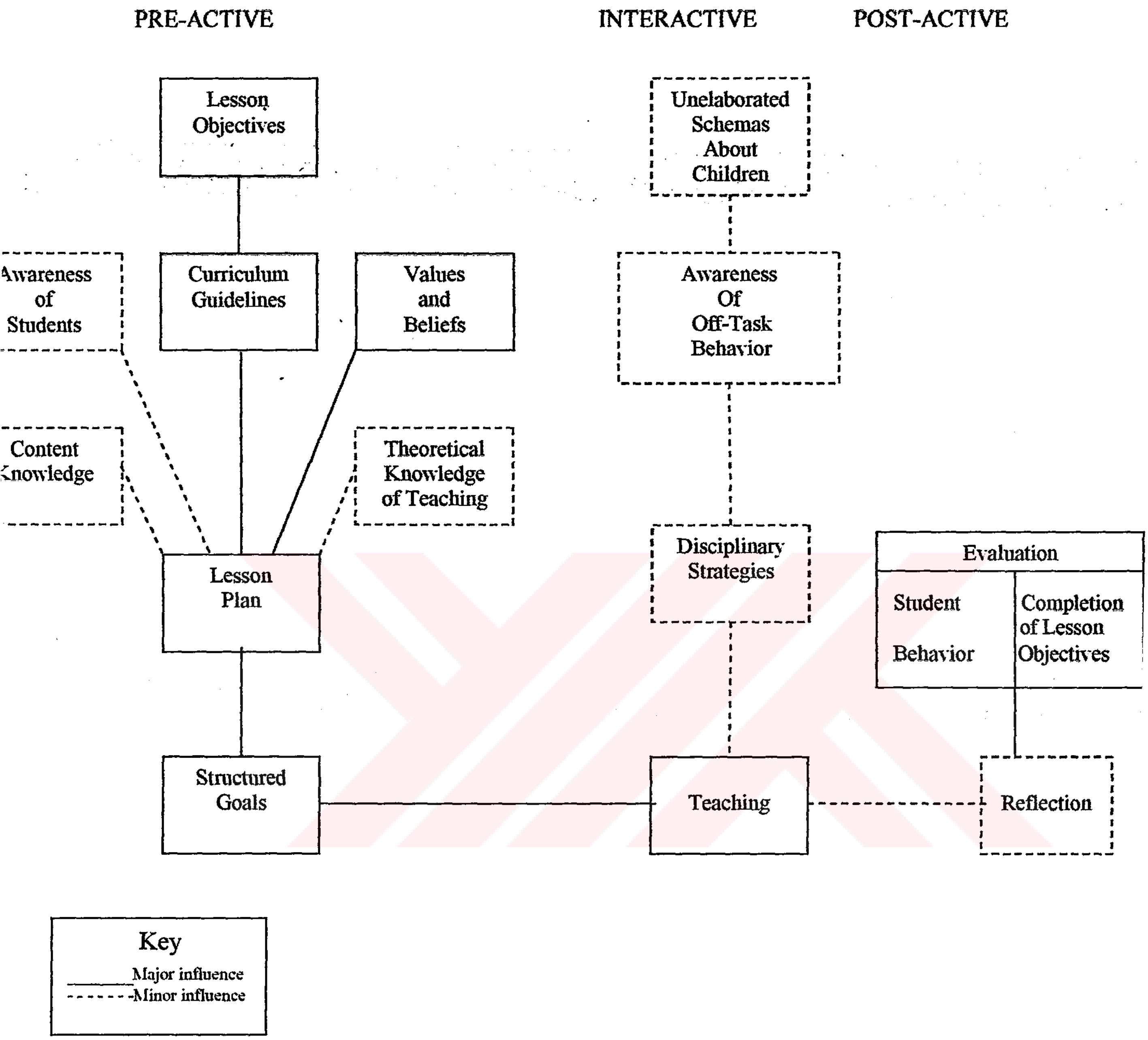


Figure 2.6. Novice teachers' decision making (From Westerman, 1991, p. 301)

As seen in Figure 2.6. above, novices' information components are not interconnected to other components in the way as the experts' components seem to be. Similarly, Borko and Livingston (1989) reports that differences between experts and novice teachers in all areas of teaching result from the novices' less elaborate, less interconnected, and less accessible schemas.

The models presented in Figure 2.5 and Figure 2.6. provide reasons and evidence for other research findings suggested in the relevant literature (Borko & Livingston, 1989; Fogarty et al., 1983). For example, the models suggest that experts consider information from a wide variety of sources while interpreting classroom events. Moreover, experts are seen to be concerned with underlying causes while solving classroom events, whereas novices pay more attention to surface features because of their lack of knowledge in their unelaborated schemas about students.

Lastly, experts are more attentive in monitoring student learning and cues and adapt the lessons appropriate to student needs; therefore, they change their preplanned teaching strategies when necessary, but always moving toward achievement of their goals. Westerman (1991) also finds out that expert teachers are more aware of the students in the pre-active phases and in the interactive phase (i.e., during the lesson), and therefore, they monitor more often for student cues (i.e., learning or behavior).

Similarly, in another study, Borko and Livingston (1989) examine the planning, teaching and reflection of experienced and novice teachers. They state that novice teachers are seen to be more varied, less selective post-lesson reflections than experts. Moreover, they find that experienced teachers are observed to show less time consuming and more efficient planning than novice teachers.

2.9.5. Student Performance Cues and Interactive Decisions

The research conducted on teachers' decision making suggests that the learner factors and needs such as student ability, personality, sex, participation structures, self-concept, social competence, independence, skills and preferences at unobservable cognitive level, classroom behavior, and work habits may affect teacher interactive decision making process (Berliner, 1990; Nunan, 1989; Saskatchewan Education Center [SASKED], n.d; Shavelson, 1983; Warner, 1987).

Dewey (1933) also remarks that the teacher should observe his or her students and respond to their immediate needs on the spot:

> The teacher must have his mind free to observe the mental responses and movement of the student....The teacher must be alive to all forms of bodily expression of mental condition- to puzzlement, boredom, mastery, the dawn of an idea, feigned attention, tendency to show off, to dominate discussion because of egotism, etc- as well as sensitive to the meaning of all expression in words. He must be aware not only of their meaning, but of their meaning as indicative of the state of mind of the pupil, his degree of observation and comprehension (p.275).

In line with this claim, some recent studies report that student cues are the most frequently identified antecedents for interactive decisions of teachers (Berliner, 1990; Borko & Shavelson, 1990; Johnson, 1992, 1999; Warner, 1987). In these studies, teachers are observed to rely on different types of student cues such as disruptive behavior, inattentiveness, incorrect or incomplete answers, unsatisfactory work, and apparent lack understanding. It is also emphasized that thinking about instructional processes and strategies -such as the nature of questions, explanations, reinforcement, review, sequencing, pacing activities and transitions between the activities- constitute the second largest category of antecedents for interactive decisions of teachers. However, content or subject matter and instructional objectives represent the smallest percentages of teachers' statements about their interactive thoughts (Borko & Shavelson, 1990; Johnson, 1992, 1999).

In a similar study, Paterson and Graham (2000) examine the thinking of five junior high school teachers as they teach in inclusive classrooms through triangulating data from semi-structured interviews, stimulated recall of interactive thinking while viewing video-taped lessons and researcher field notes. This qualitative study yields the fact that teachers recognize student individuality from both academic and non-academic perspective in their interactive thoughts.

Johnson (1992, 1999) also analyzes student performance cues, teachers' instructional actions in response to these cues, and teachers' interactive decisions among pre-service teachers. She notes that pre-service teachers use more student responses that are elicited rather than initiated and that they employ more instructional attention to errors and deficient responses, while initiated and elicited responses receive less attention. The study also highlights that pre-service teachers are primarily affected by unexpected student responses and the need to control the flow of instructional activities while making interactive decisions in the class. Another finding indicates that majority of their instructional decisions are concerned with student understanding, motivation and involvement, and instructional management.

Similarly, a group of further studies are conducted to explore interactive decisions with regard to social studies instruction among teachers teaching a social studies unit. These studies yield that teachers use the cues of student participation and involvement in the class to judge how well their lessons were progressing. Another finding reveals that the correlation between a measure of the complexity of teachers' interactive decisions and measures of student achievement and attitude are negative. In particular, students' achievement and attitude scores are seen to be lower in situations in which teachers report considering alternative teaching strategies and deciding not to change their behavior (Borko & Shavelson, 1990; Shavelson, 1983).

In contrast, Wodlinger (1980) investigates interactive decisions and concludes that most of the interactive decisions reported by teachers are triggered by environmental factors such as interruptions, instructional materials, equipment, and time constraints rather than student performance cues.

Of the studies referred to above, our study is to some extent consistent with Johnson's (1992), Fogarty et al.'s (1983), and Westerman's (1991) studies in terms of methodology and purpose. Moreover, as in our case, all these studies adopt a cognitive and interpretative approach to uncover the thoughts of the teachers while making decisions. As for the methodology, these three studies mainly employ the stimulated recall technique to elicit what teachers think while lecturing in the class. Apart from the stimulated recall technique, Westerman (1991) uses post-teaching interviews and delayed self reports, and Johnson (1992) employs written retrospective accounts of the teachers. We also cover some other reflective data collection tools such as the *snake* to obtain more reliable data throughout the study.

2.10. Reflective Data Collection Tools

2.10.1. The Stimulated Recall Technique

Regarding the influence of the development of cognitive psychology, a number of qualitative and narrative research data collection tools are being used in the studies on teacher thinking to gain useful and appropriate insights into the thought processes of both teachers and students (Freeman, 1996b; Kansanen, 1995; Olson, 1992).

Most studies on interactive decision making have conducted the method of stimulated recall which relies heavily on teachers' verbal reports. The stimulated recall technique is designed to enable teachers to reflect on their teaching so that they can come to the conclusions and make generalizations about the teaching and learning processes taking place in the class at the time of teaching. For this reason, the stimulated recall interview is a means of reflection-in-action rather than reflection-on-action, which contributes valuable insights into the life of language classrooms, as well (Nunan, 1989). In this technique, teachers are asked to produce retrospective reports of their thinking with regard to the provision of extensive retrieval cues on video-tape. As stated by Bloom (1953b), the rationale underlying this technique is that a participant "may be enabled to relieve an original situation with vividness and accuracy if s/he is presented with a large number of cues or stimuli which occurred during the original situation" (p.161).

Originally, Bloom (1953a, 1953b), in his study with college students, develops the methods of stimulated recall to revive the memories of students after a class so that they can recall the thoughts that occurred during it. In these studies, Bloom (1953a, 1953b) uses sound recordings as the stimulus. Later, Kagan (1984) and Kagan, Krathwohl, and Miller (1963), in similar studies, elaborate these methods to work with psychological counselors and other members of helping professions. Subsequently, stimulated recall has been employed in educational studies in different ways and with various stimuli such as written records, audio-tapes, and video-tapes (Axelsson, 1999; Elstein, Shulman, and Sprafka, 1978; O'Brien, 1993). Actually, Kagan (1984) is one of the researchers who uses video-tape as a stimulus and develops many of the interrogation procedures used by following researchers.

In a stimulated recall technique, the researcher or the teacher stops the video-tape at useful intervals to inquire about the thinking process of the teacher at that moment. It has been found out that more interesting recollections are obtained when it is the teacher who decides where to stop the video rather than the researcher. In this technique, it is assumed that teachers are able and willing to articulate their thought processes. Therefore, in a stimulated recall procedure, the task of the interviewer is to encourage reflection, and the video-taped lesson acts as a stimulus and support for the memories of the participants. Actually, the subject's verbal facility and ability to put thoughts into word form are the most important criteria deciding the effectiveness and fruitfulness of the technique (Barduhn, 1997; Kagan, Schauble, Resinikoff, Danish, and Kratwohl, 1967; Poulisse, Bongaerts, & Kellerman, 1986; Wear & Harris, 1994).

In the stimulated recall technique, if the person is not too anxious or stressed, the self-confrontation experience occurs. That is to say, teachers will notice some discrepancies between what he thought he is doing and what he is actually doing or a difference between what he is doing and what he wants to do. The former is called as an incongruence discrepancy and the latter is a deficiency discrepancy. The person confronts himself at three levels : First, he confronts himself as he is, and second, he confronts his instructed behaviors- his conscious information processing and decision making, and at last, he confronts the consequences of both (Shavelson,1983).

The stimulated recall technique is a useful tool especially in collaborative research because not only teachers but also students and the researcher can present their interpretations of what is going on in the classroom. Furthermore, such verbal reports are considered as the indicators of the cognitive processes of teachers. The results can be reliable and valid in the case that this technique is employed in association with other techniques (Nunan, 1992a; Poulisse, Bongaerts, & Kellerman, 1986).

McMeniman et al. (2000) summarize the limitations of some other methods employed in research on teaching and teachers in regard to stimulated recall technique. They state that interviews and survey data are unreliable predictors of actual classroom behavior since the data are removed from the teaching and learning environment. Similarly, observation can not enable the researcher to access to the thinking of teachers at the time of teaching in a complex and entangled environment. As for interaction analysis, they claim that it only provides a crude and superficial record of teacher actions and of the process of teaching. Therefore, McMeniman et al. (2000) report using the stimulated recall technique in order to minimize the possibility of superficial self-presentation and elicit implicit personal theories and beliefs of teachers which underline their actions in the class which would be difficult to obtain in any other way.

Calderhead (1981a) also asserts that stimulated recall technique is a systematic approach in collecting potentially useful data in research on teaching especially in naturalistic, classroom based research even though some problems in respect to its validity can not be completely resolved. Calderhead (1987a) comments on the problems associated with the stimulated recall technique as follows:

> Where there is a time lag between the thinking and reporting of the thought, it is possible that the reported thought is an abstraction or reinterpretation of real thinking. Some thinking may not be recalled or be

> verbalisable. In some cases, teachers may not wish to expose or confront their thinking.... In fact, each model appears to provide us with one rather contrived and possibly distorted view of teachers' cognitions. (pp.184-185)

Furthermore, the video-taped data should be exploited carefully because ambiguity may occur about what the subject is responding on the tape and the degree to which the researcher is seeing the same thing. In addition, the researcher should be very careful not to ask leading questions but only ask for information relating to a specific problem or situation. Therefore, it is particularly difficult matter to select questions and analyze the responses in the stimulated recall technique. Noakes (1995) also remarks that participants may censor or distort their recall of thoughts to present themselves more favorably. Finally, Barrows (2000) notes that stimulated recall is underutilized because its existence is not generally recognized and its usefulness not appreciated.

2.10.2. Video-Taping and Audio-Taping Procedures

Rosenstein (1997, 2002) presents a review of the literature on the use of video in the social sciences and in program evaluation. She asserts that modern technology has facilitated such use and that video cameras are lighter, less complicated, and computer compatible in digital format.

Day (1990) states that video and audio recordings are the most neutral techniques for observation since they help teachers to see and hear themselves as their students see and hear them. Along with their complete objectivity, they can capture the essence of the classroom. Moreover, they can be viewed or listened over and over so that the participants can discuss their actions appropriately and agree on an interpretation of an event or behavior. However, video-tape feedback can be a stressful, anxiety-arousing experience (Nunan, 1992a; Van Lier, 1988).

Regarding observational benefits of video use, Collier and Collier (cited in Rosenstein, 2002) state that the video-taping procedure helps the researcher to deal with the 'what' as well as the 'how' of behavior since it can capture the 'sparkle and character' of an event." Moreover, traditional observation techniques are selective from the outset, which leaves possibly important information out of the record and therefore lost. The video-taped record, although selective in the positioning of the camera and the breadth of the lens, still records all that is within its view. Such an inclusive record can then be analyzed by multiple viewers for varied purposes. Besides, it can provide a permanent record of contextual and paralinguistic data such as chalkboard work, the layout of the classroom, gestures, and so on.

Parallel to these ideas, Schratz (1992) comments on the benefits of audio-visual recording as follows:

> Audio-visual recordings are powerful instruments in the development of a lecturer's self-reflective competence. They confront him or her with a mirror like objective view of what goes on in class. Moreover, class recordings which are kept for later use, can give a valuable insight into an individual teacher's growth in experience over years. (p.89)

Prosser (cited in Rosenstein, 2002), on the other hand, points out that video recording has some considerable limitations such as 'representativeness', 'trustworthiness', 'interpretation', and reflexivity' on the obtained data. However, as for the issue of accurate representativeness, Rosenstein (2002) has found, in years of use, that people including children of all ages, respond to the presence of the camera in the same way as they would to the presence of an observer. That is to say, they act self-consciously in the class for approximately twenty minutes and then the observer, the audio-tape, or the camera fades into the background. Thus, after twenty minutes, the recorded behavior is an accurate representative account. Another limitation is that video and audio recordings may make the participants anxious and less likely to reveal confidential information. Moreover, audio and video-tapes also take a long time to transcribe and analyze (Blaxter, Hughes, & Tight, 1996).

Piloting is important in both video-taping and audio-taping procedures because the researcher gets familiar with the procedures before the actual study. Otherwise, s/he may have difficulties in using the video camera, standing at an appropriate spot, or managing the timing of the lesson.

2.10.2.1. Transcribing Video and Audio-Recordings

Transcriptions of audio-recordings include only verbal interactions (i.e., verbal interactions) in the activity or lesson. Transcriptions of video-tapes, however, include both verbal and nonverbal interactions in an activity or lesson.

Video-taping provides rich data on a permanent –recall basis; nevertheless, specific items of data may not be very accessible. For example, if you are interested in how the teacher corrected the errors, it would be much easier to locate examples in a transcript than by going backwards and forwards on a tape. Moreover, after transcribing the material, the researcher can easily make use of the transcript for the analysis of multiple factors such as student errors, teacher talk, or question types. Sometimes, depending on the aim of the study, it is possible to transcribe on a selective basis, not the whole thing (Allwright & Bailey, 1991; Van Lier, 1988).

Davis (1995) states that the commentary to the video and audio-tape should be transcribed and analyzed inductively to identify emerging themes. Then, the common patterns should be given to the participants to review to see if they are understood correctly, what Davis (1995) calls member checks.

2.10.3. The Snake Technique

The *snake* is a diagrammatic flow chart used to promote reflection on critical incidents in the life history of the participants, which is named differently in the relevant literature such as "river", "river of experience", or "a developing fish." The rationale behind this technique is to reveal some specified aspects of a person's life rather than a comprehensive life history (Denicolo & Pope, 1990).

In line with Kelly's (1955a) fundamental personal construct corollaries, the use of the *snake* is based on the principle that a construct helps us to anticipate a finite range of events only. In other words, constructs should be related to the specific events or experiences on which they are formed. Moreover, Pope and Denicolo (cited in Cabaroğlu, 1999) claim that these constructs develop gradually and influenced consciously or unconsciously by formative experiences.

Albanese (cited in Cabaroğlu, 1999) remarks that the *snake* technique is conducted to get information about participants' beliefs and to obtain some clues as to what has led them to their beliefs by unraveling important incidents in their personal life stories. Therefore, this technique can be said to provide a depth of information which otherwise would not be easily accessible through pre-determined interviews. Besides, Pope and Denicolo (cited in Cabaroğlu, 1999) state that the *snake* enables the participants to use their own words and to indicate events which are personally significant. For this reason, the *snake is* supposed to yield high quality data.

The *snake* technique can either be employed on its own or in combination with other data collection techniques to confirm some aspects of the already collected data by other means or to elaborate the data (Denicolo & Pope, 1990).

2.10.4. Interview

Interviews can be unstructured (i.e., open), semi-structured (i.e., semi-open), and very structured depending on their degree of explicitness and structure.

In unstructured interviews, there is usually a topic for the interview, and the researcher does not control the interviewee. Since the interviewee has a maximum freedom of expression and elaboration, often unexpected information emerges. In such interviews, one question leads to another without a preplanned agenda of what will be asked. Therefore, unstructured interviews are mostly preferred in qualitative and descriptive studies.

The second category, semi structured interviews, includes specific and predetermined questions which the interviewer asks the interviewee to explore in-depth information; however, some elaboration in the questions and answers takes place during the interview. In addition, some other questions are asked according to the route the interview proceeds.

Thirdly, in structured interviews, completely predetermined questions are asked to the interviewee. For this reason, no elaboration takes place in either questions or the answers. This type of interview is preferred when a large number of participants are to be interviewed or when uniform and specific information is needed (Borg, & Gall, 1989; Cohen & Manion, 1994; Robson, 1993).

All these data collection tools summarized above are employed in the present study to obtain more reliable and valid data considering their weak and strong points as suggested by the relevant literature. Moreover, nowadays, these are the most popular reflective data collection tools employed in the area to uncover teachers' thoughts and implicit beliefs (Borg, & Gall, 1989; Cohen & Manion, 1994; Robson, 1993).

2.11. Triangulation

Triangulation means using multiple tools of data collection, holding multiple points of view on the topic, and covering multiple research questions and source of information. The rationale behind the use of triangulation is that using a number of different methods while investigating a question will yield accurate results (Freeman, 1998). A sociologist, Denzin (cited in Freeman, 1998) outlines four basic of triangulation as follows:

1. Data Triangulation: Using several sources of data in a study: Writing itself, teachers' corrections and assessment of another teacher can be several sources of data in a study on student writing.

2. Investigator Triangulation: Using more than one investigator to collect the data. That is to say, the researcher, in addition to him or herself, can ask a colleague to make field notes on the writing class or conduct interviews.

3. Methodological Triangulation: Using multiple ways to collect data in studying the problem. Interviews, observations, and questionnaires can be conducted together to study the issue in depth.

4. Theoretical Triangulation: Using more than one perspective in analyzing the data such as analyzing a video-tape for the sequence of activity; for gender and participation and for topic, language used, and errors made.

Every method has its own special strengths and weaknesses therefore no single method is uniformly superior. Regarding this statement, a combination of methods, theories, and investigators can be employed while investigating a set of research questions to compensate for the weaknesses of each approach, method, or researcher. Such triangulations will minimize the weaknesses of a single approach by building the strengths of a particular type of data collection tool.

Triangulation also enables the researcher to validate and crosscheck the findings. Moreover, the use of some other types and sources of data helps the researcher to understand the setting and the people being studied more deeply and clearly. Researchers can also explain more fully the richness and complexity of human behavior from more than one standpoint (Cohen & Manion, 1994; Creswell, 1994, 1998; Freeman, 1998).

This chapter has reviewed the relevant literature and presented information about some relevant current conceptions and theoretical underpinnings of teachers' thinking and decision making processes. The next chapter reports our research design and methodology. Moreover, the pilot study and its implications for the study will be covered in the next chapter. Finally, the data analysis procedure used to analyze both quantitative and qualitative data will be explained in detail.

CHAPTER 3

METHODOLOGY

3.0. Introduction

This chapter aims to describe the overall design of the study including the participants, the research context, and the data collection and analysis procedures. The pilot study, conducted prior to the main study in Spring, 2001, is also covered in detail, focusing on the methodological modifications and adaptations proposed for the actual study. Moreover, ethical and personal issues that may arise before, during, and after the study are mentioned throughout the chapter.

3.1. Overview of the Study

The study primarily investigates interactive thoughts and decisions of EFL teachers from teachers' own perspectives regarding teachers' expertise level, focusing on possible reasons underlying their interactive decisions. Therefore, it adopts a cognitive and interpretative approach to teacher thinking process.

The study aims to answer the following research questions:

1. Are there any differences between experienced and novice teachers in their interactive decisions?

   a. Do experienced teachers respond to certain types of student behavioral cues in the same way as novice teachers do?
   b. Do experienced teachers make the same type of interactive decision (i.e. reflective, immediate, and routine) as novice teachers?
   c. Do experienced teachers consider more instructional alternatives(i.e., goals) while making interactive decisions?
   d. Do experienced teachers make more interactive hierarchical decisions than novice teachers?
   e. Do experienced teachers approach(i.e., feel about) their interactive decision making behavior more positively than novice teachers?

2. What are the possible reasons (i.e., context, materials , prior knowledge, etc.) underlying the interactive decisions of experienced and novice teachers?

3. What classroom incidents cause the most frequent discrepancies between the lesson plan and the actual lesson?

3. 2. Theoretical Assumptions and Interactive Decisions

Regarding a cognitive and interpretative approach, the study is mainly based on the assumption that teachers are professionals who make reasonable judgments and decisions in a complex and uncertain environment. It also assumes that teachers' behavior is guided by their reason based thoughts, judgments and decisions. Another assumption is that expertise is an important factor in decision making behavior of teachers in terms of making use of routines and knowledge and recognizing student behavioral cues. Finally, it is assumed that teachers interpret classroom events differently and thus react to classroom events differently (Borko& Shavelson, 1990; Farrell, 1998; NIE, 1975; Noakes, 1993; Sendan, 1992).

3.3. The Pilot Study

3.3.1. Why Piloting?

Piloting is the process whereby researchers try out the research techniques and methods together with the analysis of the collected data they have in their mind so that they can see how well they work in practice and if necessary modify their research plan or any aspects of the plan accordingly. That is to say, pilot study is not an end in itself but only a means by which the main study can be improved. Therefore, the value of piloting can not be overestimated. Piloting is also important in both video-taping and audio-taping procedures because gets familiar with the procedures before the actual study. Otherwise, s/he may have difficulties in using the video camera, standing at an appropriate spot, or managing the timing of the lesson (Blaxter et al., 1996).

Pilot studies are carried out with fewer participants than those of the actual study; however, they serve all the purposes of the usual tryout. That is to say, pilot studies improve data collection routines, enables the researcher to try scoring techniques, and check the appropriateness of standard measures and locally developed measures. Moreover, they allow the researcher to test the hypothesis preliminarily before its actual precise testing in the main study so that researchers may drop some and develop new hypothesis when necessary. In addition, since unforeseen problems may be revealed in the pilot study, the researcher greatly recognizes the treatment errors and tries to overcome them in redesigning the main study. Pilot studies may also save time and money on a research project which will yield nothing since many research ideas which seem to be promising are actually unproductive when carried out in research settings. Above all, the pilot studies provide enough clues or data for the researcher to make sound decision on the advisability of going ahead with the main study (Blaxter, et al., 1996; Borg & Gall, 1989).

3.3.2. Introduction to the Pilot Study

This section particularly focuses on the methodological lessons, the necessary modifications, and adaptations proposed for the actual study. Since the study was conducted as a pilot study prior to a PH.D dissertation on interactive decision making of teachers, the primary goal was to test the appropriateness of the questions, data collection procedures, and analysis methods as well to familiarize the researcher with the reflective data collection tools and qualitative data analysis procedures employed in such studies.

3.3.3. Aim and Scope of the Pilot Study

The present study aims to investigate differences between experienced and novice teachers' interactive decision making behavior in the EFL classroom from the teacher perspective.

The following research questions constituted the basis of the study:

1. What are the possible reasons (i.e., context, prior knowledge, etc.) underlying the interactive decisions of experienced and novice teachers?
2. Are there any differences between experienced and novice teachers in their interactive instructional thoughts and decisions?
    a. Do experienced and novice teachers respond to certain student performance cues in the same way?
    b. Do experienced and novice teachers employ the same kind of teaching routines in the class?

3.3.4. Methodology

3.3.4.1. Participants

Two experienced (with at least ten year teaching experience) and two novice EFL teachers (with three years or less teaching experience) voluntarily participated in the study. All the participants were female EFL teachers teaching at the ELT Department of Education Faculty at Çukurova University. They have all been teaching at the department since their initial teaching experiences. Their ages range from 25 to 45. The average year of teaching for experienced teachers is 15, whereas it is only 3 years for novice teachers.

3.3.4.2. Data Collection and Instruments

The data were collected through video-taping procedure, stimulated recall technique, audio-recording, hypothetical situations, lesson plans, and *snakes.* Two-hour classes for each teacher were videotaped only once. Prior to video-taping procedure, each participant was asked to choose a class to be videotaped and submit us a lesson plan of that class. The video-taped lessons were Linguistics, English Literature, Reading and Study Skills, and Listening and Speaking. We coded the video-tapes to identify and categorize student performance cues and interactive decision points, using a standard classification scheme adapted from Fogarty et al. (1983) (see Appendix 4).

In the stimulated recall sessions, each teacher was shown her teaching and invited to comment on her instructional actions and recall thoughts and decisions they made during the class. The teachers were asked to stop the tape at any point they recall any thoughts or decisions. In the case the participants did not stop the video-tape at a possible decision point identified before, we stopped the tape and asked whether she made a decision at this point or not. We also asked a set of probe questions to find out the effects of possible factors on their interactive decision making behavior.

During the interviews the participants were asked probe questions to go deeper into the participants' response such as Why did you act like that? Patton (cited in Cabaroğlu, 1999) distinguishes among three types of probe questions as clarification, detail oriented and elaboration probes: the first refers to clarifying ambiguous points (i.e.,Would you please clarify what you mean here?). Moreover, non verbal behaviors of the teachers were also noted to be noticed while interpreting the audio recorded data., the second is used to fill in the blanks in the responses (i.e., How do you know that?), and the last type allows the respondent to talk or comment more on the issue (i.e., Would you please comment more on your behavior?).

A constructive technique, *the snake* was used to promote reflection on critical incidents in the life history of the participants. Hypothetical situations -if...what statements- were also employed in the study to investigate the issue in-depth.

3.3.4.3. Data Analysis

A standard classification scheme was adapted from Fogarty et al. (1983) (see Appendix 4) to classify student performance cues, instructional goals, prior knowledge, and teachers' instructional decisions in the video-taped lessons. Content analysis was conducted for the analysis of the stimulated recall interviews.

3.3.4.3.1. Student Performance Cues and Instructional Actions

Table P3.1. Student Performance Cues Utilized by Experienced and Novice Teachers

Student Performance	Experienced Teachers			Novice Teachers		
Cues	A (25)* %	B (28) %	Total %	A (23) %	B (21) %	Total %
Deficient Response	34	37	35.5	13.04	*6.41*	*9.72*
Initiation	26	20	23	42.76	49.61	46.18
Errors	24	18	21	13.77	14.18	13.97
Attention	16	25	20.5	30.43	29.80	30.11

*NOTE: The total number of the cues is given in the parenthesis.

Percentage frequencies of student performance cues are displayed in Table P3.1. As shown in the table, there are both individual and group differences in the use of student performance cues by the participants. Experienced teachers utilized Deficient Responses more than any other category. Furthermore, experienced teachers were seen to employ all the categories almost equally. Novice teachers, on the other hand, made use of Initiations more than any other category, which covered almost half of the performance cues reported by the novices. The second most frequent cue was seen to be the category Attention among novice teachers. In contrast with experienced teachers, the novices reported the category Deficient Responses as the least frequent cue category when compared to the other cue categories.

Table P3.2. Instructional Actions Implemented by Experienced and Novice Teachers for Student Performance Cue Categories

Student Performance Cues

Instructional Actions	Deficient Responses		Initiations		Errors		Attention	
	Exp. %	Novice %	Exp. %	Novice %	Exp. %	Novice %	Exp. %	Novice %
Gives Feedback	6.25	20	0	8.69	37.5	20	0	0
Explains	21.25	40	0	17.39	12.5	0	33.4	13.30
Checks Knowledge	41.25	20	0	4.34	50	20	16.7	40
Focuses Attention	12.5	40	50	13.04	0	40	33.4	33.4
App, Ex, or P	18.75	0	25	26.08	0	10	0	0
Elicits, and Incorporates Input	0	0	25	30.43	0	10	16.7	13.4
Manages	0	0	0	0	0	0	0	0
Total number of the actions	16	5	4	23	8	10	6	15

As observed in Table P3.2, some differences appeared among the instructional actions employed by experienced and novice teachers in response to specific cue categories. For instance, in regard to Deficient Responses, experienced teachers were found to employ the category Checks Knowledge more than any other category, whereas the novices appeared to equally employ the categories Explains and Focuses Attention more often than any other category. Moreover, experienced teachers employed the category Applies, Extends, and Plans with a frequency of 18.75 %; however, the novices did not implement this category at all in response to Deficient Responses.

As for the category Initiation, experienced teachers were not found to employ the categories, Gives Feedback, Explains, and Checks Knowledge; novice teachers, on the other hand, utilized these categories with a combined frequency of 10.15. The most frequently employed category for Initiation in the group of experienced teachers was Focuses Attention (with a frequency of 50 %), whereas it was Elicits and Incorporates Input for the novices.

In response to another student performance cue category, Errors, experienced teachers implemented the Checks Knowledge (with a frequency of 50 %) category more frequently, while the novices employed the Focuses Attention category more often than any other category. It is interesting to observe that novice teachers employed a wider range of instructional actions when confronted with the instructional action categories Initiation and Errors. As for the last student performance cue category, Attention, experienced teachers utilized the categories Explains and Focuses Attention more frequently, while the novices utilized the category Checks Knowledge more frequently.

As for the similarities, both groups did not implement any management related actions in response any student performance cue category reported in this study. Moreover, in regard to Deficient Responses, both the experienced and the novice did not implement the category Elicits Input. Another finding revealed that neither group responded to the category Attention with the instructional action categories, Gives Feedback and Applies, Extends, and Plans, which supports earlier findings reported by Fogarty et al. (1983). Overall, the categories, Checks Knowledge, and Focuses Attention were found to be the most frequent instructional actions among the participants in response to student performance cues.

Different and interesting combinations of student performance cues and instructional responses to those cues were observed during the study. For example, Experienced Teacher A completely changed the content of the lesson on the spot, regarding the student performance cues, as follows:

"*Teacher A: What are the bilabial sounds? (Checks Knowledge)*

The class: No answer (Deficient Response)

Teacher A: Bilabial sounds are .... (Explains). OK! Today we are going to study bilabial sounds instead of phonological development.

At the interview, she commented that she had planned to study phonological development of children in that class; however, she realized that the students were not able to describe English sounds they had just started studying. Therefore, on the spot, she decided to change the content of the lesson.

Another example can be given from the class of Novice Teacher A:

"Teacher: Do you remember the characters in the novel?

(Checks Knowledge)

The class: Housewives (Error)

Teacher: Only housewives? (Focuses Attention)

Teacher: There are some other people working in the house. (Elicits Input)

The Class: And ... (Initiation)

In the preceding example, the teacher employed an error correction strategy since she could not receive the correct answer: She first directed the students' attention on the error and then encouraged the students to initiate a conversation to find the correct answer. These two examples show that both the experienced and the novices were capable of identifying student performance cues and implementing appropriate instructional actions in response to these cues.

3.3.4.3.2. Instructional Goals

Table P3.3. Instructional Goals Reported by Experienced and Novice Teachers

Instructional Goals	Experienced Teachers			Novice Teachers		
	A (26)*	B (26)	% of goals	A (22)	B (30)	% of goals
Student Motivation/ Involvement	+	+	23.07	+	+	15.14
Student Understanding	+	+	23.07	+	+	21.96
Social/Affective Development	+	+	13.46	+	+	16.81
Group Management	+	+	15.38	+	+	16.02
Curriculum Integration	+	+	9.61	+	+	15.75
Development of Language Skills	+	+	13.45	+	+	6.21
Subject Matter	+	+	7.3	+	+	21.69

* Note: Total number of instructional goals reported by each participant is given in parenthesis.

Table P3.3. displays information on the instructional goals the participants considered during their teaching in the class and mentioned at the stimulated recall interviews. The plus (+) indicates that the participant considered that specific goal at least once during her teaching. Table P3.3. shows that both groups considered each goal at least once but with a difference in their appearance frequencies.

As shown in Table P3.3, experienced teachers considered Student Understanding and Student Motivation / Involvement more often than any other goal category, whereas the novices appeared to prefer the goal categories Student Understanding and Subject Matter more frequently. This indicates that regardless of their expertise level, the participants reported the goal category Student Understanding as one of the most important instructional goals they considered during their interactive teaching. However, Subject Matter which was reported as one of the most frequent goal categories by the novices was found to be the least frequent category among experienced teachers.

Another interesting finding shows that novice teachers were much more concerned with combining the old and new information (i.e., Curriculum Integration) while making interactive decisions. Nevertheless, experienced teachers were seen to consider the development of language skills more often than the novices. It also appears that while the teachers reported considering a wide set of instructional goals as a basis for their interactive decisions, they considered these specific goals at different times in the class.

Both groups were seen to be capable of considering more than one instructional goal at a time. However, experienced teachers attended to multiple instructional goals more frequently than the novices.

The following excerpt from the class of Experienced Teacher B may illustrate the multiple use of instructional goals very well:

> *"Teacher: Do you know any sleep disorders?*<u>*(Checks Knowledge)*</u>
>
> *The class: No answer*<u>*(Deficient Response)*</u>
>
> *Teacher: Okay! Some of the sleep disorders are imsomnia and snoring* <u>*(Explains)*</u>*" Let's write these words on the board* <u>*(Focuses Attention)*</u>.

Experienced Teacher B commented on her behavior as follows:

> *" I just wanted to introduce some kind of vocabulary because they were not familiar with such words as imsomnia and snoring."*

In the preceding example, the teacher pursued two different instructional goals while accomplishing that action: Development of Language Skills and Subject Matter because she tried to teach both the lesson content (i.e., sleep disorders) and the spelling and pronunciation of these words.

An example for the goal category Group Management was found in the class of Novice Teacher A. She read aloud some lines from the novel to show the part describing the boy's diving in the novel they were reading. She said she did it knowingly:

> *"I decided to read these lines from the novel so that the students could easily follow and find that part in the novel. "*

Another excerpt from the class of Novice Teacher A clearly shows the relationship between the student performance cues, instructional actions, and instructional goals:

> *"Teacher: What kind of description is it?* <u>*(Checks Knowledge)*</u>
>
> *The class: No answer* <u>*(Deficient Response)*</u>
>
> *Teacher: Is it a figure of speech? (Extends & Focuses Attention)*
>
> *The class: Correct answer.*

Novice Teacher A explained the reason behind her decision as follows:

> *"Since they could not answer the question at first, I decided to provide some clues to find the correct answer because they seemed not to realize what I was asking at that moment. I knew that they could answer the question because they should have studied it before."*

This excerpt is an example for the consideration of multiple goals among the novices during their ongoing instruction. In her comment, the teacher reported considering both Student Understanding and Curriculum Integration at the same time in making that decision.

3.3.4.3.3. Prior Knowledge

Table P3.4. Prior Knowledge Categories Reported by Experienced and Novice Teachers

Types of Prior Knowledge	Experienced Teachers			Novice Teachers		
	A (20)*	B (26)	Total %	A (17)	B (22)	Total %
Pedagogical Principles	+	+	37.30	+	+	38.48
Student History	+	+	23.46	+	+	17.94
Academic Skills	+	+	10.76	+	+	33.48
Knowledge	+	+	11.34	+	-	11.09
Preferences	+	+	10.76	-	-	00
Important Content	+	+	6.34	-	-	00

*NOTE: Total number of prior knowledge categories for each teacher is given in parenthesis.

Another dimension of teacher thinking and decision making is displayed in Table P3.4.- prior knowledge the participants recalled during their in-class teaching. Overall, experienced teachers were seen to consider a wider range of prior knowledge. For example, novice teachers did not report the categories, Important Content, Preferences as a basis for their interactive decisions, whereas experienced teachers were found to report these categories with a combined frequency of 8.55. Moreover, only one of the novice teachers recalled the category of Knowledge while commenting on her in-class actions.

As for the other categories, most of the reports for the prior knowledge by experienced teachers were in the categories of Pedagogical Principles and Student History, while the novices concentrated on the categories of Pedagogical Principles and Academic Skills. That is to say, both groups primarily focused on Pedagogical Principles but with a difference in their emphasis: Experienced teachers significantly preferred this category as the most dominant one, whereas, novice teachers preferred the categories Pedagogical Principles and Academic Skills almost in equal percentages.

Another remarkable finding is that the goal category Academic Skills was seen to be one of the most popular categories among the novices, whereas it was the least frequent category among the experienced teachers. The last category, Knowledge, received equal percentages from both groups, which indicates that both groups preferred it in a moderate degree.

Experienced Teacher B provided a good example for the utilization of Student History in her decision making process: The main topic in that specific lesson was sleeping, and she started a conversation with a student by asking the question *"how many hours do you sleep a day?"* Then, all the students began to laugh, and the student answered the question as "16 hours."

Later, at the interview, Experienced Teacher B explained the reason behind her decision as follows:

> *" In the past, that student told me that he could sleep about 16 hours a day in holidays. At that time, we laughed about it. Since today we were going to listen to a passage on 'sleeping disorders', I preferred to start with him both to have some fun and to relate the lesson content to their daily lives."*

The other experienced teacher, Teacher A mostly emphasized Pedagogical Principles while commenting on her instructional actions. For example, as a routine, she was seen to summarize the previous lesson in Turkish not in English. She commented on this routine as:

> *"If the students are able to express something in their mother tongue, this means that they have internalized that information, and it is their own idea. When you ask them to summarize some information in English, they usually come up with memorizing."*

Another example of how teachers make use of Pedagogical Knowledge was observed in the class of Novice Teacher B:

> *"Teacher: Yes, you please! (She gives a turn to a student.)*
>
> *(Focuses Attention)*
>
> *The student: Reducement (Error)*
>
> *Teacher: Can you please repeat? (Focuses Attention)*
>
> *You mean reduction ? (Checking Knowledge)*
>
> *The student: Reduction (Correct Answer)"*

Novice Teacher B commented on her behavior as follows:

> *"Usually I do not provide the correct answer ; instead, I make them find the correct answer because if I correct them all the time, they will be very relax while speaking and do not control their speech all the time."*

The same teacher asked what skimming and scanning were in subsequent questions, and she received correct answers. The overriding concern of the teacher here was to combine the new subject matter with the prior knowledge (i.e., Curriculum Integration) because she said that these students took the prep class; therefore, they should have studied these strategies- skimming and scanning- before.

3.3.4.3.4. Teaching Routines

Routines are well established teaching behaviors that are performed automatically to cope with the classroom events especially with unexpected events. They are usually employed without conscious thinking (Shavelson, 1983). Regardless of their expertise level, all the participants reported using teaching routines at different points in class. The most frequent routines reported by the participants are presented in Table P3.5. below.

Table P3.5. Routines Employed by Experienced and Novice Teachers

Experienced Teachers
Greeting the students in Turkish,
Summarizing the previous lesson,
Starting the lesson with something from the daily lives of the students,
Stating the aim of the lesson at the very beginning of the class,
Asking if the students have any questions in regard to lesson content,
Checking the attendance.
Novice Teachers
Greeting the students in Turkish,
Checking the attendance,
Checking homework,
Summarizing the present lesson at the end of the lesson ,
Summarizing the previous lesson,
Conducting warm up activities.

As shown in Table P3.5., the experienced teachers and the novices employ almost the same kind of routines in the class such as greeting the students in Turkish, summarizing, and checking the attendance; however, some differences were observed. For example, experienced teachers started their lessons with something else rather than the lesson content, whereas the novices jumped into the subject matter as soon as the class began. Furthermore, the novices employed management related routines more frequently, whereas the experienced teachers employed the routines which facilitate student understanding and involvement more often.

The present study also shows that teacher beliefs about how to behave in the class affect the nature of teaching routines and interactive decisions. For instance, Experienced Teacher A tended to summarize each part of the lesson instead of summarizing the whole lesson. She explains her behavior as follows:

> *"In my opinion, this summarizing technique facilitates student understanding because it enables the students to see the relationship between that summarized part and the overall subject matter of that lesson."*

3.3.4.3.5. Discussion and Conclusion

The results suggest some major differences and similarities between experienced and novice teachers' interactive thoughts and decisions. As for the student behavioral cues, experienced teachers primarily focused on Deficient Responses, whereas the novices focused on Initiation. However, all the participants, regardless of their expertise level, were seen to be able to identify student performance cues they came across in the class.

In response the student performance cues, the experienced teachers and the novice differed in the implementation of the instructional actions to a great extent. Moreover, in contrast with previous findings, the novices implemented a wider set of instructional actions especially when confronted with Errors and Attention. Nevertheless, both groups reported Checks Knowledge and Focuses Attention as the most frequent instructional action categories in their overall interactive decision making processes. Moreover, neither group implemented management related instructional actions in response to any student performance cue.

Among the instructional goals, even though the groups differed in the consideration of different instructional goals while teaching in the class, the category Student Understanding appeared to be one of the dominant goal categories in both groups. Moreover, in line with the earlier findings, experienced teachers attend to multiple instructional goals more frequently than the novices. As for the prior knowledge, experienced teachers employed a wider range of prior knowledge about Pedagogical Principles, Student History, Academic Skills, Important Content, Knowledge, and Preferences during ongoing instruction. However, both groups reported Pedagogical Principles as the most frequent prior knowledge category affecting their interactive decision making.

Both the experienced and the novice employed a well established set of teaching routines during ongoing instruction. However, the novices employed management related routines more frequently, whereas the experienced teachers employed the routines which facilitate student understanding more often. The study also suggests that teacher beliefs about their teaching have a considerable effect on their decision making process.

3.3.5. Implications of the Pilot Study for the Main Study

3.3.5.1. Aim and Scope of the Study

The pilot study yielded invaluable rich qualitative data beyond the research questions investigated in the pilot study; therefore, more research questions were involved in the actual study to make use of the data gathered in the actual study.

3.3.5.2. Instruments and Data Collection

First of all, the pilot study familiarized us with the use of video-tapes in terms of how to use the video-tape appropriately, how and where to stand in the class, how to focus on the interactions between the teacher and students, classroom seating arrangement and teachers' nonverbal behaviors. Moreover, the students in the pilot study were observed to be anxious during the video-taping procedure in the pilot study; therefore, they were told that it was just a kind of academic investigation focusing on their teachers' actions rather than a formal assessment criterion. Furthermore, we realized that the video camera may have produced some expected or unexpected effects on the observable in-class behavior of the students and teachers. That is to say, they may have acted differently in the videotaped classes due to the video-taping procedure. Nevertheless, as stated in the relevant literature (Rosenstein, 2002), the students were observed to act self-consciously in the class for ten or fifteen minutes and then we and the camera faded into the background.

Secondly, through the pilot study, we got familiarized with the stimulated recall technique which we had never employed before. Moreover, we learnt when and how to conduct these interviews after the video-taping procedure and how to prepare the questions to be asked at the interviews more appropriately. We also realized that we were asking some leading questions at the stimulated recall interviews to elicit the reasons behind the actions of the participant teachers. Therefore, we have reviewed the relevant literature to see the nature and types of the questions asked in other such studies and tried to modify our questioning style. In addition, regarding the participants' comments, we have reformulated our interview questions in terms of wording, clarity, and scope of the actual study. Piloting has also helped us to estimate the average time length for the stimulated recall interviews. Besides, we have observed that length of the interviews and quality of the data can be affected by the work schedule and personality of the participant teachers such as being shy, relaxed, talkative, etc.

Thirdly, we have noticed that some terms such as theory and interactive decision were vague or different for some of the participants due to their different methodological backgrounds. Therefore, we have decided to clarify such terms whenever needed throughout the actual study to obtain more reliable data. Regarding the lesson plan, participants in the pilot study were seen not prepare any written lesson plan; therefore, we have prepared a written lesson plan outline to be completed by the teachers before the video-taping sessions in the actual study.

Fourthly, we used policy capturing (i.e., hypothetical situations) and diaries in the pilot study. However, with regard to the comments made by the participants and some other competent researchers in the area, we have decided to withdraw these two reflective data collection tools in our study. Moreover, the stimulated recall and semi-structured interviews proved to provide a large amount of data about interactive thoughts and decisions of teachers.

We have also learnt how to conduct the *snake* activity to gain information about the learning and teaching background of the participant teachers and any other significant event that may have contributed to their teaching until that time. Lastly, we have become aware of our weaknesses and strengths in conducting each data collection tool throughout the pilot study. Thus, we have had confidence in conducting these data collection tools to gather data in the actual study.

3.3.5.3. Data Analysis

The pilot study has also provided valuable insights into the analysis of the actual study findings. A classification scheme, developed by Fogarty et al. (1983) (see Appendix 4), was used in presenting the results in the pilot study. The comments on the analysis of the findings have indicated that the scheme is appropriate for the actual study to display the data both quantitatively and qualitatively. The pilot study has also revealed that the data should be presented both quantitatively and qualitatively since the former will certainly provide an overall idea about the scope of the study, and the latter will provide a more in-depth and extensive analysis on the bases of the categories given in the quantitative part. Moreover, throughout the pilot study, the need for an appropriate statistical calculation has arisen to support the quantitative data scientifically. Therefore, with regard to the nature of the quantitative data, chi-square test (X^2) seems to be an appropriate analysis method for our study.

In the following section, the research design for the main study will be presented in detail.

3.4. The Research Design

Among different kinds of data, a basic distinction between the quantitative (i.e., numbers) and the qualitative (i.e., words) may be recognized, which will determine to a great extent how data will be collected and analyzed. The collected data may sometimes reflect both types, though either the qualitative or the quantitative may predominate. However, this distinction is not so clear in all cases, and both approaches provide a well representation of reality of participants. The qualitative approach provides more details about the participants under consideration, while quantitative approach offers more precision, but both provide only partial description. However, these approaches have a tendency to shade into each other since it is very rare to find a research report which does not include numbers and words together. Moreover, in some cases, qualitative data can be quantified, and similarly, quantitative data can be qualified. Therefore, a research design can be eclectic in such studies (Blaxter et. al, 1996; Seliger & Shohamy, 1989).

Qualitative research is concerned with describing phenomena that occur naturally, without intervening any experiment or an artificially contrived treatment. Furthermore, qualitative research is heuristic but not deductive since few decisions, if any, regarding research questions or data are made before the research begins. The ultimate goal of qualitative studies is to discover phenomena and understand those phenomena from the perspectives of the participants involved in the activity; therefore, qualitative studies reflect subjective data, whereas quantitative studies provide objective data which are free from the bias (Borg & Gall, 1989; Creswell, 1994, 1998; Seliger & Shohamy, 1989).

This study is mainly designed as a qualitative one since it aims to collect and analyze the data from the perspectives of the participant teachers. However, the qualitative data will also be quantified to provide a general overview of the frequencies of different decision types and some other emerged categories throughout the study. Therefore, an eclectic approach, a combination of qualitative and quantitative approaches, is adopted in designing the present study.

3.5. The Research Context

The study was conducted at the Foreign Language Center (YADIM), Çukurova University. The center provides an extensive English language learning program for the students of Çukurova University. The program is a thirty two-week course which includes four blocks, each of which lasts eight weeks. The proficiency level of the students is determined as Beginners, False Beginners, and Pre-Intermediate through a standard proficiency exam at the beginning of the year. Therefore, the syllabus the teacher follows (see Appendix 7 and Appendix 8) and the exams given to the students in each block change according to the proficiency level of the students. All the quizzes and exams for all level students are prepared by the testing unit, and teachers are responsible only for conducting and evaluating the exams properly.

The students at this center are grouped into two broad categories as undergraduate and graduate. Undergraduate students are those who have just entered the university and whose age range between 17 and 25, whereas graduates are those who graduated from a faculty and attend there as a compulsory requirement of their Master Program. Their ages range between 21- 35. Both groups should successfully complete the program to be able to attend the courses in their own department in the following year.

Totally, 65 teachers graduating from different universities and having different teaching experiences have been teaching at YADIM. Some of these teachers are attending post graduate programs (i.e., M.A. and Ph. D) in ELT offered by Çukurova University or different universities. Regarding the nature of the courses, all courses integrate four skills: Reading, Writing, Listening, and Speaking. Moreover, two or three teachers teach the same class and each teacher starts her or his lesson from the point where the other teacher has left. Therefore, some committees such as Syllabus and Grammar are established, and the committee coordinators hold weekly meeting sessions with all the teachers to see whether everything is going well regarding the teaching order teachers should follow in every block.

As for the facilities, YADIM has a self access room, library, a meeting room, a material production unit (MPU), testing unit, teacher training unit, and video rooms. Some teachers are responsible for these units and therefore, they are given no teaching duties or their teaching duties are reduced. Besides, teachers do not usually prepare teaching materials since they can borrow their materials from the material production unit on daily basis.

3.6. Participants

The participants of the study are EFL teachers who were, at the time of the study, teaching at YADIM, Çukurova University. The participants were selected by a convenience sampling strategy. In other words, the nearest teachers were chosen as the participants of the study so that we could collect the data easily and reach the participants whenever necessary. In addition, *stratified random sampling* was employed because of the subgroups included in the study.

The teachers in the study can be divided into two subgroups, novice and experienced teachers, in terms of the years of experience teachers have. Novice teachers are those who have been teaching English for two years or less, and experienced teachers are those who have been teaching English at least for five years.

As for the number of the participants, 4 experienced and 4 novice teachers participated in the study voluntarily. All the participants were female EFL teachers whose ages ranged from 23 to 45. The average year of teaching for the experienced teachers was 15, whereas it was only 2 years for the novice teachers. Moreover, only one of the novice teachers, Ece, had no prior formal teaching experiences at the time of the study. The other novice teachers, Gamze, Zeynep, and Burcu had two years of teaching experiences. As for their academic studies, apart from Gamze, all the novice teachers were M.A students at the ELT Department of Education Faculty, Çukurova University at the time of the study.

Among the experienced teachers, Kumru was the most experienced teacher with 20 years of teaching experience. Moreover, she had been involved in different types of academic studies till that time (see Appendix 10). For example, she had attended Aston University Distance learning M.A program and Fullbright summer courses. In addition, she had worked as a Cambridge University COTE tutor and organized School-University Colloboration at YADIM. As for the other experienced teachers, Kezban and Merve were not so interested in academic studies except some in-service teacher training courses being held at YADIM. The last experienced teacher, Selen, had completed her M.A thesis in ELT at the Education Faculty, Çukurova University. Kezban, Merve, and Selen were teaching English for ten years at the time.

3.7. Instruments

The qualitative method allows us to employ a variety of reflective data collection tools and methods of analysis. Therefore, different reflective instruments were conducted throughout the study to collect more reliable and accurate data on the interactive thoughts and decisions of teachers : the stimulated recall technique, video-taping, semi- structured interview, the *snake*, audio-taping of the stimulated recall sessions, transcripts of video and audio-tapes, classroom maps, lesson plans, and teaching materials.

Data collection tools were chosen on the bases of their practicality, appropriateness with respect to the nature, focus, and design of the study, methods of analysis, the research context, and the characteristics of the participants. The extensive literature review on the use of these tools has also clearly identified where, how and when to use these tools more appropriately throughout the data collection process. Most importantly, all these data collection tools were piloted and closely examined prior to the main study so that the weaknesses and strengths of each tool were identified. Moreover, the pilot study was presented at an international conference, and the instrumentation part has been modified with regard to the comments made on the study by expert researchers at the conference.

The design of the study determines the degree of explicitness of the data collection tools. Field notes, records, diaries, observations, and open informal interviews or conversations with participants are typical low degree data collection tools. These types of data collection tools are mostly observed in heuristic/synthetic type of research, focusing on understanding a phenomenon in its interactive environment where it occurs, without isolating variables from the general context and without making precise pre-data collection decisions. High degree data collection tools are, on the other hand, structured questionnaire, discrete point tests, formal interviews, and meta-linguistic judgment tests. Such data collection tools involve the use of formal and structured type of data collection procedures which determine in advance the specific focus of the data that will be sought (Seliger & Shohamy, 1989).

Regarding this classification, the data collection tools in this study are said to be low degree data collection tools: the stimulated recall interview (see Appendix 1), semi-structured interview (see Appendix 2 and 3), the *snake* (see Appendix 10 and Appendix 11), and video and audio-recording.

Similarly, Marton (1981) distinguishes between first-order and second order research regarding the nature of the data obtained through the use of each instrument. The former focuses on what people do, whereas, the second refers to how people perceive what they do. That is to say, the distinction is based on the accounts of activity and behavior and accounts of thinking and perception, which requires a shift in the research perspective. Marton (1981) also claims that in first order research, we orient ourselves towards the world and make statements about it. In the second perspective, on the other hand, we orient ourselves towards people's ideas about the world.

Table 3.1. presents the instruments used in the study together with their primary aims and the research questions they answer. Moreover, the table also clarifies whether these tools are first order or second order.

Table 3.1. Instruments to be utilized in the Study

Instrument	**Aim**	**Research questions**	**First order or Second order**
Snakes	Methodological triangulation To obtain objective data on the professional background of the teachers	2	First &Second
Semi-structured Interview	To identify beliefs, learning and teaching theories of the participant teachers	2	Second
Video-taping	To video-tape what teachers and students do and how they react to each other in the class; their oral language, social interaction patterns, students' work, and teachers' non verbal actions	1	First
Stimulated Recall Interview	To evaluate how teachers think about what they do and how they react to students' actions in the class. To elicit their beliefs, perceptions, and reasons underlying their in-class actions	all	Second
Audio-taping	To record the interviews for the analysis so that we can obtain permanent data	1e, 2, 3	First
Lesson Plans and Teaching Materials	To see the effect of lesson plans and teaching activities on the nature of teachers interactive decisions.	4	First
Transcriptions of Audio-tapes	To analyze the audio-taped data more practically without rewinding the tape recorder.	all	First
Transcriptions of Video-tapes	To enable us to analyze the video-taped data more practically without rewinding the video-tape.	all	First
Classroom Seating Maps	To see the effect of classroom seating arrangement on the class behaviors of the teachers.	2, 3	First

3.8. Data Collection

Even though stimulated recall and video-taping were the primary data collection tools of the present study, some other tools were also employed to gather more reliable and accurate data and to support the findings from different perspectives. Thus, the study has yielded richer and more in-depth data on the interactive decisions and thoughts of EFL teachers.

Table 3.2. provides information about the date of employing a specific instrument, research context, and whether the data were collected before, during or after in- class teaching throughout the study.

Table 3.2. The Data Collection Schedule

Date	Instrument	Research Context (YADIM)	Before, During or After Teaching
September, 2001	Briefing	Meeting room	Prior to the data collection process.
September, 2001	*Snakes*	In the office, alone	Prior to the first video-taping.
October, 2001	Semi-structured Interview	Offices of the teacher interview room	Prior to the first video-taping.
November, 2001	Video-taping 1 Stimulated Recall Interview 1 Audio-Taping 1	Classroom interviewing room interviewing room	During teaching After teaching During the interview
December, 2001	Video-taping 2 Stimulated Recall Interview 2 Audio-Taping 2	Classroom office office	During teaching After teaching During the interview
January, 2002	Video-taping 3 Stimulated Recall Interview Audio- Taping 3	Classroom Office Office	During teaching After teaching During the interview
Prior to each Video-taping	Lesson plans; teaching materials	Office	Before teaching
March- August 2002	Transcriptions of Video and Audio-tapes	Video room & Library	After the data collection period
November, 2001-January, 2002	Classroom Seating Maps	Classroom	During teaching

3.8.1. Briefing

Prior to the data collection procedure, we conducted a meeting with all the participants to explain the aim and the complete procedure of the study as well as to answer any question coming from them about the study. Moreover, all the participants were assured about the confidentiality and anonymity of the findings; therefore, they were asked to find a code name to be utilized throughout the methodology and data analysis part. Furthermore, the participants were told about the methods of data analysis roughly to ensure that even the methods of data analysis would not threat them in any way. Finally, we got their weekly teaching schedule and telephone numbers to contact with them whenever necessary during the study.

3.8.2. Semi-Structured Interviews

Semi-structured interviews (See Appendix 2 and Appendix 3) were conducted with each participant teacher separately prior to the first stimulated recall interviews to elicit their regular planning procedures, use of routines, and any learning and teaching theories underlying their in-class actions. Even though we used a pre-determined list of questions (see Appendix 2 and 3), the participants directed the route of the interview with their responses. In addition, all the semi-structured interviews were audio-taped and then transcribed for practical purposes. Moreover, non-verbal behaviors of the teachers, observed at the interview, were noted to be considered in the interpretation of the audio recorded data.

3.8.3. Video-Taping Procedure

Lessons for each teacher were video-taped, in random order, three times at regular intervals in the same semester: at the beginning, in the middle, and at the end of the semester. The participant teachers were video-taped in their regular classes. Moreover, prior to every video-taping procedure, they were asked to choose a class to be video-taped and submit us a lesson plan of that class. While video-taping the classes, we tried to stand only at one point while video-taping the classes in order not to distort the security of the classroom environment; however, we sometimes had to move to record some classroom activities better and focus on the teacher in some cases.

The class period was 45 minutes, and there were 20 students in each class. Some classes were Graduate students, and some classes were Undergraduate students taking prep class before attending their department as a full time student. Nevertheless, after the first video-taping sessions, some special remedial classes for the students who got very low grades from the first achievement were formed at YADIM. This change affected the study procedure because three of the participant teachers had to leave their regular classes and began teaching these remedial classes. However, since the study focused on the teachers not on the students, they were observed in the remedial classes without changing anything in the data collection procedure.

3.8.4. Stimulated Recall Interviews

At the stimulated recall sessions, each participant teacher was invited to view her own video-taped lessons and recall her inner thoughts and decisions while teaching. The teachers were asked to stop the tape at any point they recalled any thoughts or decisions. In the case the participants did not stop the video-tape at a possible decision point we had identified beforehand, we stopped the video-tape and asked whether she made a decision at that point or not. The participants were also asked to comment on their instructional actions and explain why they chose to act in that way (see Appendix 1). By showing these video-tapes to the participants, we also validated our interpretations of what had occurred in the class.

Throughout the stimulated recall interviews, the teachers were informed about the value of their honest responses and comments due to the qualitative nature of the study. It should also be noted that the participants were really able and willing to articulate their thought processes in relation to their in-class teaching, which yielded more reliable data throughout the study. After each stimulated recall interview, the participants were asked if they had anything to add apart from the issues discussed at the stimulated recall interview. Moreover, their sudden reactions to the video-taped classes were noted throughout the stimulated recall sessions.

Most of the stimulated recall interviews took place either on the same day or the following day, but not immediately after the class in order not to distort the data obtained through the stimulated recall procedure. That is to say, a considerable time length was left between each video-taping session and following stimulated recall interview to elicit their real interactive thoughts rather than reinterpretations of their thinking in the class.

Furthermore, the interview schedule was arranged according to the teachers' daily teaching schedule so that they could attend the stimulated recall interviews comfortably. Prior to the stimulated recall interviews, we coded the video-taped data to identify and classify student performance cues, teachers' instructional responses to these cues, their interactive decisions, and their concerns while making interactive decisions, adapting a standard classification scheme developed by Fogarty et al (1983) (see Appendix 4).

Regarding the relevant studies in the literature (Fogarty et. al., 1983; Johnson, 1992, 1999), we tried to pose clear and meaningful questions to the participants, ask questions including only one idea, use open-ended questions to elicit richer qualitative data without challenging them (see Appendix 1, Appendix 2, and Appendix 3). In addition, we tended to avoid asking biased or leading questions to have more objective data. The teachers were also asked some probe questions to elicit more complete information on their interactive actions and thoughts. Probes can be used for elaboration, explanation, clarification, and completion of detail to go deeper into the participants' response. Patton (cited in Cabaroğlu, 1999) distinguishes among three types of probe questions as clarification, detail oriented, and elaboration probes. The first refers to clarifying ambiguous points (i.e., Would you please clarify what you mean here?). The second is used to fill in the blanks in the responses (i.e., How do you know that?), and the last type of probes allows the respondent to talk or comment more on the issue (i.e., Would you please comment more on your behavior?).

Preparative questions such as "Now, I would like to learn about or I want to ask a question about" were also asked at the stimulated recall interviews so that the participant had more time to organize her thoughts before the question was asked. Sometimes, without giving any warning, they were asked direct questions such as "I will ask you questions about ..." which Patton (cited in Cabaroğlu, 1999) calls as direct announcements.

We tried to talk less than the teachers at the interviews to gather more information on their interactive thoughts and decisions. Moreover, we arranged the stimulated recall interviews such in a way that most of the complex and controversial questions were asked for the latter part of the interview after the rapport between we and the respondent had been established. In addition, we tried to use a conversational mode throughout the stimulated recall, communicating empathy, encouragement, and understanding to create a trustful and relaxed atmosphere.

All the interviews either stimulated or semi structured, were audio-taped. Therefore, we were controlling both the audio-tape and video-tape simultaneously throughout every stimulated recall procedure. Most importantly, we assured the teachers that the study would yield valuable insights into their teaching in order to make the participants develop positive feelings toward the data collection procedure employed in the study.

3.8.5. Snakes

A constructive technique, the *snake* was used to find out whether personal and professional backgrounds of the participants affect their interactive decisions.

Prior to the data collection procedure, each participant was asked to draw a *snake* chart and remark the critical incidents contributing to their teaching profession (see Appendix 10 and Appendix 11). Therefore, all the participants were explained how a *snake* chart was drawn by showing them some samples obtained from the other studies. In this study, *snakes* were not analyzed separately; however, they were used as prompts during the stimulated recall sessions while interpreting the video-taped data. Another purpose behind the use of the *snake* in the study is to triangulate the data obtained through stimulated recall interviews.

3.8.6. Lesson Plans and Teaching Materials

Lesson plans cover the objectives of a class, the teaching materials, the processes planned to accomplish those objectives, the timing and pacing of the activities, and the expected roles of the teacher and the students in the class. Teaching materials, handouts and syllabus are also examined in classroom based research to examine the factors affecting the in-class teaching of the teachers (Freeman, 1998).

As mentioned earlier, the participants were asked to submit the lesson plan of the lesson to be video-recorded; however, the participants were found not to prepare any written lesson plan due to the fact that each teacher starts teaching from the point her partner leaves. To overcome such a drawback in terms of the research design, we had developed a model of lesson plan to be filled by the teachers (see Appendix 5 and Appendix 6). We also made a file of the teaching materials, handouts and worksheets given to the students in each class, and the teaching orders (see Appendix 7 and Appendix 8).

3.8.7. Classroom Maps and Seating Arrangements

Classroom maps are the visual representations of how space and movement work in the classroom. They indicate the location of people, desks, windows, and other relevant items and also show movement patterns of both teachers and students in the class (Day, 1990; Freeman, 1998). Classroom seating arrangements, which were in circle shape at the time of the study, also serve as one of the data collection tools in the present study.

3.8.8. Transcriptions of Video-Taped Classes and Audio-Taped Interviews

We transcribed both the video-taped classes and audio-taped interviews in order not to deal with the video and audio-tapes while analyzing the data (see Appendix 9). Moreover, these transcriptions constituted the bulk of the data collected in the study.

3.8.9. Problems Encountered

As in all studies, some expected and /or unexpected problems emerged throughout the study. For example, the teachers sometimes postponed the video-taping sessions without giving any early notices or excuses. Moreover, sometimes, we could not find an appropriate place to conduct the stimulated recall sessions since each room is designed specially for some specific academic meetings or learning activities at YADIM. Therefore, majority of the interviews were conducted in the offices of the participants which they share with three colleagues. However, we were lucky since the officemates of the participants were really polite and tolerant during the interview sessions. In some cases, the participants required us to be very quick in conducting the interview because they had something else to do after the interview. In such cases, we preferred to divide the interview session into two reasonable parts or completely postpone it to a closer date in order not to lose anything from the quality of the collected data. Since we knew the research context and the participant teachers very well, it was not so difficult for us to fit in the research context.

The most difficult part of the study was to transcribe almost 60 cassettes- 30 video-taped classes and 30 audio-taped interview data. It took almost a whole year to transcribe and code the gathered data in the study. It was really hard work since the whole class period

–45 minutes- were completely videotaped in all the sessions regarding the teacher and students' verbal and non verbal behaviors, and their interaction patterns throughout the lessons. Therefore, it seemed that the study would take several years more while transcribing the data. Apart from the backaches, headaches, and strained eyes, we could not sleep properly for a while since we had to watch the video-camera cassettes for eight hours a day for two months.

3.9. Ethical Considerations

Ethical issues may arise throughout a study due to some possible sources: the nature of the research itself, the context for the research, the procedures to be adopted, the data collection methods, the nature of the participants, the type of the data collected, and what is to be done with this data. Any kind of research has the potential of raising ethical issues or considerations; therefore, every researcher owes a duty to him or herself as a researcher, as well as to other researchers and to the participants of the research and the audience for the research, to exercise responsibility in the processes of data collection, analysis and dissemination (Borg& Gall, 1989; Eichelberger, 1989).

Ethical research means that researcher should get the informed consent of those they are going to interview, question, observe or take materials from. Moreover, it also covers reaching agreements about the uses of the data, and how its analysis will be reported and disseminated. Problems associated with ethical considerations concern conflicts of interest between the demands of confidentiality or anonymity, and those of legality or professionalism. This conflict can also be observed between the desire of the researcher who would like collect as much good data as s/he can and the wishes and demands of the participants (Borg& Gall, 1989; Eichelberger, 1989).

Another ethical consideration, confidentiality is demanded about how to use the material collected. That is to say, after collecting the data, the participants should be ensured that no one else can reach the collected data except the researcher and co investigators. The participants should also be explained the reasons for conducting such a research, and its value and possible outcomes. Besides, the participants should be informed about every aspect of the study that might affect their willingness to participate.

Another consideration is that participants should have the right to withdraw from the research or decline to participate in at any time throughout the study. Moreover, the researcher has the responsibility of protecting the participants from physical and mental discomfort, harm, and danger which may arise due to research procedures (Blaxter et al, 1996; Borg & Gall, 1989; Cohen & Manion, 1994; Eichelberger, 1989).

3.9.1. Ethical Considerations in the Study

All the teachers were mature enough to decide whether to participate in the study or not. In briefing, they were ensured that they had the right to withdraw from the study at any time they wanted. Moreover, the aim of the study, the data collection procedure, and methods of analysis were explained to them in detail. They were also promised that the collected data would be kept confidential and anonymous at various stages of the study: data collection procedures, analysis, reporting findings. For this reason, their names were removed from the data, and the participants were asked to choose code names to be used throughout the study.

Above all, the participants were treated with respect. In addition, they were reminded that their cooperation was essential to obtain more fruitful data on their thinking process. Finally, we got official permission from the administration of YADIM to conduct the study there and benefit from the available facilities throughout the data collection procedure.

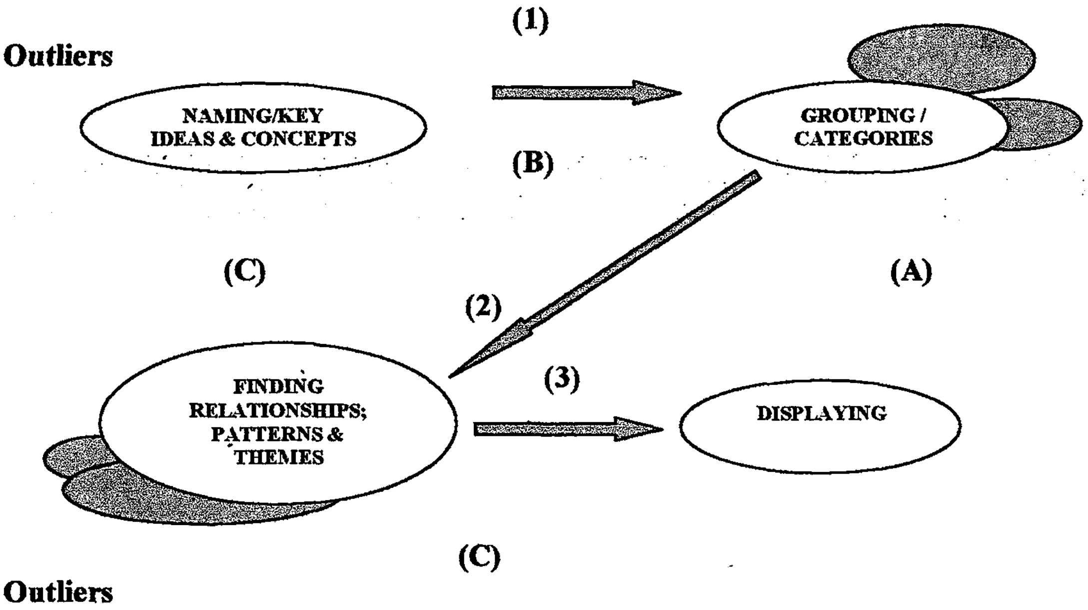
3.10. Data Analysis

3.10.1. Data Analysis Procedures and Strategies for Testing the Findings

The methods of data analysis will primarily depend on the nature of the research problem, the design of the study, and the type of the data collected. Drawing patterns, applying schemes, and categorization are some of the techniques applied in the analysis of qualitative data. In qualitative data analysis process, the researcher looks for commonalties, regularities, or patterns across the data available (Seliger & Shohamy, 1989).

3.10.1.2. Grounded Approach versus A Priori Approach

Figure 3.1. illustrates two basic approaches to data analysis: grounded and a priori approaches. In the first approach, the analysis is grounded in what is in the data, whereas, in the second approach, pre-existing or priori categories usually gathered from the relevant studies and literature are applied to the data. No matter which approach you carry out, when you name what you see in the data, you take the first step in deciding what the interpretation will eventually be (Freeman, 1998).



The numbers (1-3) mark the path of grounded data analysis: It starts with naming, then moves to grouping (1), finding patterns (2),and displaying (3).Outliers generally occur in the grouping stage.

The letters (A-C) mark the path of a priori data analysis: It starts with established categories and organizes them into a basic display (A), than names by category (B), and finds patterns (C), in the display. Outliers generally occur as relationships are identified among categories.

FIGURE 3.1. Grounded and A Priori approaches to data analysis (From Freeman, 1998)

In the grounded approach (i.e., inductive), the interpretation is build upon on what you are seeing in the data. That is to say, the names and categories evolve as you work through the data. Once the categories have emerged, they are applied to the remainder of the data to refine categories and discover new commonalties and patterns. Therefore, this type of approach is descriptive and exploratory in nature. Besides, grounded theory involves a cyclical or spiral perception of research process in which data collection and data analysis take place in close conjunction and feed into each other (Blaxter, et al., 1996).

In contrast, in a priori approach (i.e., deductive), a set of pre-determined names and categories will be employed to analyze the data. In other words, the data will be analyzed with an ordering system of categories that already exist. A common kind of analysis seen in an a priori approach is measuring quantities or counting instances in the data to name what is in the data. This system is designed either out of a conceptual framework or from the specific research questions (Freeman, 1998; Seliger & Shohamy, 1989).

Qualitative approach emphasizes the grounded theory since it will more accurately reflect the data (Borg & Gall, 1989). The qualitative data analysis includes four elemental activities: Naming, grouping, finding relationship, and displaying (Freeman, 1998).

3.10.1.2.1. Naming

The process of labeling the data in some way is called naming, and the emerging labels are called codes. In this process, the items or groups are assigned codes to simplify and standardize the data for analytical purposes and direct further analysis. Codes can differ in size such as words, phrases, sentences, and paragraphs (Blaxter, et al., 1996).

The codes in any qualitative research are originated from three basic sources: categories outside the data, the data themselves, or the categories created by the researcher. The first category enables the researcher to code the data in relation to the setting, the research question, previous research and so on. As for the second source, the researcher may code the data by using the terms emerged in the data. Finally, the third category covers the names given by the researcher to patterns she or he sees in the data. The second and third categories are called grounded codes since they are rooted in the data collected, whereas the first category codes are called a priori codes since the codes come from outside the data (Freeman, 1998).

In the case codes emerge throughout the analysis, they can be either named as they are articulated by the participants or by assigning inductively generated categories. The former is called as in vivo-codes (Strauss, 1987) or emic level codes (Miles & Huberman, 1994).The latter is called as sociologically constructed codes (Strauss, 1987) or etic level codes (Miles & Huberman, 1994). E*mic* is what insiders know; *etic* is what outsiders see (Coffey & Atkinson, 1996; Freeman, 1998).

3.10.1.2.2. Defining and Testing Codes

The identified codes should be operationally defined to make the meaning of each code clear and distinct for both the analysis part and the reader since some codes may seem ambiguous or different for some people due to their different experiences or insufficient knowledge in that area. Therefore, all the coded data should be organized under each code with their operational definitions. Codes are continually tested throughout the analysis process. In the case, the codes are seen to be ill-fitting and inapplicable; they can either be omitted or redefined throughout the analysis process (Freeman, 1998).

3.10.1.2.3. Grouping

This stage covers reassembling the names the researcher is giving to parts of the data by collecting them into categories. As with codes, the categories can also be grounded, emerging from the data, or they can be a priori from outside. Grouping the names starts creating a structure around the data, like the scaffolding on a building while being constructed. Thus, an interpretation of the data that accounts for what is going on in them emerges (Freeman, 1998).

3.10.1.2.4. Finding the Relationships and Patterns

Afterwards, the patterns among the categories are identified to strengthen that structure. While grouping, one should see which codes are like each other and which things go together and which do not. Miles and Huberman (1994) call this process as clustering. These patterns share a deep structure of three basic characteristics: superior\ subordinate, co-occurring, and sequential or recursive.

In a superior \ subordinate relationship, something seems to cause, direct or include something else; for example, loosing one's job makes some people angry or create a new direction in their lives. The second one, co-occurrence emerges when one topic occurs in data in relation to another topic. In the example given above, if the ones who are angry because of loosing their jobs also report having financial difficulties, this will be a co-occurring relationship. The third, sequential or recursive relationship is based on patterns of order and time, in which, one thing precedes or follows another. When the patterns go linearly, the relationship is sequential, when it connects back to itself; it is recursive. For instance, the daily or weekly class schedule is a recursive cycle; however, when the curriculum is presented in a textbook, it is mostly organized sequentially (Freeman, 1998).

3.10.1.2.5. Outliers

It is critically important to look at what does not fit into the emerging structure of the analysis while naming, grouping, and finding relationships in the data. The parts that do not fit are called outliers since they lie outside the analysis. However, outliers will provide valuable insights about your analysis since they clearly indicate whether our interpretation is weak or incomplete, and how it should be redirected (Freeman, 1998).

3.10.1.2.6. Data Display

At this stage, the researcher is mainly concerned with setting out the patterns and relationships s/he sees among the categories to make the interpretation concrete and visible. Such a process enables the researcher to see how the parts connect into a whole. Moreover, data displays are both processes and products. That is to say, making them is as important as having them completed. In making and remaking displays of data, the researcher is refining the interpretations which fit the data in response to the research question and inquiry. Data displays are also dynamic and always open to rethinking and remaking.

These four categories naming, grouping, finding relationships, and displaying are the basic elements of any data analysis. Even if you enter the process at different points depending on your aim, the four activities will remain the same and stand in the same relationship to one another (Freeman, 1998).

Apart from those four stages mentioned above, two more categories will be covered in the analysis of the data in the present study; familiarization and selection (Blaxter et al., 1996).

3.10.1.2.7. Familiarization

The researcher should get familiar with the data through familiarization process in which s/he repeatedly reads the whole data. While reading the data, s/he should keep the research questions and the purpose of the study in mind so that s/he can recognize new issues more easily. Moreover, the relevant parts of the data can be underlined or highlighted, and some parts of the data can be changed by addition of marginal notes and comments. Such a process may also draw attention to what is being concerned as more important perhaps for later quotation. Therefore, familiarization process will act as the first stage of the analysis in this study (Blaxter et al., 1996; Miles & Huberman, 1994).

3.10.1.2.8. Selection

Selection is a key process which the researcher relies on to manage the data collected in his or her study. Actually at this point, the researcher selects, for various reasons, some interesting, significant, unusual, or representative examples of his or her data to illustrate, emphasize, and discuss the argument; therefore, this process always reflects a good deal of subjectivity. Selection is always the last component of the analysis since selection of interesting or more fruitful examples can take place only after the completion of the whole analysis process (Blaxter et al., 1996).

3.10.2. Quantitative Analysis

In the quantitative analysis of the findings, the classification scheme developed by Fogarty et al. (1983) (see Appendix 4) was adapted to classify student performance cues, teachers' instructional actions in response to these cues, their instructional goals, and prior knowledge. Some new categories or sub categories, such as management factors, teacher related factors, and institutional factors, emerged throughout the analysis of the collected data.

Moreover, the appearance frequencies and percentages of the categories for each teacher were displayed numerically in tables to provide a general overview of the findings. Statistical Package of Social Sciences (SPPS) for Windows, Release 12.0 was used to calculate X^2 values to evaluate the significance of the numerical differences found between the experienced and novice teachers in the study. Moreover, some excerpts from the video-taped classes and interviews also accompanied the quantitative data to support the quantitative data and the interpretation of the data.

3.10.3. Qualitative Analysis

In the qualitative part, the analysis of the data began after the first video-taping observation and continued throughout the data collection period. That is to say, the data were concurrently collected and analyzed because each stimulated recall session was an integrated part of the analysis procedure. This also enabled us to check whether we were gathering the data sufficiently and appropriately before the data collection procedure was completed.

The qualitative data analysis procedure covers a combination of both a priori and grounded approaches. That is to say, the categories sometimes emerged from the data, and at other times, the analysis started with the pre-determined categories usually gathered from the relevant literature (Bailey, 1996; Fogarty et al., 1983; Johnson, 1992, 1999). We looked for the commonalties, regularities, or patterns across the data. The non-verbal message conveyed by the participants, intentionally or non-intentionally, while commenting on their in-class actions also contributed to the interpretations of the qualitative findings.

In the content analysis, as one part of the qualitative analysis, a scheme used by Noakes (1995) was modified and broadened throughout the analysis (see Appendix 9). Moreover, the categories developed by Bailey (1996) were adapted to classify and report pure qualitative data obtained through semi-structured and stimulated recall interviews.

The categories of Bailey (1996) are given below as follows:

- Serve the Common Good
- Teach to the Moment
- Further the Lesson
- Accommodate Students' Learning Styles, Preferences, and Needs
- Promote Students' Involvement
- Distribute the Wealth.

Furthermore, parallel to Westerman's (1991) decision making models, interactive decision making models of the experienced teachers and novices were developed in regard to their video-taped and stimulated recall data. Finally, a graphic representation of student performance cues and the associated instructional actions the teachers made in response to these cues were also drawn for each teacher in the study.

To conclude this part, as Miles and Huberman (1994) state, social phenomenon is rooted half in the mind of the people and half in the objective world. For this reason, the aim of the study is to provide a bridge between the study findings, the participants, the reader, and of course the researcher to develop a shared understanding.

3.10.4. Checking the Findings

3.10.4.1. Validity and Reliability

The results of the present study can be said to have reasonable confidence for some reasons. First of all, each data collection tool served to find an answer to the specific research questions investigated in the study (see Table 3.1.). Moreover, the appropriateness of each data collection tool was tested in the pilot study. In terms of reliability, triangulation of the data collection tools in the study yielded some useful insights into to the interpretation of the findings. Furthermore, triangulation helped us to see whether the participant teachers were consistent in what they do and what they say.

All the teachers were videotaped in the same week to eliminate the threat of teaching different units or points, which may have considerable effects on the content and quality of the interactive decisions they make. Moreover, the stimulated recall interviews were conducted in the same room for all the participants, using the same design for all the participants throughout the study. Above all, the stimulated recall data were elicited from the participant teachers separately so that the participants could express themselves more easily and were not affected from the comments given by the other participant teachers. Besides, the participants themselves directed the route of the stimulated recall interviews, which has provided much more fruitful data. That is to say, the participants themselves were given the opportunity to stop the tape and reflect on their actions whenever they wanted or thought they had made an interactive decision. All the participants were also seen to be really open and honest in their comments at the stimulated recall interviews and in their informal post-reflections they had with us after the interviews.

As for the size of the sample, the data were collected from a large sample of the teachers to be able to generalize the results more easily. Moreover, the teachers were videotaped in their regular classes three times, and subsequently they were interviewed three times in the following stimulated recall sessions to check the consistency of the data gathered from the participants.

3.10.4.2. Researcher Effect

The researcher may influence both the situation and the participants or s/he can be affected by the research setting since s/he spends a great deal of time there (Miles & Huberman, 1994). To eliminate such biases in this study, the participants were explained the purpose and data collection procedures of the study in detail. Keeping the research questions in mind throughout the study, triangulating the data collection tools, interacting with some other knowledgeable people on the site were some of the strategies employed to reduce the researcher effect in the study. Besides, a good rapport was established between the researcher and the participants since both parts had known each other for a long time.

3.10.4.3. Member Check

The participants were asked to confirm the analytic categories created, interpretations made and conclusions reached throughout the study. Quality of their comments was also good because the teachers did not only answer the questions as yes or no but also they commented on their behaviors critically and made lengthy comments about the findings.

This chapter has presented information about the research design, the methodology and the data analysis procedure in detail. In the following chapter, we will present and discuss the quantitative findings obtained throughout the study.

CHAPTER 4

DISCUSSION OF QUANTITATIVE FINDINGS

4.0. Introduction

This chapter displays quantitative data on the student performance cues the teachers utilize in the class, and the instructional actions they employ in response to these cues. Moreover, the graphic representations of the student performance cues and the associated instructional actions of the teachers in response to these cues will also accompany the quantitative data to accurately indicate the relationship between the student performance cues and the instructional actions the teachers make in response to the cues. Besides, the instructional goals teachers pursue, and the prior knowledge categories they utilize while making interactive decisions will be investigated in this chapter. Finally, types of decisions, hierarchical and sequential decisions, will also be explored in this chapter.

The quantitative data will be presented using the frequencies of the categories and the corresponding percentages. In addition, a Chi-square (X^2) test is conducted to see the significance of the differences observed between the experienced and novice teachers. X^2 values have been calculated using Statistical Package of Social Sciences (SPPS) for Windows, Release 12.0 with the help of a statistician. We also include some relevant classroom excerpts and comments teachers made at the interviews to clarify, support, and illuminate the quantitative data. In reporting the findings, some examples may appear to represent more than one category. In other words, the same example can be seen to exemplify another quantitative or qualitative finding throughout the discussion part.

4.1. Student Performance Cues

Table 4.1. presents the percentage frequencies of student performance cue categories utilised by both experienced and novice teachers during their interactive teaching in the class. As Fogarty et al. (1983) reported, some remarkable differences have been noted between the groups of the teachers. For example, contrary to the pilot study findings (see Section 3.3.4.3), the experienced teachers were observed to make use of the category Attention almost twice as much as the novice teachers. Kezban, however, seems to be the only experienced teacher who used the Attention category the least among all the teachers in the study. Moreover, parellel to the pilot study findings (see Section 3.3.4.3), the experienced teachers also employed the Deficient Response, Initiations and Errors categories more frequently than the novices. However, novices were found to be more interested in the Incomplete Answer, Elicited Response and Noise categories compared to the the experienced teachers. All these differences were also statistically supported by the Chi-square(X^2) values calculated for each category (see Table 4.1.).

Overall, the frequencies reported in Table 4.1. for the utilization of the student performance cues, have revealed significant differences between the groups of the teachers (X^2: 225.516 $p \leq 0.001$) except for the category of Error. In general, the experienced teachers utilized more student performance cues than the novices at the stimulated recall interviews.

Table 4.1. Percentage Frequencies of Categories of Student Performance Cues Reported by the Experienced and Novice Teachers

Student performance Cues	Experienced Teachers										Novice Teachers										X^2
	Kumru		Merve		Merve		Kezban		Total		Gamze		Burcu		Zeynep		Ece		Total		
	f	%	f	%	F	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	
Deficient Responses	116	14.55	145	15.75	155	19.45	112	19.68	528	17.10	153	19.79	81	11.22	197	24.10	93	18.14	524	17.56	44.035 ***
Initiations	147	18.44	186	20.92	176	22.08	122	21.44	631	20.22	138	17.85	206	28.53	144	17.56	95	17.47	583	19.86	16.741 ***
Errors	98	12.30	75	9.63	65	8.15	87	15.29	325	10.84	56	8.24	35	4.85	66	8.10	77	12.54	234	9.19	5.961
Attention	112	14.05	170	17.29	92	11.54	44	7.81	743	12.66	83	10.74	46	6.37	75	9.15	50	10.14	254	10.6	67.445 ***
Elicited Responses	289	38.26	320	33.95	274	36.38	174	35.58	1057	37	258	37.37	313	45.35	278	36.90	263	38.85	1112	39	24.333 ***
Incomplete Answers	11	1.39	12	1.23	18	2.31	1	0.20	42	1.37	32	5.14	18	2.85	24	2.93	6	1.72	80	2.99	17.624 ***
Noise	5	0.92	12	1.23	-	-	-	-	17	0.45	5	0.87	6	0.83	5	1.26	7	1.14	23	0.80	11.697 **
Total	797	100	983	100	797	100	569	100	3343	100	773	100	722	100	820	100	614	100	2810	100	225.516 ***

* $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

Parallel to the findings reported by Fogarty et al. (1983), some differences have appeared among the individual teachers within each group in terms of the use of the student performance cues, as well. For example, two of the experienced teachers, Kumru and Kezban, were concerned with the Errors category more than the other two experienced teachers, and they did not hesitate to use the mother tongue while correcting these errors. However, the other experienced teachers, Selen and Merve, completely avoided using the mother tongue while correcting students' errors. Another remarkable finding is that the experienced teachers Selen and Merve did not report utilising the category of Noise at all. This may be due to the fact that they were teaching graduate classes throughout the data collection period.

Similarly, the most inexperienced teacher Ece was seen to be interested in correcting errors and reducing the amount of the noise in the class much more than the other novices in the study. This may be due to the fact that she was trying to act according to some teaching principles she had been taught at the faculty. Another novice teacher, Zeynep, favored Deficient Response category more than the other novices due to the nature of the course; she taught reading passages in all three video-taped lessons. Moreover, she was interested in the comprehension of the passages more than the management of the class.

As for the similarities between the groups, the category of Elicited Response was found to be the most frequent student performance cue category among all the participants, which indicates that all the participants are sensitive about the students' performance in the class.

4.2. Instructional Actions

Table 4.2. displays the frequencies and percentages of instructional actions the teachers implemented for all the categories of student performance cues in the class regarding the expertise level of the participant teachers. Overall, the teachers, regardless of their expertise level, are seen to employ all the instructional actions categories, giving the most attention to the categories of Gives Feedback and Focuses Attention/Effort. As regards the category of Focuses Attention/Effort, apart from Selen, all the other teachers were seen to favor the category to a great extent. Selen claimed that the motivation of her class was already good; therefore, she did not need to employ this instructional action category a lot. For this reason, some other factors may be said to affect teachers' choice of the instructional actions rather than their expertise level.

As for the striking differences, the experienced teachers were found to implement the instructional categories, Explains Concept/Procedure, Applies, Extends, or Plans, and Elicits and Incorporates Input more frequently than the novices. However, the novices were observed to favor the instructional action categories involving Gives Feedback, Checks Knowledge, and Focuses Attention/Effort much more than the experienced (see Table 4.2.). The possible reason for this difference may be that the novices perceive Deficient Responses and Errors as indicators of student misunderstanding or lack of understanding. Therefore, in line with the findings reported by Fogarty et al. (1983), the teachers were seen to choose to respond to these cues with the instructional action categories of Checks Knowledge, Gives Feedback, and Focuses Attention/Effort. That is to say, teachers' reactions may also differ with regard to how they perceive the student performance cues they observe throughout the lesson. All these differences between the experienced and novice teachers were also found to be statistically significant ($p \leq 0.001$).

Table 4.2. Categories and Percentage Frequencies of Instructional Actions Utilized by the Experienced and Novice Teachers

Instructional Actions	Experienced Teachers										Novice Teachers										X^2
	Kumru		Merve		Selen		Kezban		Total		Gamze		Burcu		Zeynep		Ece		Total		
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	
Gives Feedback	211	26.50	207	21.10	155	19.45	129	22.87	702	22.48	163	20.50	182	25.32	210	27.74	187	30.10	742	25.92	21,518 ***
Explains Concept/ Procedure	125	15.70	129	13.10	176	22.08	84	14.89	514	16.45	115	14.47	100	13.90	83	10.77	85	13.64	383	13.20	18.757 ***
Checks Knowledge	13	1.63	24	2.44	65	8.16	41	7.26	143	4.88	69	8.68	33	4.59	59	7.65	91	14.61	252	8.89	31.191 ***
Focuses Attention/ Effort	238	29.90	348	35.36	92	11.54	195	34.57	873	27.85	268	33.71	257	35.75	233	30.22	123	19.74	881	29.86	92.906 ***
Applies, Extends, or Plans	61	7.66	87	8.84	274	34.38	54	9.58	476	15.12	97	12.20	75	10.43	76	9.86	68	10.91	316	10.51	94,232 ***
Elicits and Incorporates Input	146	18.34	185	18.75	17	2.14	61	10.83	409	12.49	81	10.19	55	7.65	105	13.11	56	8.91	297	10.12	138,43 ***
No Response	2	0.27	4	0.41	18	2.25	-	-	24	0.73	2	0.25	17	2.36	5	0.65	13	2.09	37	1.50	26,884 ***
Total	796	100	984	100	797	100	564	100	3141	100	795	100	719	100	771	100	623	100	2908	100	94.381 ***

$* p \leq 0.05$ $** p \leq 0.01$ $*** p \leq 0.001$

Some individual differences are also observed within the groups in Table 4.2. For example, the most inexperienced teacher Ece implemented the category of Gives Feedback more frequently than any other categories in response to student performance cues (30.10 %). Moreover, this is the highest percentage category among all her reported instructional action categories in Table 4.2. Nevertheless, she paid the least attention to the category of Focuses Attention/Effort when compared to the other novice teachers in the study. As for the experienced teachers, Selen focused on the categories involving Applies, Extends, or Plans, Checks Knowledge, and Explains Concepts/Procedure more frequently than the other experienced teachers. Another finding indicates that the most experienced teacher Kumru was found to implement the category Checks Knowledge (1.63%) the least as compared to the other experienced teachers and to the other action categories she implemented throughout the study (see Table 4.2.).

As shown in Table 4.2., both groups rarely implemented No Response category with respect to the cues they observed in their classes (0.73% for the experienced teachers and 1.50% for the novices). Regarding the X^2 value (p: 26.884), the novices were found to keep their silence in some of the observed situations more frequently than the experienced teachers. This finding may also imply the fact that the experienced teachers are more ready to respond to the unexpected situations using a wider set of sponge activities and routines.

As regards the number of the instructional action categories, the experienced teachers were found to employ more instructional categories (3141 vs. 2908) than the experienced teachers in Table 4.2., which also reveals statistical significance. The instructional actions of the novices, on the other hand, are observed to fall into the categories almost in equal frequencies (see Table 4.2.).

4.3. The Instructional Actions of the Teachers for Separate Student Performance Cues

Table 4.3. reports the frequencies and percentages of instructional actions teachers employ in response to specific student performance cues they observe during the ongoing lessons. As seen in Table 4.3., some remarkable differences have appeared between the groups. For instance, as for the Deficient Response category, the experienced teachers implemented the categories of Gives Feedback, Explains Concept/ Procedure, and Elicits and Incorporates Input with a combined frequency of 15.68, while the novice teachers employed these instructional action categories less frequently (8.95% combined frequency) in response to the Deficient Response category. The novices, however, were seen to employ Checks Knowledge and Applies, Extends, or Plans categories more frequently than the experienced teachers (see Table 4.3.). Furthermore, as found by Johnson (1992), all the experienced teachers react to the Deficient Response category using at least one of the instructional categories, whereas 0.57 % of the novices are seen to remain silent in response to Deficient Response categories in some instances. However, compared to the other instructional actions, both experienced and novice teachers employed the Focuses Attention/Effort category in the greatest percentage in response to the Deficient Response category (see Table 4.3.).

As shown in Table 4.3., both groups implemented Focuses Attention/ Effort, Gives Feedback and Explains Concept/Procedure categories in response to Initiations cue category almost in the same percentages, giving priority to the experienced teachers group.

Table 4.3. Percentage Frequencies of Instructional Actions Utilized by the Experienced and Novice Teachers for Student Performance Cues

Instructional Actions	Deficient Responses				Initiations				Errors				Attention				Elicited Responses				Incomplete Answer				Noise				X^2
	Exp.		Nov.		Exp.		Nov.		Exp.		Nov.		Exp.		Nov.		Exp.		Nov.		Exp.		Nov.		Exp.		Nov.		
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	
Gives Feedback	40	7.62	27	5.16	166	26.47	150	25	116	35.8	65	27	61	15	58	24	367	39	394	36	14	35	22	28	-	-	-	-	18.977 ***
Explains Concept\ Procedure	93	17.71	77	15	125	19.94	107	18	19	5.86	16	7	99	23.68	35	15	121	13	114	10.5	-	-	9	11	4	24	-	-	34.528 ***
Checks Knowledge	31	5.90	53	10	21	3.35	37	6	8	2.47	19	8.8	13	3.11	18	8	26	2.8	107	10	1	2.5	5	6	1	7	-	-	14.905 **
Focuses Attention\ Effort	177	33.71	185	38	203	32.37	176	30	108	34	87	37	135	32.30	74	31	229	23	283	25	16	40	27	34	4	23	21	91	42.031 ***
Applies, Extends, or Plans	70	13.33	84	16.06	49	7.82	61	10	16	4.94	23	10	49	11.72	32	14	51	5	93	8	5	12.5	9	11	3	17	2	9	14.375 *
Elicits and Incorporates Input	114	21.72	94	18	63	10.05	43	8	57	17.55	22	9.4	61	14.55	43	8	162	17	101	9	4	10	8	10	1	6	-	-	11.752 *
No Response	-	-	3	0.5	-	-	14	2.9	-	-	5	0.8	-	-	-	-	-	-	16	1.5	-	-	-	-	4	23	-	-	42.000 ***
Total	525	100	523	100	627	100	593	100	324	100	234	100	418	100	240	100	956	100	1112	100	40	100	80	100	17	100	23	100	
X^2	16,159*				26.402***				26.301***				20.214**				87.874***				6.076				21.340**				

* p≤ 0.05 ** p ≤ 0.01 *** p ≤ 0.001

Table 4.3. indicates that the groups of teachers employ different instructional actions in response to the Error category. The experienced teachers, for example, used Gives Feedback category more than the novices in response to the cue category of Error, whereas the novices employed Focuses Attention/Effort more frequently than the novices. Moreover, Gives Feedback category appeared to be the most predominant category among the experienced teachers giving secondary importance to the category Focuses Attention/Effort, while the novices favoured the Focuses Attention/Effort as the most pre-dominant category, giving the secondary importance to the Gives Feedback category. Furthermore, the novices implemented the categories of Checks Knowledge and Applies, Extends, or Plans more frequently than the experienced teachers when confronted with Errors. Nevertheless, the experienced teachers employed the category Elicits and Incorporates twice as much the novices in response to the Errors categories. The only similarity emerged in this part is that both groups responded to the Errors category in the category of Explains Concept/Procedure with a value under the 10% (6.35% a combined frequency) (see Table 4.3.).

Similarly, the fourth student performance cue category, Attention, has reflected both similar and different patterns between the groups. As for the similarities, Focuses Attention/Effort category was the major category employed by both group teachers in response to Attention category, whereas the Checks Knowledge category was the only category receiving the least attention by all the teachers in the study. As for the differences, the novices were seen to employ Gives Feedback category more frequently than the experienced teachers, whereas the experienced teachers favored Elicits and Incorporates Input more than the novices in response to the Attention category.

In regard to Elicited Response category, both groups favored Gives Feedback and Focuses Attention/Effort almost in the same percentages (see Table 4.3.). However, the experienced teachers implemented the Explains Concept/Procedure and Elicits and Incorporates Input categories with a combined frequency of 14.80%, whereas the novices employed those categories with a combined frequency of 9.70 %. Even though Checks Knowledge and Applies, Extends, or Plans categories were found to be the least popular categories in both groups for the cue category of Elicited Response, the novices employed those instructional actions more frequently than the experienced teachers throughout the study.

As displayed in Table 4.3., both groups implemented Gives Feedback and Focuses Attention/Effort categories as the major instructional action categories in response to the Incomplete Answers; nevertheless, the experienced teachers employed these categories more frequently than the novices. However, the novices responded to the Incomplete Answers category utilizing the category of Checks Knowledge more frequently than the experienced teachers (6% versus 2.5%). Besides, 11 % of the novices used the category of Explains Concept/Procedure, whereas no experienced teachers implemented this category at all in response to Incomplete Answers category. The groups, on the other hand, did not differ in the use of the other two categories, Elicits and Incorporates and Applies and Extends or Plans in response to the cue category of Incomplete Answers (see Table 4.3.).

As for the last student performance cue, Noise, neither group employed Gives Feedback category (see Table 4.3.). However, the experienced teachers employed a wider set of instructional actions in response to the Noise category, whereas, the novices employed only two instructional actions, Focuses Attention /Effort and Applies, Extends or Plans, However, the experienced teachers preferred not to respond to the cue category of Noise in some instances, while the novices reacted to the Noise category utilizing a kind of instructional action throughout the study.

Overall, as seen in Table 4.3., the experienced teachers responded to the student performance cues of Elicited Response, Initiation and Attention by implementing a cyle of instructional actions which cover Gives Feedback, Focuses Attention/Effort and Explains Concept/Procedure. The novices, on the other hand, paid more attention to the student performance cue categories of Elicited Responses, Initiation and Deficient Responses and respond to them using a cycle of instructional actions which include Gives Feedback, Focuses Attention/Effort and Elicits and Incorporates Input. The cue categories of Errors and Incomplete Answer received the least instructional attention from the teachers in both groups. However, priorities and preferences of the teachers differ in their reactions to these student performance cues with regard to their expertise level. The experienced teachers, for example, utilized Giving Feedback category in response to Errors and Incomplete Answers cue categories as the pre-dominant response category, whereas the novices gave the priority to the category of Focuses Attention/Effort (see Table 4.3.).

Apart from the Incomplete Answer category, all the differences appeared between the groups are found to be significant. Therefore, in contrast to Fogarty et al.'s (1983) findings, the experienced teachers differ from the novices in the use of the instructional actions in response to specific student performance cues during the ongoing instruction.

4.3.1. Relationship between Student Performance Cues and the Instructional Action Responses of the Teachers

The relationship between the student performance cue categories and the associated instructional actions made in response to these categories by teachers in each group were illustrated in Figures 4.1 to 4.4. The three pairs in Figures 4.2, 4.3, and 4.4 were matched randomly, whereas Kumru and Ece, the teachers in Figure 4.1, were assigned into the same pair on purpose since Kumru was the most experienced teacher, while Ece was the most inexperienced teacher among the participants.

As represented in Figures 4.1 to 4.4., consistent with the findings reported by Fogarty et al. (1983) and Westerman (1991), the instructional actions that the experienced teachers made are seen to form a more complex and connected structure compared to those of the novices'. The instructional action responses of the novices, on the other hand, are observed to constitute simpler and more linear combinations in all the figures.

In all the representations of the experienced teachers, almost all the cue categories are connected to the instructional actions, even the same category is connected to different action categories at different points throughout the lesson. However, the actions of the novices represent fewer connections to some action categories. Besides, some instructional actions of the novices have appeared to be unconnected to any cue category. These findings reflect that the novices are anxious about some management problems and methodological principles at the time of the teaching; therefore, they tend to implement some unconnected instructional actions during their ongoing instruction (see Figures 4.1 to 4.4.).

In addition, the experienced teachers are found to implement a cycle of instructional actions varying between 3 and 5, whereas the novices are observed to employ only one instructional action category in the majority of the cases and two instructional actions at most, in rare cases, in response to the student performance cues they observe in the class (see Figure 4.1. to 4.4.).

To provide some insights about how these figures were drawn, the corresponding classroom excerpts of the teachers (i.e., student performance cues and the instructional actions in response to those cues) are given prior to each figure.

The classroom excerpts of the most experienced teacher Kumru and the most inexperienced teacher Ece in Figure 4.1 are given as follows:

KUMRU:

T: Bir de ne öğrendik geçen derste? (Focuses Attention/Effort)

SS: NO RESPONSE (Deficient Responses)

T: Disgusting!!! (Focuses Attention/Effort)

T: But we don't say it! Children say it, değil mi? (Explains Concept/Procedure & Checks Knowledge)

T: Alright! (Focuses Attention/ Effort)

T: What you think? What is delicious? (Elicits and Incorporates Input)

SS: NO RESPONSE (Deficient Responses)

T: Listeden bakarak değil mi? (She shows the list) (Focuses Attention/ Effort)

T: You choose the one that is delicious for you! (Explains Concept/Procedure)

S: Bananas is delicious. (Error)

T: BananaS? (Focuses Attention/Effort)

SS: ARE!!! (Initiation)

T: Alright! (Gives Feedback)

ECE:

T: How many roles are there? (Applies, Extends, or Plans)

SS: NO RESPONSE (Deficient Response)

T: Do you know all these questions? (Checks Knowledge)

T: Yes, any questions about the questions? (Applies, Extends, or Plans)

SS: Silence (Deficient Response)

T: Do you know all these questions? (Focuses Attention/ Effort)

SS: No (Elicited Response)

T: OK! I want you to make a pair work activity (Explains Concept/Procedure)

SS: Yerimizi değiştirecek miyiz. (Initiation)

T: Yes, turn your chairs like this (Gives Feedback)

T: (She shows with her hands that they should sit face to face) (Applies, Extends, or Plans)

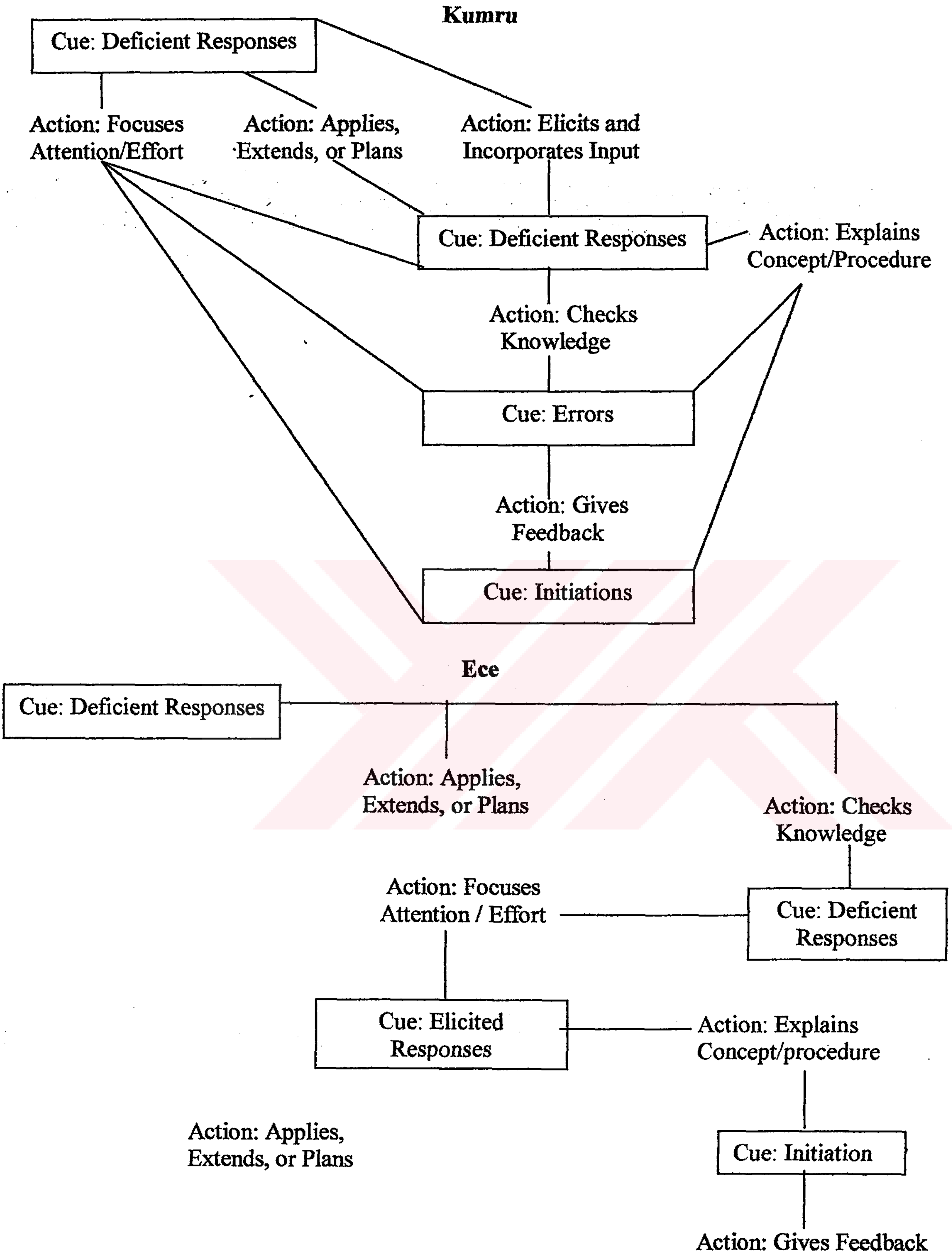


Figure 4.1. Relationship between instructional action responses and student performance cue categories for the experienced teacher Kumru and the novice teacher Ece

The classrom excerpts of the experienced teacher Selen and the novice teacher Burcu in Figure 4.2 are given as follows:

SELEN:

S: Did people /wear/ jeans one hundred years ago?
(Wrong pronunciation; Error)
T: WEAR jeans one hundred years ago?
(She corrects his pronunciation) (Gives Feedback)
T: Yes! (Focuses Attention/Effort)
T: What do you think? (Elicits and Incorporates Input)
T: Did they wear jeans? (Applies, Extends, or Plans)
SS: (Murmur): Yes! Yes (Elicited Response)
T: OK! (Gives Feedback)
T: You know jeans were first like uniforms for? (Checks Knowledge)
SS: Farmers (Error)
T: Farmers! Or the ones who searched gold! (Checks Knowledge)
T: You know! You know at the States! (Explains Concept/Procedure)
SS: 4 ü yapmadık heralde hocam! (Initiation)
T: Yes, 4 Pakize! (Focuses Attention/Effort)

BURCU:

S: He always /answered/ questions correctly (Wrong pronunciation; Error)
T: Yes, he always answered questions correctly. (Gives Feedback)
(She pronounced the word correctly.)
T: Yes, Yasemin! (Focuses Attention/Effort)
S: He never told out of turn. (Elicited Response)
T: Yes, he never told out of turn (Gives Feedback)
S: Hocam! Ne demek out of turn? (Initiation)
T: For example, I say Tuba, I say Mediha
T: I say Ahmet, but somebody talks, (Explains Concept/ Procedure)
SS: Söz almadan konuşmak!!! (Elicited Response)
T: Then, number 8! Nazlı! (Focuses Attention/Effort)

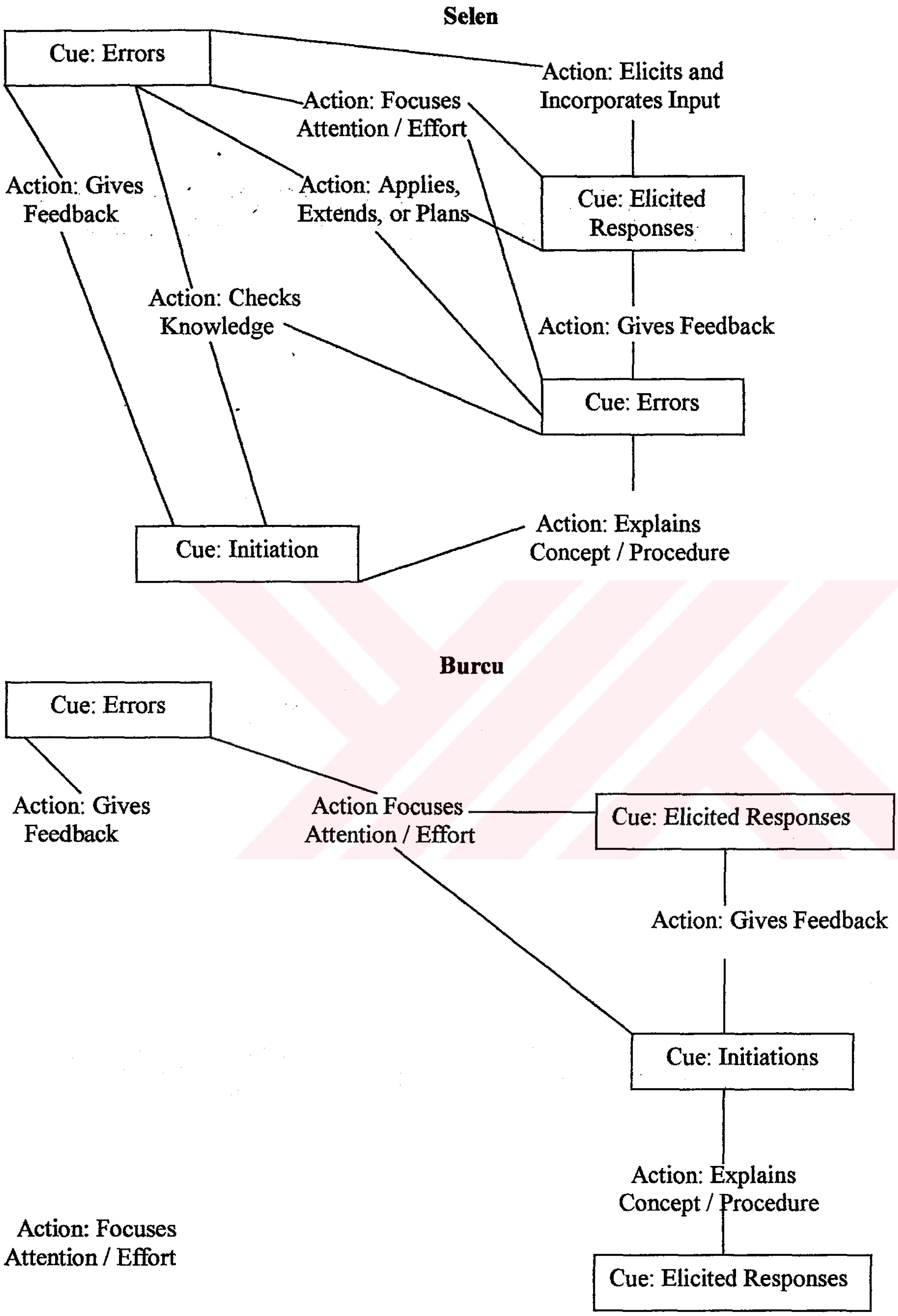


Figure 4.2. Relationship between instructional action responses and student performance cue categories for the experienced teacher Selen and the novice teacher Burcu

The classrom excerpts of the experienced teacher Merve and the novice teacher Zeynep in Figure 4.3 are given as follows:

MERVE:

SS: Nineteen seven (1907)!
Ninety seventy (1970)! (Attention)
T: The first one is 1935! (Gives Feedback)
T: Yes! (Focuses Attention/Effort) After that? (Elicits and Incorporates Input)
S: Nineteen seventy (1970)! (Attention)
T: And the next one is nineteen seventy (1970)! (Explains Concept/Procedure)
SS: SILENCE (Deficient Responses)
T: OK? (Gives Feedback) Let's check it again! (Applies, Extends, or Plans)
T: (She plays the tape again and stops it after the first date). (Routine)
T: YES! (Focuses Attention/Effort.)
SS: Nineteen seventies (1970s)! (Elicited Response)
T: Yes, 1970s! Very good! (Gives Feedback)
T: 1970s: -s here! (Focuses Attention/Effort)

ZEYNEP:

T: Did you like the song? (Elicits and Incorporates Input)
SS: No! (Attention)
T: You do not like the song? (Focuses Attention/Effort)
SS: Evrim and I do not like the song. (Initiation)
T: WHY? NEDEEN? (Elicits and Incorporates Input)
SS (Murmur): Because........ (Elicited Response)
T: Just a moment! (Applies, Extends, or Plans)
T: (She played the song again) (Routine)
T: OK! Now, let's check the answers! (Elicits and Incorporates Input)
T: (She reads lines and stops before the first blank) (Focuses Attention / Effort)
SS: Wrong answer (Error)
T: Be careful! It is not the answer (Gives Feedback)
T: (She played that part again) (Applies, Extends, or Plans)

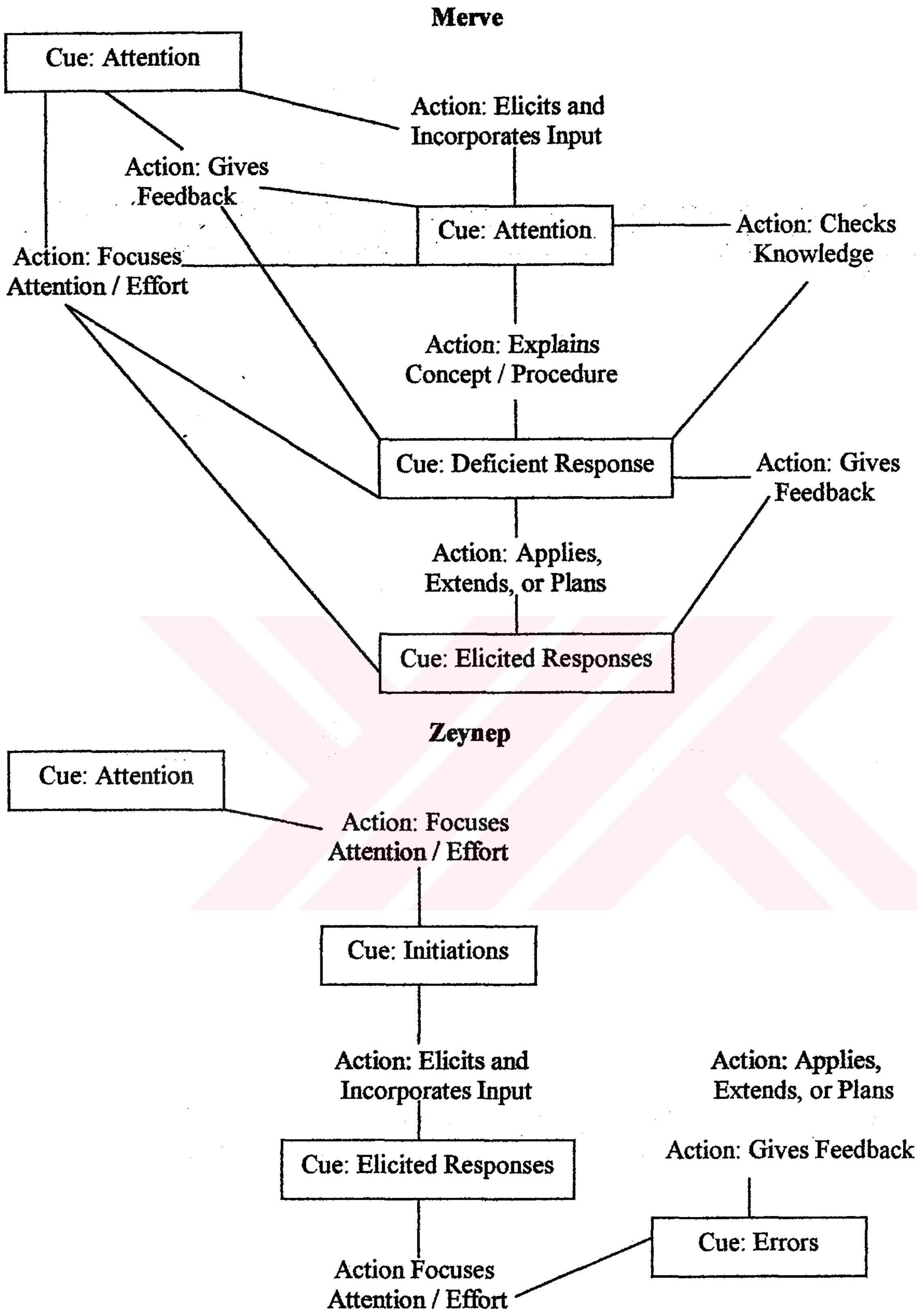


Figure 4.3. Relationship between instructional action responses and student performance cue categories for the experienced teacher Merve and the novice teacher Zeynep

The classrom excerpts of the experienced teacher Kezban and the novice teacher Gamze in Figure 4.4 are given as follows:

KEZBAN:

T: Arkadaşlar hatırlıyorsanız, en iyi şekli bu sıfatların öğrenilmesi için! (Checks Knowledge)
S: Zıt anlamları ile! (Initiation)
T: Güzel! (Gives Feedback) Zıt anlamlarıyla beraber!
T: Çoğunu biliyorsunuz. (Explains Concept/Procedure)
(She is cleaning the board)
T: For example, old? (Applies, Extends, or Plans)
S: Young! (Incomplete Answer)
T: OLD? (Checks Knowledge)
S: New. (Elicited Response)
T: New or young, Good! (Gives Feedback)
S: Hocam bu alıştırma nasıl olacak? (Initiation)
T: Now, I am going to give you the example on the board and we are just doing the same thing again. (Explains Concept/Procedure)
T: Right? (Focuses Attention/Effort)
T: And you are going to write in your notebooks! (Explains Concept/Procedure)
T: (She writes): This room is warm (Focuses Attention/Effort)

GAMZE:

SS: Fifty-seven. (Initiation)
T: Yes, Hüseyin!! (Focuses Attention/Effort)
H: Fifty-seven. (Elicited Response)
T: Read the whole sentence, please!!(Explains Concept/Procedure)
SS: NO RESPONSE (Deficient Response)
T: That was.............. (Focuses Attention/Effort)
T: (She makes some gestures with her hands to get the answer.)(Applies, Extends, or Plans)
H: Sixty-three years ago. (Elicited Response)
T: Thank you 63 years ago. (Gives Feedback)
T: (She fills in the blank with the answer)

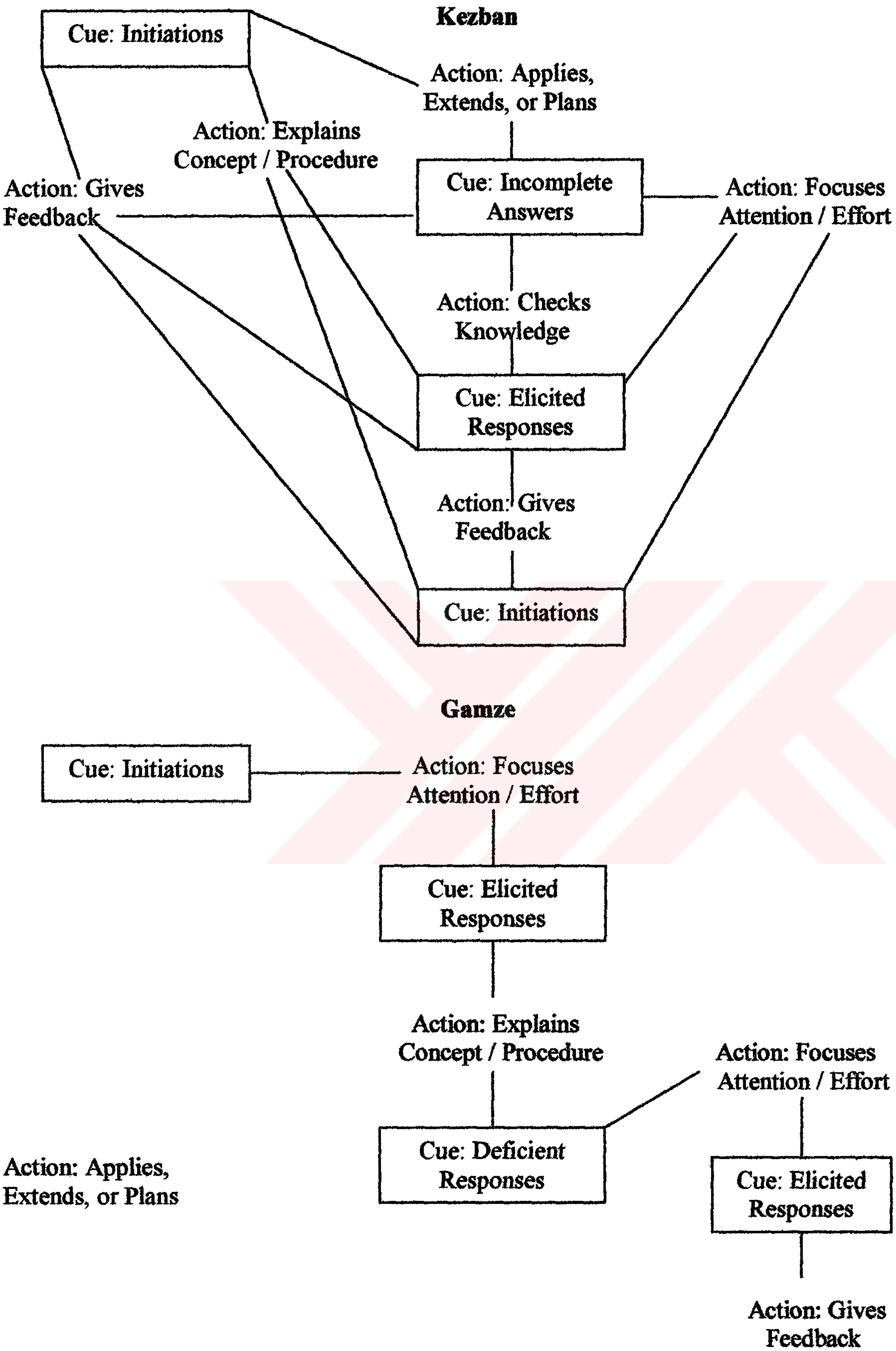


Figure 4.4. Relationship between instructional action responses and student performance cue categories for the experienced teacher Kezban and the novice teacher Gamze

4.4. Instructional Goals

Table 4.4. illustrates another dimension of differences between the experienced and novice teachers regarding the instructional goals teachers pursue during their ongoing instruction. The data reported in Table 4.4. were obtained from the stimulated recall interviews conducted for the videotaped classes with the teachers after the class. That is to say, these categories emerged out of what the teachers had recalled about their instructional behaviors while watching their video-taped lessons. Table 4.4. provides the data in the form of the individual frequencies and percentages for both groups of teachers as well as their total scores as a group, and the X^2 values associated with the findings.

Regardless of the expertise level, all the six categories were attended by all the participant teachers throughout the study. X^2 values indicated a great statistical difference between the groups in regard to instructional goals they pursue while making interactive decisions. Consistent with the pilot study findings (see Section 3.3.4.3.), regardless of the expertise level, Student Motivation and Involvement and Student Understanding were the most consistently and frequently recalled instructional goal categories among the teachers (see Table 4.4.).

Table 4.4. Categories and Percentage Frequencies of Instructional Goals Reported by the Experienced and Novice Teachers

Categories of Instructional Goals	Experienced Teachers										Novice Teachers										X^2
	Kumru		Merve		Selen		Kezban		Total		Gamze		Burcu		Zeynep		Ece		Total		
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	
Student Motivation and Involvement	55	31.80	56	32.94	116	40.41	71	25.73	298	32.88	118	33.81	90	31.32	81	45.76	62	24.90	351	31.15	33.583 ***
Student Understanding	33	19.15	28	16.47	33	11.50	66	23.91	160	17.66	80	22.90	43	14.99	34	19.20	53	21.29	210	19.77	17.720 ***
Group Management	26	15.20	28	16.47	41	14.28	38	13.77	133	14.68	38	10.86	41	14.29	15	18.48	31	12.45	125	11.78	17.249 ***
Curriculum. Integration	20	11.56	23	13.53	28	9.75	31	11.23	102	11.26	28	8.1	49	17.1	15	8.48	31	12.45	123	11.58	12.804 **
Social Development	15	8.67	8	4.70	33	11.50	17	6.16	73	8.10	26	7.44	16	5.58	13	7.35	28	11.24	83	8.62	16.429 ***
Subject Matter Content	24	13.62	27	15.89	36	12.56	53	19.20	140	15.42	59	16.89	48	16.72	19	10.73	44	17.67	170	17.10	24.051 ***
Total	173	100	170	100	287	100	276	100	906	100	349	100	287	100	177	100	249	100	1062	100	4.500

* $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

As for the differences, X^2 values show that Group Management category was the only goal category experienced teachers favored more frequently than the novices throughout the study. The novices, on the other hand, were observed to mention the goal categories of Student Motivation and Involvement, Student Understanding, Curriculum Integration, Subject Matter Content, and Social Development more frequently than the experienced teachers. However, these goal categories also received considerable attention from the experienced. For instance, one of the experienced teachers, Merve, explains her reason of chosing pair-work as to motivate the students and promote their involvement throughout their interactive teaching:

> Pair work was not something planned for that lesson. I want them to discuss it in pairs because they did not want to talk to me. I thought they could talk more freely with their partners, (Student motivation & Involvement) and I could hear them talking (Practice). They may have been frightened to make mistakes since they were being recorded (Pedagogical Principles & Student History). Before the lesson, I had planned to employ only question and answer technique. But at that time, they did not talk, so pair work was just a solution to make them talk more at the time (Pedagogical Principles)

Merve also gives the students some prompts to promote their involvement in class activities:

> I also provided my students with some words they can use in the sentences they would produce (Subject Matter Content & Student Motivation and Involvement) to help my students. If I do not help them, they can not talk every time (Student History). They may feel that "our teacher helps us, so I can raise my hand and I can start talking. I am sure

she will help us". So this is a good way of making the students participate in the class and one more thing, encouraging them (Student Motivation and Involvement).

The most inexperienced teacher Ece tries to involve the students in the activity in the following classroom excerpt:

T: (Number 5, Aslıhan! (Routine)

T: T-shirt (Gives Feedback)

S: No RESPONSE (Deficient Response)

T: False? (Checks Knowledge & Focuses Attention/Effort)

T: (She goes nearer Aslıhan while she is trying to give the correct sentence.) (Applies, Extends, or Plans)

T: (She waits for few seconds) (Applies, Extends, or Plans)

Other SS: She is wearing jeans. (Initiation)

T: Aslıhan makes it. (Elicits and Incorporates Input)

S: NO RESPONSE from Aslıhan (Deficient responses)

T: What is t-shirt Aslıhan? (Checks Knowledge)

Ece tries to explain the rationale behind her decison emphasizing the goal category of Student Involvement as follows:

I insisted on Aslıhan because if I say "OK, Aslıhan! Forget it!" and I take another student for turn. I would never do this because I want to win the students. I want to involve every student (Student Involvement). That is our aim. I wait. I do not believe that it is loosing time (Belief).

As for the goal category of Student Understanding, different combinations of student performance cues and instructional actions in response to these cues emerged for both groups. Moreover, both groups preferred almost the same strategies to make the students understand the task, meaning, message or the instructions. One of the experienced teachers, Kezban, chose to give a concrete example to enhance Student Understanding:

"You know dam? Seyhan dam!"

(Checks Knowledge & Focuses Attention/ Effort)

Kezban explains the idea behind using that example as follows:

> Seyhan dam is the easiest example I could think at the time. (Student Understanding & Knowledge)The students could not understand what dam means at first sight because when I told them dam Seyhan, the first thing that came to their mind was the river (Knowledge), but I am sure, secondly it would come baraj in Turkish. So it was a good example (Student Understanding).

Paraphrasing is another technique both groups of teachers employed for the goal category of Student Understanding as observed in the class of the novice teacher Ece:

T: What is the traffic like in Adana? (Elicits and Incorporates Input)

S: Some streets are crowded, difficult, and problematic.

(Elicited Response)

T: So, it is sometimes difficult you say.

T: Especially when you go shopping Where? Which place in Adana.

Ece commented on the excerpt as follows:

> I think here the students could not understand what I mean (Student Understanding). Especially I want them to say or define which place in Adana is more problematic regarding the traffic. I just paraphrased my question so that they could understand it (Student Understanding).

As observed in Table 4.4., Curriculum Integration, another instructional goal category, was favored by the novices more frequently than the experienced teachers; however, the experienced teachers also tend to combine the old and new information successfully. Moreover, regardless of the expertise level, all the teachers were seen to be aware of the curriculum guidelines and valued the principle of Curriculum Integration while explaining majority of their in-class actions at the stimulated recall sessions. They also appeared to believe that Curriculum Integration can help students to learn and retain the knowledge better.

One of the experienced teachers, Selen, refers to student psychology while explaining her reason for explaining the aim of the next lesson:

> I stated the aim of the next lesson as well. It is connected with the first lesson we had (Curriculum Integration).May be some students may feel that they could not understand the focus of the lesson perfectly, so they can feel badly and stressed, which cause them feel worse (Student Motivation and Involvement). Therefore, I tell them this is not finished, so I do not think that you are guilty if you do not understand properly. This is not finished and in the second hour, this unit will go on. So you will have the chance of learning properly. That's why. Just to gain such students (Student Motivation and Involvement).

Consistent with the other findings throughout the study, the experienced teachers are seen to be more concerned with pedagogical principles while explaining why they integrated the old and new information. For example, one of the experienced teachers, Merve, comments that

> I am asking about their previous lessons because they have to make a link between the previous and the current lesson in their minds (Curriculum Integration). This is important (Belief). Actually, I know what they have done. But when they remember the previous hour, they feel themselves ready for the next activity (Student Motivation). They also feel that their teacher is really aware of their studies. Their teachers really come from them. This is also important (Student Motivation).

Another experienced teacher, Kezban, who was teaching a remedial class at the time, was observed to integrate the old and new information indirectly:

> T: It is uncountable, right? (Explains Concept / Procedure)
>
> T: If we say sugar, do we say are there? (Checks Knowledge)
>
> T: How much sugar are there?
>
> T: Can we say? (Checks Knowledge)
>
> T. No, because it is uncountable. (Gives Feedback & Explains)
>
> T: So, we use "is there" (Explains Concept / Procedure)

Kezban also uses her pedagogical knowledge in her comments:

> Sugar! Well! I am going from known to unknown (Pedagagical Principles). Giving example hey know. I am sure they know about sugar (Knowledge), so I gave this example (Student Understanding). There was no question about it from the students, but no need to be asked a question;

> just a stepping stone to a new one. Let them acquire the new thing (Pedagogical Principles & Personal Choice).

The novice teacher Zeynep also reports considering the instructional goal of Curriculum Integration in the following classroom excerpt:

> T: OK! (Gives Feedback)
>
> T: Burglar is a person who steals…. (Elicits and Incorporates Input)
>
> S: stole!! Steal (Elicited Response)

Zeynep explicitly explaines that she aimed to integrate the old and new information at the time:

> I repeated the sentence to correct the mistake he did, and also I wanted to take their attention on the use of relative clause, which they learnt last week, so I wanted them to remember this knowledge, so I gave them an example (Curriculum Integration).

Another novice teacher, Burcu, states that she uses the old knowledge to see how much the students progressed with her partner in the previous hour:

> I am practicing the present perfect tense because they had learnt it the day before. I was not sure whether they could use it effectively or not. I had not had any lesson with them yesterday, so I was just trying to be sure what they have learnt (Curriculum Integration).

Apart from the quantitative differences reported in Table 4.4., some qualitative differences have appeared between the groups in terms of Curriculum Integration. For example, the experienced teachers are more concerned with summarizing the information at the transition points to prepare the students for what is coming after that stage. Moreover, the novices integrate the old and new information mostly in terms of the relevant lesson and rarely relate present learning to past or future learning, whereas the experienced teachers are more concerned with the previous and next hours to see whether the current lesson fits to the total teaching order or syllabus. The experienced teachers are also observed not to hesitate to double back to relate the new information to prior knowledge, which confirms the findings reported by Westerman (1991).

Table 4.4. indicates that the novices consider the goal category of Subject Matter Content (17.10% versus 15.42%) more frequently than the experienced teachers while making interactive decisions. For example, the novice teacher Burcu uses her own daily life experiences to introduce the new subject:

> I really went to the dentist, but I did not plan to mention it in the class. It just came to my mind. My tooth was aching at that time, and I just wanted to share it with them (Student Motivation and Involovement). Later on I introduced the subject using this experience. It happened on the spot (Curriculum Integration). How I start the morning activities depends on the topic because in this unit, the present perfect tense focuses on experience (Subject Matter Content), so I focused on both my and their experiences. It depends on the nature of the topic at hand (Student Motivation and Involvement & Nature of the Activity). Therefore, today I started with a kind of speaking activity (Student Motivation).

Similarly, one of the experienced teachers, Selen, was observed to be concerned with the goal category of Subject Matter Content in the following classroom excerpt:

> T: Yes!
>
> Z: I haven't been to Hungary (Elicited Behavior).
>
> T: Good Zöhre!
>
> T: She has not been to Hungary (Gives Feedback)
>
> T: Yes, Medine! (Focuses Attention/Effort)

Selen comments on the preceding classroom excerpt as follows:

> I repeated her sentence by adapting it to third person form in present perfect tense (Curriculum Integration). I wanted to introduce them that grammar point authentically. I do not like writing them on the board: I, you......etc. (Student Motivation and Involvement) But this is just comparing have and has (Curriculum Integration). To give them the message that I takes have and with the third person, it becomes has!!! (Student Understanding) But they are acquiring it. They are not aware of that they are learning actual grammar (Pedagogical Principles).

Regarding the least popular goal categories among the participants, Social Development was the only goal category receiving the least attention from both groups of teachers with a percentage under 10 (8.10% for the experienced teacher and 8.62% for the novices) (see Table 4.4.).

As for the individual differences, the experienced teacher Kezban, and the novice teachers Gamze and Ece were seen to pursue the goal categories of Student Understanding and Subject Matter Content more frequently than any other teachers in the study since they were teaching remedial classes with a different teaching order throughout the study (see Table 4.4.). That is to say, the proficiency level of the students is seen to be a determinant factor for dominating the instructional actions throughout the study. For example, the most inexperienced teacher Ece states that she can spend more time on an activity than planned due to the low level of the students in the remedial class:

> Sometimes, I even make them listen to the text three times. I let them listen to more difficult parts during the second listening section and the whole during the third time so that they can check their answers one by one especially in Level 1 (Routine, Student Understanding &Student Motivation and Involvement).

To conclude this part, parallel to Johnson's (1992) findings, all the participant teachers are observed to consider different specific goals at different times throughout their ongoing instruction. Moreover, they appear to consider a wide set of instructional goals while making interactive decisions. Nevertheless, contrary to the previos research findings (Fogarty et al, 1983; Johnson, 1992), the novice teachers report more instructional goals than the experienced teachers in the study (1062 versus 906); however this difference does not reveal any statistical significance.

These findings reflect that the novices in the study have a strong methodological background covering the teaching and learning theories, trends, and strategies they learnt at the faculty. Besides, the teacher they model throughout their teaching in the class may have affected their actions as well as their interactive decisions.

4.4.1. Multiple Instructional Goals

Regardless of the expertise level, all the teachers were seen to be capable of considering more than one instructional goal at a time. However, the experienced teachers attended multiple instructional goals more frequently than the novices. For example, the experienced teacher Merve considers multiple goal categories while commenting on one of her interactive decisions at the stimulated recall interview as follows:

> This was something I decided on the spot: Asking them to report about their own partners (Student Motivation and Involvement), so they are going to make sentences with "he or she", the third person form (Academic Skills, Subject Matter Content, & Curriculum Integration). I add one more thing to the activity. Moreover, I had five minutes left after the activity. That's why I added it (Group Management & Timing).

Similarly, the novice teacher Burcu combines some instructional goal categories while commenting on her video-taped actions at the stimulated recall interview:

> I focused on the phrase "bookworm" because it was the title of the activity (Subject Matter Content). Here I did not give its Turkish meaning because if I say a person who reads a lot, they may say clever, hard working, such kinds of things (Student Understanding). But the worm, the meaning is different because it is the same in Turkish. If they see what worm means, they can easily connect (Curriculum Integration). I preferred to draw it because visuals, visual things are more effective and I can (Teacher Preference).

To sum up, in line with the relevant studies (Johnson, 1992, 1999), the experienced teachers are seen to attend multiple instructional goals more frequently than the novices while making interactive decisions.

4.5. Prior Knowledge

Table 4.5. summarizes the data on the prior knowledge categories the participant teachers reported recalling while teaching in the class. Contrary to the findings reported by Fogarty et al. (1983), it is in this part that the least differences are observed between the experienced and novice teachers' interactive decision making behavior. Moreover, regardless of the expertise level, Pedagogical Principles and Student History were the most frequently and consistently recalled prior knowledge categories among the participant teachers. However, as shown in Table 4.5., the experienced teachers focused on Pedagogical Principles and Student History categories more frequently than the novices while commenting on their video-taped classes at the stimulated recall interview. The pedagogical principles category was also seen to be associated with the other prior knowledge categories and instructional goal categories in most of the reported cases throughout the study.

Table 4.5. Categories and Percentage Frequencies of Prior Knowledge Reported by the Experienced and Novice Teachers

Categories of Prior Knowledge	Experienced Teachers										Novice Teachers										X^2
	Kumru		Merve		Selen		Kezban		Total		Gamze		Burcu		Zeynep		Ece		Total		
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	
Important Content	5	6.94	6	8.81	3	2.44	8	5.19	22	5.26	4	3.84	7	7	1	1.26	4	2.90	16	3.80	1.614
Pedagogical Principles	18	25	16	18.18	39	31.70	36	23.38	109	26.07	29	27.88	21	21	22	27.85	32	23.19	104	24.70	8.110*
Student History	14	19.44	25	30.41	37	30.08	42	27.27	118	28.23	24	23.07	26	26	20	25.32	37	26.81	107	25.42	7.518*
Academic Skills and Abilities	22	30.56	7	15.95	18	14.64	37	24.02	84	20.09	29	27.88	21	21	13	16.46	27	19.57	90	21.38	10.135*
Knowledge	9	12.5	12	19.64	14	11.38	26	16.88	61	14.59	16	15.39	18	18	18	22.78	32	23.19	84	19.95	649
Preferences	4	5.56	3	7.46	12	9.76	5	3.26	24	5.76	2	1.94	7	7	5	6.33	6	4.34	20	4.75	4,917
Total	72	100	88	100	123	100	154	100	437	100	104	100	100	100	79	100	138	100	421	100	5.811

* $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

As mentioned earlier, the experienced teachers were observed to be more concerned with the goal category of Pedagogical Principles. For instance, the experienced teacher Selen emphasizes Pedagogical Principles in her comment:

> Time to time, I repeat the sentences the student uttered may be to correct their pronunciation (Pedagogical Principles & Academic Skills & Language Development). That's why I want to hear all the studnets the correct form (Group Management). A bit error correction may be (Pedagogical Principles) instead of directly warning him or her that it is not good. Just to model the other students (Belief & Alternative Action). Other students can feel that it was wrong, but the teacher did not correct it (Group Management), and if I correct it immediately the student who made the mistake can be discouraged (Student Motivation and Involvement), but this is a good way of error correction (Belief).The other students can see the exact correct model and that student can not fell himself inferior, either (Balance Student Learning and Psychology).

Secondly, as shown in Table 4.5., the experienced teachers utilized the prior knowledge category of Student History more frequently than the novices at the stimulated recall interviews. The experienced teacher Kezban, for example, states that she considers her knowledge on the students' proficiency while giving the turn in the class:

> Sevgi is a very slow student. The first time she came to Yadim, she had no knowledge in English. So she had a great improvement in English (Student History). That's the reason and I did not want her to read her sentences loudly because her pronunciation is not good enough (Academic Skills). I do not want to make it worse to let her read (Group Management).

Similarly, another experienced teacher, Merve, also draws upon the Student History category while making an interactive decision in the following classroom excerpt:

> T: Ayla! Are you going to watch Fox Kids?
>
> (Elicits and Incorporates Input)
>
> T: Because of your son! (Focuses Attention/Effort)
>
> S: (laughing): Yes! Çok sık! (Elicited Response)

Merve explains the reason for choosing Ayla to answer the question as follows:

> "Ayla has a five year old son and I have a five year old son, so I know the problem (Student History & Knowledge)."

Another instance also appears in the class of Merve who has a great deal information about her students:

> T: What are your plans?
>
> (Focuses Attention/Effort & Elicits and Incorporates Input)
>
> T: I think you are going to an internet café? (She laughs)
>
> (Focuses Attention/Effort)

In this excerpt, Merve uses the information about the student's private life to participate her in the activity:

> I know that she is going to visit an internet café because she has had a boy friend in the USA, and every afternoon she goes to an internet café to chat with him (Student History & Student Motivation).

An interesting situation arose in the class of the experienced teacher Selen. She did not react to talking students during the lesson since she knows that they are good students:

> Those talking students are great students. I love them so much and one of them passed an exam for being an instructor at the university. That's why he was so smart (Student History), so I did not tell anything to them because I knew, I was sure that they would focus on what we were doing in a few minutes (Student History).

The novices were also seen to consider the Student History category as a determinant factor in their interactive decision making behavior. For example, one of the novices, Burcu, emphasizes the low profiency, age, and attention span of the students, and the level of the task in her stimulated recall comments:

> Recep is one of the silent students (Student History). He is also very bad at English and needs to improve his English (Academic Skills). He prefers to be silent because he is older than the others, older than me. Also he always wants to be silent, so he needs to be encouraged. I asked him to answer such an easy question to make him participate in the lesson unconsciously (Student Motivation and Involvement).

Thirdly, parallel to pilot study findings (see Section 3.3.4.3.3.), the Academic Skills category is seen to be favored by the novices more frequently than the experienced teachers (see Table 4.5.). For example, the most inexperienced teacher Ece covered her plan earlier and decided to fill in the allotted time with a kind of listening activity since she thought that her students needed more input provided by native English speakers:

> Before the lesson, I was hesitating to include this listening activitybecause the same activity is given in the book. On the spot, I decided to use that activity because it is a kind of listening input for the students (Social Development). It is not bad for them to listen to native speakers. This is just one aim and I had to fill in my time (Time Constraint). I checked my time and saw that it was enough for the activity.This free speaking activity was not planned before, but every time if I have a few minutes left in the end, I can conduct any kind of task or activity related to the new pattern (Routine, Academic Skill & Social Development).

As for the similarities observed in Table 4.5., the experienced and novice teachers considered the prior knowledge categories of Important Content, Knowledge, and Preferences almost in equal percentages which reveal no statistically significant differences between the groups of teachers (X^2: 5.811 * $p \geq 0.05$). Moreover, the categories of Important Content (5.26 % for the experienced teachers and 3.80 for the novices) and Preferences (5.76% for the experienced teachers and 4.75 % for the novices) received the least attention from both groups with a combined frequency of 4.90. The Knowledge category, however, seems to be more popular than the Important Content and Preferences categories among the teachers in the study. The most experienced teacher Kumru illustrates the Knowledge category in her comment as follows:

> I know they have learnt the phrase a pair of because we studied it together in the previous lesson (Knowledge & Important Content). They know a pair of glasses, shoes. Just to make them remember that information (Curriculum Integration)

Another experienced teacher, Selen, changed the nature of the activity since she knew that none of the students had been abroad:

> T: Think about the cities you have been!
>
> T: Think about the cities in our country! (Applies, Extends, or Plans)
>
> T: And make some sentences! (Explains Concept / Procedure)

Selen comments on her behavior as follows:

> I decided to do such an activity at the time because I could not get any positive sentences about the countries (Curriculum Integration) because none of the students have been abroad (Student History & Knowledge), so I just turned it into cities for just getting that structure in positive sentences (Student Involvement).

All the novices were also seen to make use of the Knowledge category a lot while commenting on their video-taped actions at the stimulated recall interviews. For example, the most inexperienced teacher Ece asks questions about Paris, relying on their world knowledge:

> Paris is a very well known city and if they have not been to there. They may have heard about it from media. They have some knowledge about Paris (Knowledge).

Another novice teacher, Burcu, tries to give extra information about the work of Shakespeare to make the students participate in the activity:

> T: OK! (Gives Feedback)
>
> T: Have you seen a play by Shakespeare?
>
> SS: NO RESPONSE (Deficient Response)

T: Romeo and Juliet?

(Elicits and Incorporates Input & Focuses Attention/Effort)

SS: Yes, we know it! (Elicited Response)

T: OK! I have seen Hamlet.

T: I have seen Macbeth. (Explains Concept / Procedure)

In this classroom excerpt, the novice teacher Burcu was aware of her students' current knowledge and needs:

> I count the names of his plays because unfortunately, these years some students lack cultural knowledge about literature or other things or their own culture. (Knowledge)When I ask about authors or poets, they always have no idea. So sometimes, I feel the need to give extra information for them: The names of the writers, poets, some places, or cinemas (Curriculum Integration & Subject Matter Content).

In the following classroom excerpt, the novice teacher Zeynep reformulated her question since she suddenly remembered that the students had not learned the passives yet:

T: And did the burglars… ? (Checks Knowledge)

T: I mean, did the police catch the burglars? (Aplies, Extends, or Plans)

T: Tahsin! (Focuses Attention / Effort)

Zeynep commented on her action as follows:

> I just wanted to ask the question in the passive form, but then I remembered that they had not learnt the passive yet. Therfore, I changed it into an active sentence (Knowledge).

Another novice teacher, Gamze, also tries to use the students' knowledge of Atatürk's life to involve them in the activity:

> T: (Under the title, she writes): (Focuses Attention/Effort)
>
> T: Atatürk died in ....
>
> T: (She looks at the class and waits for few seconds.)
>
> T: (Focuses Attention/ Effort)

Gamze was sure that the students knew the date of Atatürk's death:

> I know that they have had some knowledge about Atatürk from my experiences. This is culture you know (Knowledge). This is Turkish culture. All primary school students know when Atatürk died, the dates and it was sometime close to the Atatürk's death anniversary. That is why, I used Atatürk in the sentence (Student Motivation and Involvement).

Some individual differences within each group were also noted in regard to the number of the prior knowledge categories recalled at the stimulated recall interviews. For example, in the experienced group, Kumru reported recalling 72 categories, whereas Kezban recalled 154 categories and in the other group, Zeynep recalled 79 categories, whereas Ece reported 138 categories (see Table 4.5.). That is to say, the number of the prior knowledge categories the teachers recalled at the stimulated recall interviews is seen to be affected by some other factors rather than the level of the expertise.

Contrary to the findings reported by other researchers (Fogarty et al, 1983; Johnson, 1992; Westerman, 1991), the novices in this study are seen to be able to employ and recall the same prior knowledge categories in the way the experienced teachers do, implying that these categories have also developed in novice teachers. This finding can be related to the novices' methodological knowledge and their graduate studies on ELT and EFL students.

4.6. Instructional Management

Table 4.6. presents information on the classrom management issues adressed by the participants at the stimulated recall interviews.

Table 4.6. Instructional Management

Categories	Experienced Teachers				Novice Teachers			
	Kumru	Merve	Selen	Kezban	Gamze	Burcu	Zeynep	Ece
Control the students	2	*	2	*	11	*	*	2
Equal turn giving	*							
Seating arrangement	*	*						
Use of resources		2	3		3	3	*	
Number of the students				*	*	*		
Adjusting teacher's speech rate		*	*	3	3			
Level of the text	*	*	*	*	*	*	*	3
Nature of the task /activities	5	2	2	3	2	4	*	*
Timing the activities	7	8	7	8	17	12	14	17
Totals for the individual teachers	17	16	16	17	38	22	18	23
Totals for the groups	66							101

* The category is mentioned only once at the stimulated recall interviews.

As indicated in Table 4.6., the novices reported more management related issues than the experienced teachers (101 versus 66). Our findings, therefore, are compatible with Borko and Livingston (1989), Borko and Shavelson (1990), Fogarty et al. (1983), and Johnson (1992) who report that novices are concerned with classroom management issues more frequently than experienced teachers during ongoing instruction.

Moreover, Table 4.6 indicates that all the teachers in the study have a tendency of controlling the students when they are off-task; however, experienced and novice teachers appeared to differ in their reactions to student off task behavior. In line with the previous findings in this study (see Section 4.5.), the experienced teachers were observed to make use of Pedagogical Principles category more often than the novices in the case they faced such management problems. The experienced teacher Kezban, for example, comments on the strategy she chose to cope with some management problems as follows:

> I assign some duties to some students who have already finished the activity (Group Management). I know that they could do the activity correctly. In a way, those students are better than the others, at least in this activity (Student History & Academic Skills). You know peer correction is a good way (Pedegagocial Principles & Belief). They can easily understand from each other more than the teacher (Student Understanding). If I did not give them this duty, they would talk, so some discipline problems may have arisen. In one way, I tried to manage the class (Group Management).

Similarly, the most inexperienced teacher Ece is very sensitive about the off-task behavior of the students:

> It is the beginning of the second lesson. I generally choose the student I think who is busy with something else. Sometimes, they talk to each other or just try to find something, so I choose one of the students who do not listen to me at that time so that I take their attention. It is a routine for me (Routine & Student Motivation and Involvement).

Another novice teacher, Burcu, announced the aim of the next activity to make the students who finished the task earlier busy:

> I explained the next activity for the students who finished earlier (Social Development). They should be silent and on task. They should not interrupt the others who are studying, so they can be busy with the pictures (Group Management). I do not like sleeping and talking students while I am lecturing (Teacher Feelings). I can also let them go out if they are not interested in the lesson. I can ask them whether they want to go out. If they want they can go out.

Burcu has also provided some verbal warning cues for the students to be silent:

> T: HELLO! HELLO! (Focuses Attention/Effort)
>
> T: (To the last group): What is happening? (Elicits and Incorporates Input)
>
> T: (She goes there) (Applies, Extends, or Plans)
>
> T: Did you listen? (Focuses Attention/Effort)

Burcu comments on this strategy as follows:

> These students were off task. They were speaking to each other in Turkish. They were not interested in the pullover. In the end, Fabio fainted because he had six pullovers under his jacket, so they should understand why he fainted (Student Motivation and Involvement). They are the talking students. Now, it is time to study, to do something related to the lesson. They arè the talking students. Now, it is time to study, to do something related to the lesson (Student Motivation and Involvement).

Another example emerges in the class of the novice teacher Gamze:

> T: He gave the first aspirin to his teacher. Right!
>
> T: (Elicits and Incorporates Input & Focuses Attention/ Effort)
>
> SS: No, to his father! (Elicited Response)

Gamze comments on the excerpt as follows:

> "I told a wrong statement to test if they are listening or not. To see whether they are on task or of-task. It is very practical (Student Motivation and Involvement)."

Another novice teacher, Zeynep, decides to spend some time answering the students' question about the videotaping procedure to avoid management problems that might arise during the lesson:

> I explain why you are videotaping us because they are not accustomed to a video camera in the class (Student History & Psychology). They also wonder why you are there, so I feel that I have to explain. If I did not, they would talk among each other and ask me questions throughout the lesson (Student Motivation).

As shown in Table 4.6., equal turn giving and seating arrangements were not seen to affect interactive decision making behavior of the teachers in both groups. Use of the resources and number of the students, on the other hand, were found to affect the novice teachers' interactive decisions more frequently than the experienced teachers. For example, one of the novice teachers, Gamze, reports how she adapted her lesson according to the small number of the class on the spot:

> I told before the lesson that I would not use a specific teaching technique, but I suddenly felt the need I mean we should move somehow because the students are already unwilling to study (Student Motivation and Involvement). They are not happy to be in the classroom (Student Psychology). There are only 8 students, so they are not totally motivated. I was low motivated as well (Student Motivation and Involvement). I just felt that we needed some movement, and then I made immediate plans and used TPR, which increased my motivation (Pedagogical Principles & Teacher Motivation).

Gamze also reported making some changes in the content of the lesson due to the small number of the students at the time:

> When I saw that there were so few students, I changed the content of the lesson (Group Management). Before the lesson, I planned to teach three points; want, would like somebody to do something, and encourage. I could teach only the two. May be when all the students are in the class next time, I can revise these two structures (Subject Matter Content & Curriculum Integration). I tried to answer their questions. I focused more on vocabulary (Social Development). All these things come to mind on the spot.

As for another dimension revealed in Table 4.6., the experienced teachers reported adjusting their speech rate appropriate to the level of the students more frequently than the novices. Although all the participant teachers, regardless of their expertise level, were concerned with the level and nature of the task at hand, the experienced teachers recalled the task related decisions more than the novices while explaining the rationale behind their interactive decisions. The most experienced teacher Kumru, for example, explains that the level and length of the task affect her interactive decisions:

> I did not prefer to conduct the activity in pairs because it was an easy task to do in pairs (Teacher Preference & the Nature of the Task). I usually ask them to work in pairs in more difficult tasks. Moreover, I can not check their pronunciation in pair work (Control the Language of the Students). I make them to repeat. The listening section is quite long, and they are asked to identify who tell the sentences, so they have to be familiar with the sentences. I thought it would be easier for them to get what is said (Curriculum Integration). Time to time, I am stopping the tape and ask about the sentences they hear because it is a quite long text for this level students (Academic Skills). Besides, I try to put the sentences into chunks and check if they are doing it properly (Pedegagical Principles & Subject Matter Content) because if they are lost in the beginning, and if I do not stop it, till the end, they may get lost for a while. I check in a way their attention and give time for the students who are lost (Student Motivation and Involvement & Student Understanding). I do this almost with every long listening text especially at this level (Level of the Text).

Another experienced teacher, Selen, remarks the artificiality of the task while commenting on her video-taped behavior:

> I omitted two cities asked in the instruction because in that case, it would be so long and artificial not natural (Subject Matter Content & Student Motivation and Involvement). That's why, I announce it just before they start and after I arrange it because I decide it at that point (Group management). It would be artificial because we have already asked about a lot of places. There is no need to ask more places (Curriculum Integration).

Similarly, Zeynep, a novice teacher, provides extra information about the characters in the listening text so that the students can do the task more easily:

> T: He travels all around the world, ha!
>
> T: All around the world. (Focuses Attention / Effort)
>
> T: And, he plays tennis in different championships.
>
> (Explains Concept / Procedure)
>
> T: Ha, in different countries in different cities.
>
> (Explains Concept / Procedure)

Zeynep comments on her action as follows:

> I explained that tennis players always go to the different countries because in the listening text, the speaker is talking about his trips and may be the students could not catch the reason. Just to give them a frame work (Knowledge).

Regarding the comments of the teachers given above, both groups of teachers tend to change either the content or the structure of the task to make it clearer and more appropriate for the students. They also believe that such a change encourages the students to participate in class activities.

As for the timing the activities on the spot, all the participant teachers, regardless of their expertise level, recalled it as a determinant factor in their immediate decision making at the stimulated recall interviews; however, as indicated in Table 4.6., the novices mentioned it more frequently than the experienced teachers. For example, one of the experienced teachers, Merve, reported changing some of the management strategies she had planned not to lose time since they needed time for the rest of the class:

> I preferred to assign the students into pairs because we had a little time for that only 5 minutes more (Timing), so I did not have much time to give them the chance to choose their own partners (Group Management). I preferred getting the answers about the listening part orally for the whole class (Group Management). Otherwise, it would take a long time (Timing), and the answers were only "yes or no", so I thought that it was not so necessary to get the answers individually (Subject Matter Content).

Similarly, the novices were also seen to adapt the nature of the task according to the time left towards the end of the lesson. Moreover, they are more sensitive than the experienced teachers about controlling the time throughout the lesson. For instance, the most inexperienced teacher Ece comments on this issue as follows:

> Even though the word refreshing is new for them (Knowledge), I only explained it in Turkish because we did not have enough time left (Time Constraint), and I think the word is not very important (Curriculum

> Integration). They do not need to know it. I just wrote it on the board because they asked for it (Social Development). Furthermore, I did not plan to give turns to each pair to read their dialogs. It all depends on the time left (Timing). I had extra time, and there were just six or seven pairs, so all of them could read it (Filling the Time Appropritely).

4.7. Teacher Related Factors

Table 4.7. presents teacher related factors teachers reported considering while making interactive decisions. Among the categories observed in Table 4.7., teacher style, belief, and teacher preferences were found to be stated at least once by all the teachers at the stimulated recall interviews throughout the study. As seen in Table 4.7., the category of teacher's learning experiences received attention from all the experienced teachers, whereas it was mentioned only by one of the novice teachers. For instance, the most experienced teacher Kumru explains why she employed self-correction strategy in the class with regard to her learning experiences:

> May be, the reason for this sort of correction (i.e., loudly) may have resulted from my real life experiences (Teacher's Learning Experiences): when I was a student or it may be rooted in my real life outside the class. When I listen to people, I hear the correct version of something, and I do not need to ask it to anyone. I make the correction automatically. May be, this is something to do with my learning style.

Table 4.7.Teacher Related Factors

Categories	Experienced Teachers				Novice Teachers			
	Kumru	Merve	Selen	Kezban	Gamze	Burcu	Zeynep	Ece
Teacher style	3	*	3	2	*	6	*	*
Teacher's learning experiences	*	*	*	*				*
Teacher's preferences	2	3	4	6	7	4	1	3
Teacher belief	4	3	17	26	9	8	8	9
Teacher planning			*	*				
Learning theory			*	*				
Teacher's learning style	*			3	5	4		
Totals for the individual teachers	11	8	27	40	22	22	10	14
Totals for the groups	86				68			

* The category is mentioned only once at the stimulated recall interviews.

As indicated in Table 4.7., in the novice group, only the most inexperienced novice teacher Ece refers to her learning experiences while commenting on her action:

> I stand around my desk. I thought about this before. I do not want to disturb them due to my presence because I am teaching them (Routine, Student Motivation and Involvement). If I get very close to them sometimes they can get stressed, I can feel it. (Creating Relaxed Atmosphere). This is also something I felt during my learning experiences as a student. When I was a student I did not want the teacher to come closer to me. I do not know the reason (Learning Experiences & Student History).

Table 4.7. indicates that belief is one of the dominant teacher related factors affecting the interactive decisions of both groups. Nevertheless, the groups of teachers differ in the number of their recalling instances. The experienced teachers (12.5%) recalled their beliefs more frequently than the novices (6%) throughout the stimulated recall interviews. For example, one of the experienced teachers, Selen, emphasizes her belief about the importance of authentic learning tasks:

> I sometimes repeat the answers just to motivate them (Student Motivation and Involvement), and also I add my personal views for making the conversation real not artificial (Student Motivation and Involvement & Pedagogical Principles). If you talk about the real things, the students can feel that the classroom atmosphere is real. We are having an authentic conversation (Nature of the Activities& Student Motivation and Involvement). These are the things that we should learn, so the students can match the things they see in the class with the things in the life. Therefore, this is a good way of learning (Pedagogical Principles).

Selen also relies on her beliefs while giving turns and correcting students' errors:

> The first pair is always from the ones who have better pronunciation. Then, it goes from the best to the worse because the first readings must be good models (Pedagogical Principles & Academic Skills). I did not interfere in their dialogs on purpose because it is not good to interrupt the students while they are speaking or reading something unless they have a global mistake (Student Motivation and Involvement & Pedagogical Principles), so I do not like error correction very often unless it is a huge one (Teacher Style). I always correct my students in a non threatening

> way. This is a good way of error correction (Pedegogical Principles & Belief).

The novices were also seen to hold some belief about error correction. For example, the most inexperienced teacher Ece claims:

> I generally correct pronunciation even with more proficient students (Subject Matter Content). I think this is important. If I do not correct, they do not learn it and continue to mispronounce it (Belief & Student Learning). If I correct the students, they would not try to correct and monitor themselves while talking (Pedagogical Principles& Belief). If I make him be aware of his mistake, the next time he or she tries to speak better and be aware of the grammatical items (Social Develpoment, Students' Needs & Language Development).

Another novice teacher, Zeynep, came across with an unexpected classroom event:

> S: (A student raises his hand) (Initiation)
>
> S: Aldatmak ne demek? (Initiation)
>
> T: OK! Don't you have a dictionary? (Applies, Extends, or Plans))
>
> T: Fırat, do you have a dictionary? (Focuses Attention / Effort)
>
> T: (She takes the dictionary from Fırat and gives it to the other student) (Applies, Extends, or Plans)

Zeynep explains the rationale behind her behavior regarding her belief about the retention of the knowledge:

> I did not give the meaning because I believe that if I provide the answer directly, it can not be long lasted (Belief). Moreover, I always provide a context for the unknown word. If the student tries to do something, spends some time to find the meaning, I think it will be more long lasted (Pedagogical Principles).

Sometimes, the experienced teachers and the novices were seen to share the same or similar beliefs while explaining the reasons for their actions. For example, the rationale stated by Zeynep in the above comment was observed to be favored by the experienced teacher Kezban, as well:

> I try to give the structure that is our focus in example sentences since isolated words never stay in their mind (Subject Matter Content, Student Learning & Learning Theory) May be the examples come to their mind more easily (Curriculum Integration).

Some differences, however, have also appeared among the individual teachers within each group of teachers. For example, as shown in Table 4.7., two of the experienced teachers, Selen and Kezban were found to be more belief oriented than the other two experienced teachers in the study. As for the novices, all the individual teachers reported almost the same number of belief categories (8-9) throughout the study, which means that the novices consider the category of belief equally while making interactive decisions. This finding suggests that interactive decisions of the teachers may be affected by some personality and belief factors rather than the expertise level of the teachers.

Table 4.7. displays that only two experienced teachers report the effect of the lesson plan on their in-class decisions; however, all the teachers participating in the study explain the fact that the central system of YADIM and teaching order they have to follow affect their classroom teaching to a great extent. Moreover, all the teachers tend to prepare their plans just in the form of mental images (see Appendix 5 and Appendix 6) as uttered by the most experienced teacher Kumru:

> "I do not write my plan, but I take notes in my notebook or book with a pencil or on a piece of paper. I always plan the lesson in my mind."

As for another dimension, learning theories teachers consider while teaching in the class, only two of the experienced teachers made use of their learning theories while explaining the reasons behind their actions. One such experienced teacher is Kezban who puts emphasizes on i+1 Theory and passive learning in explaining her behavior:

> My students are total beginners (Academic Skills), but I give the instructions in English (Teacher Preferences). I know that they can understand me (Student History & Student Understanding) because from the very beginning of the semester, I started speaking English because I believe in i+1 theory (Belief & Use of the Target Language). You know at first, they did not understand me, but they tried to understand, and now they can understand me. I just look at their faces and eyes (Social Development). This is my style i+1 as I said before (Teacher Style). I want them to get the instructions smoothly before they learn it (Student Understanding), so when it is time to learn, it would be easier. I am sure; just acquisition and passive learning (Learning Theory).

Similarly, the experienced teacher Selen also recalls a learning theory from her Master lessons (i.e., graduate study) while commenting on the use of the board:

> I did not put it on the board because I do not like writing wrong things on the board. I usually use the board for the correct things (Routine, Pedegogical Principles & Belief). While I was doing my M.A, in one of the lessons, it is said that students have the tendency of learning everything even the wrong things from the board (The use of the whiteboard & Academic Knowledge of the Teacher).

As presented in Table 4.7, teachers' learning style was observed to receive attention from half of the participant teachers in each group; nevertheless, the novices utilized this factor more frequently than the experienced teachers at the stimulated recall interview. The novice teacher Gamze, for instance, comments on her video-taped actions focusing on her own learning style as follows:

> Here, while getting the answers, I both repeat their answers and write them on the board (Pedegogical Principles). In a way students both see the word and hear how it is pronounced because they have difficulties pronouncing the dates (Social Development & Language Development). I am myself a visual learner, and I want to see the words all the time (Teacher Learning Style). If someone reads me something, I do not understand it. I have to see it. So when I think of myself, I think the students, and I am sure there are some visual learners among them and for those students, I have to write it on the board (Students' Learning Style).

Overall, the experienced teachers are found to recall teacher related factors more frequently than the novices (86 versus 68) while explaining the reasons for their video-taped actions. Moreover, the experienced teacher Kezban reports almost half of the categories (40) recalled by all the experienced teachers in the study, which reflects that the interactive decision making behavior of the teachers is affected by some other factors such as their beliefs, learning styles, learning preferences and experiences, and learning theories rather than their expertise level.

4.8. Institutional Factors

The institutional factors reported by the teachers at the stimulated recall sessions are summarized in Table 4.8. The novices reported considering more institutional related factors than the experienced teachers in their interactive decision making process (25 versus 10). As can be observed in Table 4.8., the novices considered catching up with the syllabus and sequencing the lesson content in their interactive decision making, while no experienced teachers utilized these factors at the stimulated recall interviews. For instance, the most inexperienced teacher Ece comments on the effect of the syllabus on her interactive teaching as follows:

> We made some writing activities. Therefore, I know how they write, which ones are good or not (Student History & Academic Skills). I have some ideas about them (Student History). We do not use the same materials with the teachers teaching other remedial classes. We do not use the textbook, but we have to follow the syllabus given to us every week.

Table 4.8. Institutional Factors

Categories	Experienced Teachers				Novice Teachers			
	Kumru	Merve	Selen	Kezban	Gamze	Burcu	Zeynep	Ece
Catching up with the syllabus					2	*	*	
Sequencing the lesson content					*	*		
Formal assessment		*		2	2		*	3
Having other classes with the same students			*	*		*		
Lack of the contact with the partner						2		
Cultural information	*	*	*	*	2	*	*	*
Forgets	*				2	*		
Teaching multiple classes					*			
Totals for the individual teachers	2	2	2	4	10	7	4	4
Totals for the groups	10				25			

* The category is mentioned only once at the stimulated recall interviews.

Another novice teacher, Gamze, reveals how the syllabus affected her interactive decision as follows:

> Actually, as I mentioned in the beginning, I was not going to introduce TELL. I did not want to teach it in that hour. It was in my plan, but when I saw that there were so few students in the class, I just gave it up (Group Management). However, then we lost a lot of time in the syllabus. At the time, we should have been learning simple past tense. We are still loosing time studying these structures. Therefore, I decided to move to TELL; two structures at one time (Syllabus).

Moreover, the novices were seen to refer to formal assessment category more frequently than the experienced teachers while commenting on their video-taped behavior (see Table 4.8.). Among the experienced teachers, one of the experienced teachers, Kezban, mentioned this category more frequently than any other experienced teachers because she was teaching the remedial class students who got the lowest grades at the achievement exams at the time.

Another experienced teacher, Merve, considers formal assessment while emphasizing the instructions in the class:

> I emphasize the instructions because the students are not good at understanding the instructions (Student History). I know that they have some problems especially at the exam. That's why I want to repeat the instructions (Formal Assessment).

The most inexperienced teacher Ece also favors the formal assessment criterion in her interactive decision making as follows:

> I wrote only those words on the board because these are all important word (Subject Matter Content), and I know that they will be asked in the quizzes or achievement (Formal Assessment).

The experienced teachers were seen to be more relaxed than the novices in the case they could not cover what they have planned since they had some other classes with the same students either on the same day or the next days in that week. Therefore, the novices can be said to follow the teaching order more strictly than the experienced teachers, which may result in their desire to be an ideal teacher and accomplish their duties properly since they are new at the institution.

Having block hours is also seen to affect their immediate decisions as uttered by the novice teacher Zeynep:

> I did not have any worries about the time because I am sure that the time was enough for what I had planned (Timing). Moreover, I have another hour with them on that day. I had three hours and this is the first hour with them (Having some other classes with the same class & Subject Matter Content).

Table 4.8. indicates that the teachers in both groups provide cultural information as the need arises throughout the lesson. The last category, Forgets, appeared at the stimulated recall data of two novice teachers, Gamze and Burcu. They reported that they changed their plans towards the end of the lesson because they forgot to introduce one of the related subject matter points in the beginning. However, neither was seen to get panicked in such a case as illustrated by Burcu in the following stimulated recall interview excerpt:

> Actually, I was going to introduce "shall we?" in the beginning, but I forgot it. While checking those two students' work, I saw that they used shall in a statement and thus I decided to introduce and explain it at the time (Subject Matter Content & Forgets).

Similarly, the most experienced teacher Kumru also forgot to announce the instruction to the activity, which caused the students to spend more time to find the correct answer. Therefore, she had to change her plan and exclude the last activity from the plan:

> I forgot to warn them that they should put a tick under each house. When they finished the activity, they realized that they could not figure it out immediately which one is left. My missing that "you can put a tick under

> each picture" caused me 5 minutes (Student Understanding). Therefore, it lasted 5 minutes more than I planned. This also made a change in my plan. There was a brief activity I was planning to include. It was a 15 minute activity. Since ten minutes here left, I a bit made the final stage longer and gave the homework afterwards (Group Management).

As shown in Table 4.8., among all the teachers in the study, only the novice teacher Gamze reports that teaching multiple classes affects her interactive decision making behavior:

> I sometimes ask such spontaneous questions. I sometimes immediately decide (Routine). I used the same thing in my previous class one hour ago, and it worked (Important Content & Pedagogical Principles).

To conclude this part, some management, teacher and institutional related factors rather than the expertise level of the teachers may determine the content, quality and number of their interactive decisions.

4.9. Types of Decisions

Table 4.9. displays the data obtained on the sequential and hierarchical decisions made by the teachers with respect to their expertise level. As seen in Table 4.9., regardless of the decision type, the experienced teachers were seen to make more decisions than the novices (264 versus 226) throughout the study. Moreover, they were observed to make hierarchical decisions more frequently than the novices while teaching in the class, which represents statistical significance (X^2: 20.928 $p \leq 0.001$).

Table 4.9. Sequential and Hierarchical Decisions of the Experienced and Novice Teachers

Type of Decisions	Experienced Teachers										Novice Teachers										X^2
	Kumru		Merve		Selen		Kezban		Total		Ece		Burcu		Gamze		Zeynep		Total		
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	
Sequential Decisions	8	10.82	12	40	25	31	19	26	64	24.24	12	21.50	15	26	20	31.75	19	39	66	29.20	1.659
Hierarchical Decisions	66	89.18	18	60	61	69	55	74	200	75.75	44	78.50	43	74	43	68.25	30	61	160	70.80	20.928***
Total	74	100	30	100	89	100	74	100	264	100	56	100	58	100	63	100	49	100	226	100	
X^2									12.499**										4.319		

* $p \leq 0.05$ ** $p \leq 0.01$ *** $p \leq 0.001$

One of the experienced teachers, Merve, illustrates how the experienced teachers form hierarchical decisions in their interactive teaching as follows:

T: Selda!

T: Did Baird send pictures from London to Glasgow?

T: (Checks Knowledge)

S: In 1927! (Elicited Response)

T: (She smiles)

T: So, make negative, please! (Hierarchical Desicion)

T: Önce bi olumsuzunu yapın sonra olumlusunu! (Hierarchical Decision)

The most experienced teacher Kumru also makes a hierarchical decision while explaining the aim of the activity:

T: Now! (Focuses Attention/Effort)

T: Tell me! But! When you tell me;

T: Anlatırken dikkat edin! Yalnız burda göstermek istediği neyse ona....

T: (Explains Concept / Procedure) (Hierarchical Decision)

SS: Çoğul! (Initiation)

T: Ya! (Gives Feedback)

T: What is good for you? (Elicits and Incorporates Input)

T: What is delicious? (Applies, Extends, or Plans)

T: What is.....? (Focuses Attention/Effort)

Similarly, one of the novice teachers, Burcu, also makes hierarchical decisions while clarifying the aim of the activity.

T: This is a worm and book worm. (Gives Feedback)

T: (She writes the phrase "bookworm" under the apple.)

T: (Applies, Extends, or Plans & Focuses Attention / Effort)

T: Yes! It is about book worm, Benny. (Gives Feedback)

T: (She again sits in front of her desk)

T: First, read about the sentences, OK!

T: First read the sentences and put them, all the words.

(Hierarchical Decision) (Explains Concept/Procedure)

T: After you finish, we are going to look at the pictures, OK!

(Hierarchical Decision) (Explains Concept/Procedure)

In contrast to the hierarchical decisions displayed in Table 4.9., no significant differences were found between the groups of teachers with respect to the number of the sequential decisions they make in the study (X^2: 1.659 $p \geq 0.05$). That is to say, both the experienced and novice teachers make sequential decisions almost equally in the class.

The following example for the sequential decisions is taken from the class of the novice teacher Gamze:

T: OK! Before we start, any interesting news or events?

T: (Sequential Decision)

T: (Focuses Attention/Effort & Elicits and Incorporates Input)

T: (She moves towards the students.) (Applies, Extends, or Plans)

T: Are you happy with the quiz tomorrow? Yes?

T: (Focuses Attention/Effort & Elicits and Incorporates Input)

T: Why not? (Elicits and Incorporates Input)

T: (Keeps to the plan.)

T: OK! Today, we are starting Unit 8. (Explains Concept/Procedure)

Another novice teacher, Burcu, also exemplifies sequential decisions very well in one of her videotaped classes:

T: (She checks the time) (Routine)

T: Lesson is finished! (Explains Concept / Procedure)

T: But, I want to ask you something! (Focuses Attention / Effort)

T: (She cleans the right side of the board):

T: How many past participles have you learnt so far?

(Sequential Decision) (Checks Knowledge)

T: Past participle? (Focuses Attention/Effort)

T: Go, went, gone for example!

(Applies, Extends, or Plans & Explains Concept/Procedure)

T: (She utters and writes the question on the board).

T: (Applies, Extends, or Plans)

T: How many past participles have you learnt so far?

T: (Checks Knowledge)

T: Any? (She looks at the class) (Focuses Attention/Effort)

T: When did you start learning perfect tense?

T: (Elicits and Incorporates Input)

SS: Two days ago!

T: Two days ago, OK! (Gives Feedback)

T: How many past participles have you learnt so far?

(Elicits and Incorporates Input)

Similarly, the experienced teacher Merve provides another example for sequential decisions:

T: Yes, best seller! (Gives Feedback)

T: OK! (Focuses Attention / Effort)

T: Now, we learnt the new words! (Gives Fedback)

T: Let's read here!(Sequential Decision) (Explains Concept / Procedure)

T: Read these texts!

T: Read first and then we are going to listen later! (Sequential Decision)

T: (Explains Concept/Procedure)

Another finding revealed in Table 4.9 indicates that all the teachers are observed to make more hierarchical decisions than sequential ones within their own groups, which is statistically supported for the experienced teachers but not for the novices. Apart from the level of teaching expertise, some other factors such as teaching order the teachers follow, the textbook style, sharing the class with partners, and having a central system at YADIM may cause the teachers to favor hierarchical decisions more than the sequential ones.

In this chapter, we reported and discussed the quantitative findings. The next chapter presents the qualitative data obtained throughout the study.

CHAPTER 5

DISCUSSION OF QUALITATIVE FINDINGS

5.0. Introduction

This chapter mainly covers the reasons, principles, and factors which guide the interactive decision making behavior of the teachers from their own perspectives. Based on the categories developed by Bailey (1996), the emerged categories throughout the study will be adapted by adding, deleting, or combining them to more accurately reflect the responses of the participant teachers. Moreover, information that is not appropriate for any of the categories is also noted to be mentioned seperately. This chapter also presents qualitative findings on the use of the teaching routines as well as the immediate and reflective decisions favored by the groups of the teachers. Alternative decisions and teacher feelings are the other issues to be discusses throughout the chapter.

Finally, regarding the models provided by Westerman (1991) and the principles mentioned by some other researchers (Fogarty, et al., 1983; Borko & Livingston, 1989; Borko, & Shavelson, 1990; Johnson, 1999), models for experienced and novice teacher interactive decision making will be proposed in regard to the findings obtained in this study. Therefore, the post-reflections uttered by the teachers at the stimulated recall interviews will also be covered in this chapter to emphasize some parts of the models appropriately. Besides, *snakes* drawn by the participants (see Appendix 10 and Appendix 11) will be considered in the interpretation of the data to see the effect of the previous teaching and learning experiences of the teachers on their interactive decision making behavior.

5.1. Reasons

5.1.1. Serve the Common Good

The principle of Serve the Common Good arises in classes where a student asks a question or has a problem which the teacher considers to be an issue for the other students, as well (Bailey, 1996). In the present study, this principle was observed to underline the in-class actions of the experienced teachers to a great extent. Moreover, they did not hesitate to change or depart from their lesson plans in such cases because they believed that dealing with the individual problems would certainly benefit the whole class.

Such an example was observed in the class of the experienced teacher Merve who insisted on correcting the pronunciation error of a student in the mid of the lesson.

> I focused on the wrong pronunciation because I taught them how to pronounce "-ed" before (Knowledge). They know it. I just warned them. Since the others heard the mistake, I wanted to correct it immediately (Group Management & Pedagogical Principles).

Another experienced teacher, Kezban, was also seen to be more concerned with the Serve the Common Good principle since she was teaching a remedial class throughout the study:

> I think they made a mistake, but I can not remember it right now. I am not sure, but it was two or three students (Student Understanding). If it is just one student, I just whisper it to them that this is not true, and it should be like this (Routine). Since more students did the mistake, I preferred to warn them loudly to take the others' attention as well (Group Management & Student Understanding). I mean it works (Pedagogical Principles).

Similarly, the most experienced teacher Kumru gives the students feedback loudly to draw the attention of the other students to the issue:

> I sometimes give the feedbacks loudly. I sometimes do it on purpose because if the other students also have such a problem, I have this in my mind, the others will listen, and some are very shy (Pedagogical Principles). They do not dare to ask the teacher if it is correct or not. I may miss them as going around, so I do it on purpose. Sometimes, I make the corrections aloud if I think it is a major mistake. I make it aloud so that the others can hear and correct their sentences silently (Group Management).

Contrary to the experienced teachers, only two of the novice teachers, Ece and Zeynep, invoked the principle of Serve the Common Good in the study. The most inexperienced teacher Ece considers the principle in the following classroom excerpt:

> T: Do you know what incredible is? (Checks Knowledge)
>
> SS: Yes, imkansız. (Elicited Response & Attention)
>
> T: How do you spell it? Emrah, spell it.
>
> T: (Checks Knowledge & Focuses Attention/Effort)
>
> T: (While he is spelling, she is writing the letters on the board.) (routine)

Ece clearly states that Serve the Common Good is the main principle behind her decision in the excerpt given above:

> Incredible was presented the week before and this is a very difficult word for the students.(subject matter) Most of the students had spelling mistakes in their vocabulary tests (Academic Skills), so I decided to write this on the white board since a student asked me how it was written (Social Development).

Similarly, the novice teacher Zeynep also utilizes Serve the Common Good principle in her classes as follows:

> T: And showing your….. (Elicits and Incorporates Input)
>
> T: (She shows her heart) (Applies, Extends, or Plans)
>
> SS: Emotions! (Elicited Response)
>
> S: Emotion nasıl yazılıyordu? (Initiation)
>
> T: Emotion (She writes it on the white board)
>
> T: (Focuses Attention/Effort & Applies, Extends, or Plans)
>
> T: It is like feeling. EMOTION!! (Explains Concept/Procedure)

Zeynep judges that Serve the Common Good principle is very important for the whole class understanding:

> First, the students said what emotion is and then one student here did not understand it. So I wrote it and explained it because even a student is enough for me (Student Understanding). I sometimes repeat their answers for the others to hear well (Group Management) or to correct their grammatical, content and pronunciation mistakes during the activity (Social Development & Correcting the students in a non threatening way).

To sum up, all the experienced teachers consider Serve the Common Good principle while dealing with the problems emerged out of language skills and student personality. Moreover, compared to the novices, the experienced teachers are found to employ more appropriate teaching routines in such cases.The novices, on the other hand, are seen to favor the principle to solve the problems related to the subject matter content and student level throughout the lessons.

5.1.2. Teach to the Moment

In some classroom instances, the teacher drops the lesson plan and explains something or deals with another issue that emerges on the spot. For this reason, some unplanned alternatives to the lesson plan are judged desirable (Bailey, 1996). Peter Shaw (cited in Bailey, 1996) remarks that in elementary education, this idea is called as Teach to the Moment.

In the present study, regardless of the expertise level, both the experienced and novice teachers were found to spend some time to deal with the issues that the students raise on the spot. For example, Kezban, an experienced teacher, taught the word "fast" even though it was not included in her plan. She comments on her action as follows:

> They are always giving examples of tasty and delicious things and at the time, I want to teach them the word fast (Student Understanding & Knowledge). I also tell that word in Turkish. You know it is an abstract noun (Student Understanding & Academic Skills).

In another instance, Kezban suddenly focuses on the difference between the words "right" and "write" which are homophones:

> T: That answer is right. (Gives Feedback)
>
> T: (She waits for a second and sits in front of her desk)
>
> (Focuses Attention/Effort)
>
> T: Not wrong but right! (Explains Concept/Procedure)
>
> T: Right! That answer is right! (Elicits and Incorporates Input)
>
> (Now, she makes her thumb up to mean right) (Applies, Extends, or Plan)
>
> T: Not WRITE! (Focuses Attention/Effort)

The experienced teacher Kezban comments on the preceding classroom excerpt as follows:

> Right and write! It is another strategy (Routine). In the previous hour, a student wrote "write". So you know I talked about it. Yes the pronunciation is just the same. But here we are talking about right or wrong (Important Content).That is the reason I give the example, and also the antonyms help the students a lot to understand (Curriculum Integration & Student Understanding). I know that they know what wrong means because in the exams and instructions, we taught them Right x Wrong and True x False (Knowledge).

(This scene was not video taped since the lesson continued more than expected)

Teach to the Moment principle is not found to be so popular among the experienced teachers. They explain that they can not spend so much time for the unrelated issues even for the related ones since they have to follow a central teaching order and scheduled exam dates.

The novices were also seen to illustrate this principle in their stimulated recall interview comments. For example, the novice teacher Gamze decided to teach the students the phonetic transcription of some words on the spot. She refers to Pedagogical Principles and student needs while explaining her reason behind her decision:

> I focused on the preposition because prepositions are also useful (Belief). Study, where? Study in the library. I also wrote its phonetic transcription because the student mispronounced it (Academic Skills). So, instead of writing the word it self, I wrote the phonetic transcription. I want them to

> learn how to read phonetic symbols (Social Development & Students' Needs). So, gradually I am trying to teach these symbols (Subject Matter Content). I am comparing and contrasting both spelling and pronunciation. I think this technique is useful (Pedagogical Principles & Language Awareness)

The most inexperienced teacher Ece is seen to be much more sensitive about this principle; therefore, lots of examples come from her classes. She, for example, tries to give some cultural information about the post boxes in Turkey and England, underlying Teach to the Moment principle in her comments at the interview:

> There is a cultural aspect. I think something is very different (Subject Matter Content). We have post boxes, but the colours are different. Sometimes the students see them in the pictures; however, they can not recognize them in English course books. Here, I just want to build a bridge (Curriculum Integration & Student Understandanding). I think they did not know what a post box is because we do not have any in Adana (Knowledge).

In another instance, Ece abandons some part of her plan to remind the students like+ing structure:

> Because one lesson or one week before, we studied like+ing. I like running or swimming (Important Content). They could not say like living. They should have known it (Knowledge). This is just repetition for them.

To sum up, the novices are found to be more concerned with Teach to the Moment principle than the experienced teachers, which indicates that they are more concerned with satisfying the needs of the students on the spot.

5.1.3. Further the Lesson

This principle highlights that teachers override their pre-active manegerial decisions, which they announce publicly to the class, to promote substance and progress of the lesson (Bailey, 1996). Further the Lesson is another principle observed to underline interactive decision making behavior of the teachers in both groups in the current study.

The most experienced teacher Kumru, for instance, realized that the lesson was not going well; therefore, she changed the whole class answer technique to individual answer to progress the lesson and promote student involvement:

> First I was getting whole class answers but then I chose Oğuz to answer because it did not go well (Subject Matter Content). In the beginning some students were not in the class, so not everybody answered altogether (Group Management). So, first I asked Oğuz. Oğuz had good pronunciation as well. The others will hear it correctly (Student History & Pedagogical Principles).

Another experienced teacher, Selen, used realia to facilitate the lesson since the students could not understand the issue through the original strategies planned for the lesson:

> Medine's clothes were so easy to describe. She was wearing jeans, shirts you know specific things (Student Motivation and Involvement & Understanding).

In another video-taped excerpt, the experienced teacher Selen taught the difference between the verbs "put on" and "wear" very briefly. She considers Further the Lesson principle while commenting on her action as follows:

> In the beginning, I explained the difference between "wear and put on" without going into details because it was not the point (Social Development & Subject Matter Content). I have not taught it yet. I have not taught the present continuous tense yet (Knowledge). They have not been familiar with the difference between "put on" and "wear" (Subject Matter Content). Afterwards, I will give examples and explain it (Curriculum Integration & Student Understanding).

The novices are also seen to utilize this principle while explaining their video-taped actions. An example is observed in the class of the novice teacher Zeynep as follows:

T: He says, "my country calls me!" (Focuses Attention/Effort)

T: (She asks slower): Why does your country call you? Talat!

(Applies, Extends, or Plans & Elicits and Incorporates Input)

SS: NO RESPONSE (Deficient Response)

T: Why does your country call you? (Focuses Attention/Effort)

SS: NO RESPONSE (Deficient Response)

T: Turkey calls you! (Focuses Attention/Effort)

T: Why? Hı? (Elicits and Incorporates Input)

T: (To another student): Ümit! (Focuses Attention/Effort)

In the above excerpt, the novice teacher Zeynep gives the turn to another student to further the lesson and thus facilitate student motivation at the time:

> I repeated the question just to help them (Student Motivation and Involvement). I did not insist on Talat because if I had, I think I may have lost the other students because they may get bored (Student Motivation and Involvement & Pedagogical Principles); therefore, I did not insist on Talat. I just wanted to get his attention to the lesson (Subject Matter Content & Attention). He is capable of answering the question, but it may take too much time (Student History). Since I did not get any response from him, I turned to another student to get the answer.

To conclude this part, both experienced and novice teachers make use of the Further the Lesson principle in their interactive decision making, but with a difference in their concerns. The experienced teachers are concerned with student understanding and appropriateness of teaching strategy, whereas the novices are concerned with time constraint and student encouragement.

5.1.4. Accommodate Students' Learning Styles, Preferences, and Needs

Parallel to Bailey's (1996) findings, both the experienced and novice teachers were observed to depart from the lesson plan to accommodate students' learning styles, preferences, and needs throughout the study. However, the experienced teachers were found to be more relaxed while tailoring the lesson according to student needs, level, and preferences.

For example, one of the experienced teachers, Merve, thinks that her students need a lot of modelling in English:

> I repeated their answers to make them hear it easily. They can also hear the correct pronunciation from my sentence (Subject matter Content). If they hear a lot, they can produce the sentences correctly (Belief & Student Motivation and Involvement).

Another experienced teacher, Selen, comments that she can easily adapt the plan or the activities according to students' immediate needs and level she observes in the class:

> I have been teaching this book for more than 2 or 3 years. I know it (Familiriziation with the Book). Therefore, I can arrange the time limits on the spot effectively according to their level and immediate needs (Students' Needs). I have been teaching them since the beginning of the term that's why I know what they have and haven't learnt (Knowledge). This is a very good thing for a teacher. I know their abilities (Pedagogical Principles).

Selen also tends to use a graded language in the class interactions due to low profiency level of the students:

> I try to use a language which is not complicated for the students (Simplified Language). I try to give simple instructions using simple classroom language. I use a graded form of English language (Academic Skills). For language classroom usage, I want to get some more interaction with the students (Teacher Interaction). These questions came to my mind on the spot. I make my sentences according to the mood of my students (Student Psychology), topic at hand (Nature of the Activity), and

> students' expectations in that lesson (Student Motivation). You know, immediate decisions.

Another experienced teacher, Kezban, also invokes the principle of Accommodate Students' Learning Styles, Preferences and Needs as follows:

> I saw that some students are not pleased with their pictures (Social Development & Students' Needs). Some found their pictures difficult to talk about it. Students' satisfaction is important for me as it is in every area of human life (Belief). I also provide some reinforcement for the students (Student Motivation and Involvement). I believe that they feel self confident if the teacher says, "Good! Well done!" something like that. I use them automatically (Routine& Student Psychology).

In another instance, the experienced teacher Kezban changed the nature of the activity on the spot due to the students' academic abilities:

> In the previous lesson, I was going to study the handouts on which there are some questions, but after writing the first sentence on the white board, I thought it would be better to scramble them and ask the students to put them into the correct order and then answer them (Student Motivation and Involvement). Because while writing it on the white board, suddenly I thought that it would be very easy for the students to answer it (Academic Skills). I just decided to change the order of the words, so it would be better for them to practice the structure of the sentence (Subject Matter Content). They are going to find the subject and the verb, and they object to combine the words into a meaningful sentence. You know, they like this kind of activities. It is like a puzzle (Preferences & Student Likes).

The novice teachers were also found to favor the principle of Accommodate Students' Learning Styles, Preferences, and Needs in adapting their lesson plans on the spot. The novice teacher Burcu, for example, changed her planned strategy on the spot regarding the weak students in the class:

> I did not plan to write the sentences on the white board, but I saw that there was something wrong with the present perfect tense (Curriculum Integration). I wrote the sentence because in the activity only some words are given and I want them to provide a complete sentence (Curriculum Integration). I also wrote it for the weak students to correct their mistakes. I know my students, and I know what they know and do not know (Student History). I know what and how they can understand easily (Student Understanding).

Similarly, another novice teacher, Gamze, accommodated her speech rate according to the students' proficiency level:

> I speak very slowly, repeating again and again because the previous day, some students told me that I am speaking fast, and they can not understand me (Academic Skills, Student History & Student Understanding), but I did not give much importance to it. The previous day, half of the students told me that I am speaking fast. So, I decided to speak more slowly and repeating (Pedagogical Principles & Academic Skills). I am very controlled here. I was actually bored because I am not accustomed to speaking so slowly (Teacher Feeling). And this is the first time I am teaching Level 1 students. For two years I taught L2 students (Teacher Background).

The most inexperienced teacher Ece tends to conduct some extra speaking activities in the class because she knows that her students like such speaking activities:

> I am patient with the class because this is a very special class. They know that they are weaker than the other students; therefore, they feel bad (Student History & Psychology). We have to be patient and pay extra attention; otherwise, they can not learn. We would loose all of them (Student Learning & Student Motivation and Involvement).I generally conduct speaking activities for this class. I know that it works because they like speaking (Routine& Preferences). Some students understand visually: They want to see it because they can not understand may be what I say (Student Understading and Learning Style).

Another novice teacher, Burcu, considers the student ages, experiences, and daily life routines while adapting the content of her questions on the spot:

> In the course book, it asks about "have you ever been to Spain? Or have you ever flown?" such kinds of questions. Their ages are not enough. They are too young to have such kind of experiences, but accidents and hospitals or toothache is very common, so they could answer it easily (Student History & Knowledge). I try to ask the most common activities for them regarding their lives and experiences (Student Motivation and Involvement).

On the whole, the principle of Accommodate Student Learning Styles, Preferences and Needs is seen to underline the interactive decision making behavior of the teachers in both groups to a great extent. Moreover, all the teachers are observed to be aware of the students' different backgrounds, neeeds, preferences, and styles. Most importantly, regardless of their expertise level, all the teachers are able to articulate this principle explicitly while commenting on their in-class actions at the stimulated recall interviews.

5.1.5. Promote Students' Involvement

Teachers eliminate some portions of the lesson, change some planned teaching techniques and sources on the spot, elaborate on the issues put forward by the students in the class, or conduct some extra unplanned activities to promote student involvement in class activities (Bailey, 1996).

In the present study, regardless of the expertise level, both the experienced and novice teachers were observed to make interactive decisions to promote student involvement. The statistical values, however, indicate that the novices consider the principle of Promote Students' Involvement more frequently than the experienced teachers (see Table 4.4.). This may be due to the fact that three of the novices were assigned to teach remedial classes (see Appendix 8) after the first videotaping session, whereas only one experienced teacher was assigned to teach such a class throughout the study.

One of the experienced teachers, Merve, did not hesitate to take part in the class activity to promote student involvement:

> I answered his question because I asked them questions, so I have to answer their question because I am one part of the class (Student Understanding & Social Development).

The groups also differ in the extent and kind of the strategies they employ to facilitate student participation in the class. The most experienced teacher Kumru for instance, used different routines to involve the students in the class activities:

> I close my ear to the students to show that they have to repeat. I pretended as if I could not hear it (Pedagogical Principles & Student Motivation and Involvement). I always go around during pair work activities to see how it is going on, to make corrections whenever necessary (Routine, Student Understanding & Subject Matter Content). It also motivates the students. They stop talking Turkish and doing some other things (Student Motivation and Involvement & Use of the Target Language).

Another experienced teacher, Selen, also employs some different techniques to promote student involvement in the activities:

> I asked the page number just for motivation (Student Motivation). When the students hear it from one of their friends, they can just get the message easily, and they can just be motivated in that page (Pedagogical Principles). May be sometimes the students can not hear it (Group Management). Using this strategy, I try to make everbody get ready to answer the question (Student Motivation and Involvement). I wanted every body to think about the answer first focusing on forming the question (Subject Matter Content). This is something I use, how can I say?, regularly: First I ask the question without announcing any name. I wait to give them some time to produce the answer. Then I choose the student to answer it (Routine & Student Motivation and Involvement).

Similarly, the novice teacher Zeynep makes use of students' lives to encourage their participation:

T: When you go to the army,

T: How do you feel? (Elicits and Incorporates Input)

Zeynep comments on this classroom excerpt as follows:

> I ask about their experiences to make them apply the things that we have studied into heir own lives (Pedagogical Principles & Student History). May be in this case, they participate and involve more in the activity. Some of the students could not think anything. So, I just wanted to guide them, may be a kind of prompt (Student Motivation and Involvement).

Another novice teacher, Gamze, employs fill in the blank technique to involve the students in the activity:

T: (She puts another sentence next to the first one on the white board.)

T: (Applies, Extends, or Plans)

T: That was ……………… years ago.

T: (She looks at the whole class with her hands pointing the blank

(Focuses Attention/Effort)

The novice teacher Gamze comments that her students are accustomed to her style:

> I did not say anything, but the students could answer it. I do not usually do this (Student Motivation and Involvement). The students get accustomed to this silence (Routine & Student History). I mean they get bored of it, but if you sometimes use this silent way, this is not a technique (Pedagogical Principles & Teacher Choice). But let me say what ever we

> call; then the students get involved in the lesson (Student Motivation and Involvement). So in a way, they participated may be unconsciously, but they participated.

In another classroom instance, the novice teacher Gamze provides real life examples to promote student involvement in the activity:

> T: OK! What about HATE? HATE?
>
> (Focuses Attention/Effort & Checks Knowledge)
>
> SS: NO RESPONSE (Deficient Response)
>
> T: What do you hate?
>
> (Elicits and Incorporates Input& Explains Concept/Procedure)
>
> SS: NO RESPONSE (Deficient Response)
>
> T: For example, I hate studying English.I hate crowded buses
>
> (Applies, Extends, or Plans)
>
> SS: Yes, Yes (They laugh) (Elicited Response & Initiation)

Gamze comments on her strategy as follows:

> Since no response comes from them, I give a real life example. I hate getting on the bus because they are always crowded, and I know that they will agree with me (Knowledge & Subject Matter Content). I just wanted to interpret their feelings they have at the time. I think they do not hate, but they are just bored. So I wanted them to feel that I was a student just like them and thus encourage them to take turns (Pedagogical Principles & Student Motivation and Involvement).

To conclude, the principle of Promote Student Involvement is seen to have some considerable effects on the interactive decisions of all the teachers in the study. Moreover, both groups of teachers are seen to have developed a good repertoire of strategies to promote student involvement. However, the experienced teachers are observed to be more practical than the novices in employing a wide set of routines to involve the students into the class activities. The groups of teachers also differ in their concerns while employing the principle. The experienced teachers, for instance, focus on the appropriate teaching strategy at the time, whereas the novice teachers are concerned with off-task behavior.

5.1.6. Distribute the Wealth

This principle involves keeping more verbal learners from dominating classroom interaction to encourage the less out going students or less verbal ones to participate more often in the class activities (Bailey, 1996). Both groups of the teachers in the study articulated this principle in their comments at the stimulated recall interviews. However, compared to the novice teachers, the experienced teachers were seen to be much more concerned with the principle of Distribute the Wealth. In addition, they were more explicit in their reasoning at the stimulated recall interviews.

An example arose in the class of the experienced teacher Selen. She makes every student to tell a sentence about one of the students in the class:

T: Everybody! (Explains Concept/Procedure)

T: Look at Yasemin and tell a sentence about her!
(Explains Concept/Procedure)

T: Yes! Tell a sentence about her! (Focuses Attention/Effort)

The experienced teacher Selen comments on the preceding classroom excerpt as follows:

> I get only one sentence from each student to describe her so that every one may have the chance to tell a sentence (Group Management & Social Development), being a fair teacher. And if I wait for all the possible answers from only one student, the other students may feel themselves in a resting time. May be they do not get interested in the lesson, but in this case they may think that "may be I can tell a sentence, this is my turn!" Just to take their attention and increase their motivation.I try to give equal turns. It is how every thing goes (Student Motivation and Involvement & Group Management).

Selen also explains that she takes the student personality into consideration while distributing the wealth:

> "I want to give the turns to silent and unwilling students (Pedagogical Principles) because I know that they know the answer, but they are not brave enough to raise their hands (Student History & Preferences)"

Similarly, the most experienced teacher Kumru employs different strategies to provide the balance among the students while distributing the wealth:

> T: Mrs. Gray'i yazan? (Focuses Attention/Effort)
>
> T: Mrs. Gray? Yes, please! (Elicits and Incorporates Input)

Kumru explains the rationale behind her strategies in giving turns to the students as follows:

> I use the names of the characters in getting the answers because if I direct the question to the students, I may come across with the same person

> (Equal Turn Giving & Pedagogical Principles). Sometimes, I choose the students to answer among the volunteers. Sometimes, among the silent ones just to motivate them to raise their hands (Routine & Student Motivation and Involvement). For example, Müge was one of the silent students (Student History).

Likewise, the novice teachers were also seen to make interactive decisions with respect to the principle of Distribute Wealth. For instance, the most inexperienced teacher Ece comments on the issue as follows with regard to a specific classrom instance:

> I especially choose the students who can not pronounce very well and I correct them (Pedagogical Principle). Olcay is one of them. He is little bit shy, so especially I pick up the students who do not talk very often in the classroom (Student History).

Another novice teacher, Zeynep, also agrees with Ece at the following post-observation conference:

> I gave the turn to Erdinç instead of Yılmaz because a few minutes ago as I remember Yılmaz had spoken but not Erdinç. I try to make every one to speak. In the last ten minutes, I try to give the turns who have not talked yet in the class (Student Motivation and Involvement). I wanted to give them a chance to speak. I always want every one to participate in the class (Routine).

To summarize, the principle of Distribute Wealth seems to affect the teachers' interactive decision making behavior to some extent. Since they know their students very well due to the small numbers of the students in the class, they are seen to be able to make appropriate interactive decisions to distribute the wealth accordingly.

5.1.7. Subject Matter Content

As indicated in Chapter 4, the novice teachers were observed to utilize Subject Matter Content category more frequently than the experienced teachers (see Table 4.4.). Nevertheless, both groups of teachers provide illuminative examples for the category of Subject Matter Content at the stimulated recall interviews.

For example, the experienced teacher Merve made a decision on the spot regarding the content of the lesson she would teach:

> I repeat the date after the student to make them say the year correctly because years, past forms of the verbs, and negative forms of the past tense are the focus of the lesson (Subject Matter Content). I use the things in the class to introduce the new subject so that the students can see clearly. I think it is clear (Pedagogical Principles &Student Understanding). If I make the students familiar with words and grammatical items in the text in this way, they can easily remember the words (Curriculum Integration & Student Understanding).

Similarly, the most inexperienced teacher Ece uses the students' old knowledge and mother tongue to make them understand the new information:

> T: Am, is are geldiği zaman ne zaman –ing kullanıyoruz.
>
> (Checks Knowledge)
>
> T: At the moment. Şu anda oluyorsa (Gives Feedback)
>
> T: Like ta nasıl oluyordu? (Focuses Attention/Effort)
>
> T: Like ta -ing liydi.I like playing football (Applies, Extends, or Plans)
>
> T: Ordaki fark ne? (Checks Knowledge)

Ece comments that she decided to explain this difference on the spot:

> I just asked a student to explain the difference between the two structures in Turkish (Student Motivation and Involvement). I decided it on the spot because I did not think this would prepare such problems in the class. I thought it would be easier for them, and then I noticed it is difficult for them.Thus I concentrated more on the structures (Curriculum Integration & Subject Matter Content).

Another novice teacher, Burcu, provides some structures and words for the writing activity so that the students can write better about the topic:

> I wrote the word weather in the centre of the white board because we will talk about bad and good weather. Fine weather and suggestions, so I thought, on the spot, it would be good to put the word in the middle of the white board (Student Motivation and Involvement). Also, they need some words to explain something especially for suggestions (Curriculum Integration). Later, I want them to write a dialog "it is too hot or cold." They need to learn the related words. I also wanted to see what they have exactly learnt, what kind of words (Important Content). If they did not learn the words I am planning to use, I could teach them those words because we will use those words during the activity (Curriculum Integration). Actually, I was going to design the white board differently, but I could not get what I thought before the lesson. I could not get effective responses (Subject Matter Content), just to help them to make sentences with the new subject, suggestions (Curriculum Integration). I left the main points on the white board and underlined those main points to attract their attention (Student Motivation and Involvement).

In another instance, the novice teacher Gamze underlines the main structures in the sentences written on the white board to draw the students' attention to the structure:

> "(She underlines would like to in) (Focuses Attention/Effort):
>
> I would like to play tennis."

Gamze emphasizes the Subject Matter Content while explaining the reason behind her action as follows:

> I underlined some parts in the sentence to let them see the structure actually to see where "somebody" comes: between "would like" and "to", to let them see (Student Understanding & Subject Matter Content).

5.1.8. Integration of the Skills

Both the experienced and novice teachers were found to be concerned with the principle of Integration of the Skills while making interactive decisions. For instance, the most experienced teacher Kumru emphasizes the integration of four language learning skills (i.e., Reading, Writing, Listening, and Speaking) while commenting on her video-taped action:

> I had not decided on the homework before the lesson. In the lesson, two students exemplified the characters, and they did it correctly in the spoken form, so I do not think it would be difficult for them to write it (Academic Skills). A written form is also necessary; combining the four skills in a way (Integration of the Skills, Belief & Pedagogical Principles). They did it orally and took notes. Written form was left, and if they do it at home, it would be good for them, just to integrate four language skills.

Another experienced teacher, Selen, also favors the principle of Integration of the Skills:

> I try to integrate the skills into the activity. This is a really authentic dialog in the class (Authenticity & Integration of the skills). I also focus on their world knowledge. Our lesson is not something artificial. It is natural and authentic (Student Motivation and Involvement & Subject Matter Content).

Similarly, the novice teacher Gamze employs different activities and strategies to integrate the four language learning skills in the lesson:

> I am interested in alternatives because I just want them to use the English they know (Academic Skills & Subject Matter Content), just to use all the vocabulary they know. I sometimes ask some questions about the hobbies in the handout because I think grammar exercises should not only be for grammatical points (Belief & Student Motivation and Involvement).They should also serve for speaking purposes sometimes writing purposes (Pedagogical Principles & Social Development). I just wanted them to feel that we are not only studying grammar; we are also talking about hobbies. I just wanted to integrate the language skills in the same lesson (Integration of the Skills & Student Motivation and Involvement).

To conclude, both groups of teachers share the idea that Integration of the Four Skills is essential in any language learning process; therefore, they make interactive decisions to integrate the skills whenever necessary throughout the lesson.

5.1.9. Student Understanding

As mentioned in Chapter 4, the novices were seen to utilize the category of Student Understanding more frequently than the experienced teachers while making interactive decisions (see Table 4.4.). However, both groups of teachers were observed to employ almost the same teaching strategies and routines to enhance Student Understanding in the class.

Merve, an experienced teacher, illustrates the principle of Student Understanding in her comments as follows:

> I stopped only for the first date to see if the students are doing the task properly or not (Group Management). May be, they misunderstood it, Just to check the students' understanding (Student Understanding).

The experienced teacher Merve also uses her body language to convey the meaning of some words to the students:

> I showed my clothes. I could also write it on the white board. I think they understand what clothes means as a whole, but it is also one part of the cloth. So I think it is enough to show it. If I give just the translation, I feel myself like a dictionary in that time (Student Understanding & Pedagogical Principles).

Another experienced teacher, Kezban, uses her world knowledge to enhance Student Understanding in the following classroom excerpt:

> T: You know intelligent? (Checks Knowledge)
>
> T: Einstein is an intelligent man. (Explains Concept/Procedure)

The experienced teacher Kezban explains her choice in the preceding classroom excerpt as follows:

> All the students know who Einstein is and also every body knows that he is very intelligent. I was sure they could understand what it means (Knowledge)

Similarly, the most inexperienced teacher Ece favors the Student Understanding principle in the following excerpt:

> T: Or he does not life demiyoruz.Fiil olduğu için ne diyoruz?
>
> (Elicits and Incorporates Input)
>
> SS: LIVE (Elicited Response)
>
> T: Yes, live. Life ne? (Gives Feedback & Checks Knowledge)
>
> T: This is an important point
>
> (Focuses Attention/Effort & Subject Matter Content)

Ece comments on her action in the preceding classroom excerpt as follows:

> I preferred to explain it in Turkish since they have to understand that point very clearly (Subject Matter Content) because I explained it several times in English. I noticed that it is very unclear for them and still make mistakes (Student Understanding). I decided it at that moment. I think it is not very important for them to hear it in Turkish or English (Belief). It is easier for them to understand it in Turkish. I prefer Turkish for this reason (Student Understanding & Academic Skills). At that time, to me, using the target language is not so important. Understanding the structure is more important (Student Understanding & Belief).

In another instance, the novice teacher Zeynep uses paraphrasing technique to enhance Student Understanding on the spot:

T: What were the men doing? (Elicits and Incorporates Input)

SS: NO RESPONSE (Deficient Response)

T: Or, who were these men? (Applies, Extends, or Plans)

The novice teacher Zeynep comments on the excerpt given above as follows:

> He could not answer the question because I think he could not understand the question. So, as you noticed, I changed my question and ask it differently. Then he could answer it (Student Understanding & Student Motivation and Involvement).

Drawing, body language, repetition, and giving examples are the other strategies employed by all the teachers in the study to enhance Student Understanding throughout the lessons. For example, the most inexperienced teacher Ece decided to draw on the white board to illustrate the meaning more properly:

SS: Purse! (Elicited Response)

T: PURSE! Ya! (Gives Feedback & Focuses Attention/Effort)

T: Put your money in purse. Especially, women use purse.
(Explains Concept/Procedure)

T: Something like that

T: (She goes to the white board and draws a purse on the white board)
(Applies, Extends, or Plans & Focuses Attention/Effort).

The most inexperienced teacher Ece explains the reason behind her decision as follows:

> First, I said women carry a purse. Since they may get a wrong idea and think it as a wallet in their minds, I drew it on the white board. I gave an example because they can get the meaning more easily if they see it in a context other than seeing it in isolation (Student Understanding & Pedagogical Principles).

Another novice teacher, Gamze, also favors drawing on the white board to clarify the meanings of the verbs "like", "love" and "dislike". She designs the white board for the activity as follows:

Like ♥ Love ♥♥ dislike ♥ hate ♥♥

don't like

doesn't like

The novice teacher Gamze emphasizes Student Understanding principle as follows:

> I symbolized the verbs, like, love, dislike, and hate, with hearts to make the meaning more clear (Student Understanding). If you remember a student asked love is stronger (Knowledge). Just to let her think so, I do a small heart. I just thought about this division at that time.I drew them on the white board just to clarify their meaning (Student Understanding). To see them altogether on the white board and that after these verbs we use –ing (Curriculum Integration & Subject Matter Content).

In the following classroom excerpt, one of the novices, Zeynep, gives examples to facilitate Student Understanding at the time:

T: Yes, he never told out of turn (Gives Feedback)

S: Hocam! Ne demek out of turn? (Initiation)

T: For example, I say Tuba, I say Mediha,

T: but somebody else talks, (Explains Concept/Procedure)

T: OK! Out of turn! (Focuses Attention & Group Management)

The novice teacher Zeynep remarks that students can get the meaning easily through such examples:

> I give the names of the students to clarify the phrase out of turn because these students are sometimes out of their turns, so they can understand easily (Student Understanding). I did not explain it in Turkish since they could easily get the idea from the example (Curriculum Integration).

Another novice teacher, Gamze, illustrates an interesting example for the issue. She chose a different technique, self-correction, to deal with the problem:

S: I would like Aslı to open the lamp! (Initiation)

S: (Aslı turned on the lights) (Elicited Response and Behavior)

S: and close it.

T : Davut! Doğru yaptı mı sence?

(Focuses Attention/Effort & Checks Knowledge)

S: Yaptım. Sonra kapa dedi. (Initiation)

T: Onun haricinde yanlış yaptığı bir şey var

(Explains Concept / Procedure & Focuses Attention/Effort)

SS: NO RESPONSE (Deficient Response)

T: (She is standing in front of her desk with her hands arms crossed)

· (Focuses Attention/Effort)

T: Open the lamp dedin di mi?

(Applies, Extends, or Plans & Focuses Attention/Effort)

S: Lambayı aç? (Initiation)

T: YES! (Gives Feedback)

T: (She looks at the lights on the ceiling)

T: Lambayı sökeceksin ve içini açacaksın. (Focuses Attention/Effort)

S: Ha! O zaman ışığı yak olacak.(Initiation & Attention)

T: Ha! Sen ışığı yak anlamında açmak demek istedin!!

(Checks Knowledge & Focuses Attention/Effort)

T: Onun için başka bir şey var. (Explains Concept/Procedure)

T: (She writes and tells).To turn on the lights

(Focuses Attention/Effort & Aplies, Extends, or Plans)

T: OK! Open kapı açmak, pencere açmak için kullanılır

(Explains Concept/Procedure).

T: Sen lambayı açmak için open the lamp dediğinde lambayı söküp içini açmamız gerekiyor.

(Explains Concept/Procedure & Focuses Attention/Effort)

T: Ama ışığı yakmak anlamında to turn on the lights

(Explains Concept/Procedure)

The novice teacher Gamze comments on the excerpt given in the preceding example as follows:

> She did not open the lamp. She turned on the lamp. So, I wanted them because she did not do what he said. So you are right. I did not just want to judge him. He made a wrong sentence, but she did not do the right action, either. I pretended to misunderstand the sentence (Pedagogical Principles & Student Understanding). Then, I made him correct himself, and then I provided him with the right structure: to turn on the lights (Student Motivation and Involvement & Pedagogical Principles).

To sum up, both groups of teachers are found to consider the principle of Student Understanding in the majority of the interactive decision making cases observed throughout the study.

5.1.10. Language Use

Both experienced and novice teachers were observed to use the mother tongue, Turkish, in the class almost for the same reasons: to define abstract and culturally different words, prevent student misunderstanding so that the activity goes smoothly, to gain time, to encourage the students, and to present or clarify an advanced structure or words emerging on the spot. Some individual differences, however, appeared within each group. For instance, some participant teachers preferred to use a mixture of both languages throughout the lesson, whereas some tended not to use the mother tongue at all.

An example for the use of the mother tongue was observed in the class of the most experienced teacher Kumru:

> T: What is Number 3? (Elicits and Incorporates Input)
>
> S: Pasta da olur mu? (Initation)
>
> T: (She smiles) (Focuses Attention/Effort)
>
> T: OK! (Gives Feedback)
>
> T: But! Listede yok pasta!

Kumru comments on her choice of language in the preceding classroom excerpt as follows:

> I decided to talk Turkish because if I say it in English at that time, they would not understand me (Academic Skills & Student Understanding). Pasta was the correct word, but it was not included in the list. When they matched the columns, there was no pasta, but I told them pasta in the previous hour, so it was a good response (Important Content & Knowledge). So, I did not reject it. I use both languages especially if it is an information gap activity and if the instruction is quite long (Nature of the Activity, Student Motivation and Involvement & Academic Skills).

The most experienced teacher Kumru further states that the proficiency level of the students affects her choice of the language in the class:

> I use both languages, especially with the total beginners for 2 and 3 months in the beginning (Routine & Academic Skills). I do it on purpose you know. I do not remember how many years I have been doing this. But this is my style (Teacher Style). I found this way because I want them to hear the second language (Social Development). But sometimes I think it is not

> enough so I use it as a mixture form or for the first two or three months. Later on, I usually use only English very rarely Turkish (Pedagogical principles & Social Development)

Another experienced teacher, Selen, on the other hand, prefers not to talk Turkish in the class at all, regarding some Pedagogical Principles:

> I never talk Turkish in the class; rarely. Using L1 is negative. Using L1 in EFL classes is not really good for the students. It does not facilitate the students because they have to get an exposure of the target language in an authentic atmosphere (Belief, Student Motivation and Involvement, & Social Development). The EFL students must hear the target language everyday in a natural atmosphere. If I use Turkish, they can not have this chance. They are learning English and it is a natural environment (Pedagogical Principles).

Similarly, the most inexperienced teacher Ece also prefers not to use the mother tongue, Turkish in the class:

> I try not to speak Turkish in the classes especially in Level 1. I do not want to speak because their level is very low (Academic Skills), and if I start to speak Turkish, they will get used to it (Student Motivation and Involvement & Social Development). I want them to understand English and in the first week, they could not understand me. They just said we can not understand anything, but now they understand more complex structures (Student Understanding).

Ece, however, reports that she sometimes chooses Turkish to gain time while explaining something advanced or important. Similarly, another novice teacher, Zeynep, uses Turkish to clarify the meaning of a difficult word even though she chooses to speak English all the time in the class:

> I do not give the Turkish meaning at first sight because I always think that giving the Turkish meaning is the last step (Belief & Social Development). Sometimes, I want them to provide its Turkish meaning especially for some abstract nouns or culturally different things. In this way, I can check whether they understood it or not (Student Understanding). So, when you are in a difficult situation, you can use Turkish but not always. For example, in English we have some words which we do not have in Turkish. So, in this case, we should give them Turkish equivalents of the words (Subject Matter Content & Student Underdstanding).

The novice teacher Gamze also uses the mother tongue, Turkish, to explain an advanced structure superficially in the following classroom excerpt:

T: (She points to the phrases on the white board):

(Focuses Attention/Effort)

"was invented and were invented"

T: Was invented ve were invented icat edildi anlamına gelen bir kalıp OK!

T: Her zamanki kuralımız geçerli:

Tekillerde was çoğullarda were kullanıyoruz.

Bu bir kalıp (Explains Concept/Procedure)

The novice teacher Gamze comments on the preceding classroom excerpt as follows:

> It is a new point for them (Knowledge & Subject Matter Content). They do not know passive verbs, and I did not want them to get panicked (Student Psychology).Therefore, I ask "What is this? Was /Were invented, How do these two verbs come together?" (Student Motivation and Involvement) So, I just turned back to Turkish to help them feel secure (Student Understanding & Student Psychology). I use the mixture of both languages because I sometimes feel, realize or observe that they need it. I can feel it when I look at their faces. Their eyes say Turkish, Turkish and Turkish!!! (Preferences, Social Development & Students' Needs)

In another instance, the same novice teacher Gamze reports that she turned to Turkish since she had no other alternative at the time:

> Colour TV is a new word for them (Knowledge) and actually I did not know how to explain it in English, and I had nothing any realia to show visual learners (pedagogical Principles & Student Understanding). I thought all these things at the time. I usually prefer drawing on the white board (Routine). I draw the objects, but how can I draw a colour TV? I can not give the colours, so I prefer to use Turkish (Teacher Preference). I felt it would be better to do it in Turkish (Belief) and also not to tire myself because it is not something concrete.

To conclude this part, all the teachers are observed to make interactive decisions to choose either language during their ongoing instruction; however, the teachers in each group differ from eachother in their reasons, attitude, and orientation.

5.2. Teaching Routines

The teaching routines observed in the video-taped classes and utilized by the teachers at the stimulated recall interviews are illustrated in Table 5.1. and Table 5.2. Table 5.1. presents the routines employed by both groups of the teachers in the study, whereas Table 5.2. indicates the differences in the routines employed by the experienced and novice teachers throughout the study.

As displayed in Table 5.1., all the teachers tend to give the attendance list to their students in the beginning and take it back in the end; however, the groups differ in their reasons for utilizing the routine in the class. For example, the experienced teachers remark that they give the attendance list to their students to sign because they trust their students, whereas the novice teachers reveal that they prefer to give the attendance list to the students since the other strategies for getting the attendance would take much more time. However, both the experienced teachers and the novices agree on the idea that getting the attendance either in the beginning or in the end does not disturb the flow of the instructional management.

Moreover, all the teachers in the study were found to explain the aim of the lesson in the beginning to encourage the students to participate in the class activities (see Table 5.1). They also appeared to believe that if students know what they will do throughout the lesson, they feel much more comfortable and secure while dealing with the tasks in the class.

Table 5.1. Routines Employed by both the Experienced and Novice Teachers

Gives the attendance in the beginning and takes it in the end.
States the aim clearly before starting each activity.
Explains the aim of the lesson at the beginning of each lesson.
Elicits interesting news or events and thus makes students talk before starting the lesson.
Asks whether the students have any questions at the end of each lesson and before, during, and after the task.
Opening and Closing Routines
Always greets the students in English as soon as entering the class.
Summarizes the previous hour.
Usually summarizes the whole lesson.
Sometimes asks a student to summarise.
Makes a very short summary to review.
Collects homework in the beginning.
The Recall Enhancement and Clarifying Routines
Pauses; Draws; Uses gestures; Acts out; First letter mnemonics.
Writes the half of the sentence and waits for the students to complete it.
Uses dialogs and asks them to act it out in front of the class if it is the part of the daily language.
Reads the instructions given in the book.
Sometimes makes students read it.
Sometimes first reads and then asks them to read.
Explains the activity in both Turkish and English.
Always provides examples for the activities.

Table 5.1. Routines Employed by both the Experienced and Novice Teachers (Continued)

White Board Usage
Does not leave the class without cleaning the white board.
Cleans the white board while the students are on task to gain time.
Points at the example sentences on the white board.
Writes emerging words on the white board throughout the lesson.
(on the upper right side of the white board with its class)
Writes the sentences and the answers students tell on the white board.
Writes the title on the top of the white board.
Writes the word on the white board if there are some kinds of mistakes.
Writes and tells the new words on the white board.
Writes the word category of the new word next to the word in parenthesis.
Writes the new words on the white board.
Circles and underlines the main structure in the sentences.
Looks at the students to complete the sentence. / for the volunteer and for more volunteers. / on the other side to involve them in the activity. / to warn: you are writing!!! / for the answer.
Looks at the other students in the case of wrong answer.
Looks at a student to make him continue.
Distribute the handouts one by one.
Says: Take one and pass the rest please.
Goes around while students are on task
Assign the students into pairs herself.
Asks students to form their own pairs or groups.

Table 5.1 displays that asking for unclear points throughout the lesson is another routine employed by all the teachers in the study. For example, Kezban, an experienced teacher, considers student personality traits while commenting on the issue:

> I ask whether they have any problems because I want to learn if there is a problem or not (Student Understanding). This is a chance for them to ask the questions like "Teacher! I did not understand this or that!" (Student Motivation and Involvement) I know that some students are shy to ask such questions during the instruction.

As for the opening and closing routines indicated in Table 5.1., the experienced teachers and the novice teachers were found to use these anchoring routines to link the current subject material with the previously learnt material. Such an example was observed in the class of the experienced teacher Merve:

> T: We talked about the inventors last lesson. (Curriculum Integration)
>
> T: You remember! We studied it in the previous hour.
>
> (Focuses Attention/Effort)

Another finding in Table 5.1. demonstrates that both groups of teachers summarize the lesson in the end. However, in some instances, the novices prefer to link the lesson with the previous hours rather than summarize the lesson in the end. At the semi structured interview, the most inexperienced teacher Ece comments on this issue as follows:

> I sometimes summarize the lesson. I have to spend my time economically because my partner will teach after me (catching up with the Syllabus). So, I have to finish my part, but generally before I start the lesson, I if it

> is the first lesson, I generally check what they studied the week before (Curiculum Integration).

Similarly, another novice teacher, Gamze, comments on the routine of summarizing the lesson as follows:

> Yes! I do not often make summaries but I sometimes make repetitions. For example, I start the lesson with a question and the answer is related to the previous lesson (Routine & Curriculum Integration).

Another routine examined in Table 5.1 is recall enhancement and clarifying routines which are used to help students remember information and understand the terms better. Both groups of teachers were seen to employ these routines equally throughout the study. Drawing, gestures, keywords, first letter mnemonics, acting out, and pausing are the major common recall enhancement and clarifying routines observed among the teachers throughout the study.

Furthermore, as seen in Table 5.1., the teachers highlighted the use of the white board as one of their ordinary classroom life routines. They reported using the white board to teach or revise vocabulary, to enhance student understanding, to draw student attention, and to summarize the lesson. For example, they were seen to write the word category of a new word next to the word in a paranthesis to teach the word category of the word (see Table 5.1.). In regard to this routine, one of the experienced teachers, Selen, reported that:

> I always write the word category of the new word next to the word in parenthesis. It is a good way of learning vocabulary (Routine, Pedagogical principles, & Student Learning). They learn the form, meaning, pronunciation and its category altogether (Subject Matter Content). May be, at first sight, it may seem a bit much, but they are

> master students, and they can get them (Academic Skills). They always like to learn parts of speech because I started teaching them vocabulary in this way (Preferences, Teacher Style). It helps them in their reading activities, in guessing the meaning of new words in a context (Pedagogical Principles).

The experienced teacher Selen also arranges the whiteboard differently to teach the words emerging on the spot:

> I write the question to focus their attention. As for the white board usage, usually the left part for the words appearing in the unit and the right hand side for the words which come out in the authentic dialog (Group Management & Student Understanding). So, they can see the words regularly related with the unit. The students can learn the words (Student Understanding & Subject Matter Content).

In another instance, the most inexperienced teacher Ece uses the whiteboard to draw the students' attention to the content of the lesson at the time:

> I wanted the others to look at the white board. If I said only yes, nobody would listen to us. I wrote it on the white board to get their attention because it was important (Group Management).

Another novice teacher, Gamze, is observed to use the whiteboard while teaching mechanical skills:

> Time to time, I write words on the white board. I know which ones are very important and which ones are not. Some mistakes can be OK. They can do these mistakes, and they will learn them by themselves, I know. However, some mistakes were more important (Curriculum Integration) and therefore, they have to be corrected immediately (Pedagogical

> Principles). Moreover, the students should know how to spell a word if it is an important word and given in the teaching order (Subject Matter Content & Instutitional Requirement).

Moreóver, both the experienced and novice teachers were observed to use the notes written on the white board throughout the lesson to emphasize the main points or make a quick review of the current lesson in the end.

Table 5.1. also shows that both groups of teachers have a habit of talking to the students while writing something on the whiteboard or cleaning it. They reported employing this strategy to gain time and control the class. As the novice teacher Gamze noted on one occasion:

> I both write and tell the sentences because I want them to complete the sentence or the question (Student Motivation and Involvement). I do not want to stop the link, the eye contact with them because when I turn my back, I can not control them or I do not know what they are doing. That's the reason (Group Management & Pedagogical Principles).

As for another routine, going around in the class, displayed in Table 5.1., the teachers in both groups were observed to go around in the class for the same reasons such as giving feedback, drawing students' attention, answering their possible questions, and checking whether the students are on or off-task. However, in some instances, the novice teachers could not explain the reasons for their walking around in the class. This may be reflecting that novice teachers do not monitor their own actions as much as the experienced teachers while teaching in the class.

The last routine presented in Table 5.1. is assigning students into pairs or groups. All the teachers in the study mostly preferred to ask the students to form their own pairs or groups due to their seating arrangements; however, the teachers were sometimes observed to form the groups or pairs by themselves so that different students could work together in different activities.

As an example, one of the experienced teachers, Merve, assigns the students into pairs:

> I assigned them into the pairs. Sometimes, they form the pairs always with the same student, but I want to avoid having such pairs. They need to change pairs (Social Development & Pedagogical Principles). Sometimes, they do not get engaged in the activity, but they talk, chat for a few seconds (Student Motivation and Involvement). I can accept a considerable amount of noise for the sake of pairing the students from different parts of the classroom (Group Management).

Similarly, in another instance, the most experienced teacher Kumru also forms the pairs by herself:

> I choose the pairs, otherwise they move to the left or right, and also it takes much more time (Time Constraint). I use pair work to make them talk (Student Motivation and Involvement).

Table 5.2. displays the differences observed between the groups of teachers in regard to the routines they employ in the class.

Table 5.2. Differences in the Routines of the Experienced and Novice Teachers

Experienced Teachers	Novice Teachers
Does not react to the latecomers. Allows the latecomer to come in silently. Asks the latecomer for the reason. Ignores the late comer.	Has a classroom rule: If anyone is late, she or he should not say anything to interrupt our class interaction. Welcomes the latecomer. Ignores the latecomer.
Verbal Routines OK! Good! Very good! Go on! Say it! Pardon? Good surprisingly good! Ask it again! Alright! Çok güzel! Let's see! Yes please! Ha ha! Excellent! Now! Please the first one, You know! That's right, Yes! What else? Let's listen to him! Thank you, Right! Yes, you are right!	**Verbal Routines** Let's! OK! Pardon? Can you say it in English? That's right! And now! Yes! What else? For example! Ya,! Thank you! Alright! Remember?

Table 5.2. Differences in the Routines of the Experienced and Novice Teachers (Continued)

Experienced Teachers	Novice Teachers
Routines for Getting the Attention Directs the questions to the students sitting in different parts of the classroom. Smiles. Laughs. Pardon! Hadi bekliyorum!!! Knockes on the desk.ŞŞŞŞŞŞŞŞŞŞŞŞŞŞŞŞ Puts her hand on her ear and waits for her or his answer. Uses her thumb to mean OK. Utters the sentence word by word. DİNLİYOR MUSUNUZ??? Lowers her tone of the voice, Raises the tone of her voice. Comments as "Well! I do not know".	**Routines for Getting the Attention** Do not tıkırdate!!! Am I speaking Chinese? Puts her hand on her ear and pretends to listen to the student more carefully. Utters the sentence word by word Knocks on her desk to get their attention Asks the question word by word Hello! Hello! Ready? Raises tone of her voice Sometimes speaks louder, consciously or unconsciously
Homework Mostly assigns the homework in the end. Usually assigns homework at the end of the related activity. Gets the homework in the last hour. Assigns the homework in both languages.	**Homework** Assigns the homework in both languages. Gives the homework in English. Assigns the homework in the end.

As revealed in Table 5.2., both groups have some classroom rules for the late comers. Nevertheless, the teachers within the groups differ in their reactions to the latecomers. For example, two of the experienced teachers allow the latecomers to come in silently, whereas another experienced teacher, Selen, does not tolerate these latecomers so easily. In one of the instances, the experienced teacher Selen explaines her reaction to the latecomer as follows:

> I did not react to the latecomers because I told them, as a rule, if they are late, they should be very quite in the first 5-10 minutes for the first lessons. I do not warn them every time (Routine & Group Management). I do not want them to disturb the lesson. Sometimes, they knock on the door. So, I do not let them come in.

Similarly, one of the novices, Zeynep, also welcomes the latecomers if they silently take their seats without disturbing the class:

> I have a classroom rule: If anyone is late, she or he should not say anything to interrupt our class interaction just like a thief. She or he should go to the seat slowly and silently. It is our rule. If she or he says something, I will be angry (Routine).

However, two of the novices, Ece and Burcu, warn the latecomers indirectly using their tone of voice and behaviours. When a latecomer comes in, Ece looks at him or her and her watch at the same time and warns the late comer orally: "You are late!" Similarly, Burcu says "Good Morning" to the latecomer and watches the latecomer until s/he takes his or her seat.

As for the verbal routines presented in Table 5.2., both the experienced and the novice teachers were found to use the verbal routines, especially while reinforcing the students, to a great extent. The experienced teachers, however, employed a broader array of the verbal routines (see Table 5.2.). For example, one of the experienced teachers, Selen, comments on the verbal routines she employs in the class as follows:

> Time to time, I give different reinforcement to encourage the students. If something is standard, ordinary not wrong but very common, I say, OK! Fine! But if something is much more interesting, I say, "excellent!". If the students choose a very different context, information, different cities, interesting activities, I use good words of encouraging or something like that. If the grammar is totally correct, I use excellent; it changes regarding lots of things (Routine, Student Motivation and Involvement & Reinforcement).

As shown in Table 5.2., both the experienced and novice teachers use their body language, facial expressions, and tone of voice indirectly to draw the student attention to the focus of the lesson. Nevertheless, the experienced teachers were observed to employ a wider set of such routines during the ongoing instruction.

As for the homework routines included in Table 5.2., the novices were seen to assign the homework either at the end of the lesson or at the end of the related activity, while the experienced teachers preferred to assign the homework only at the end of the related activity.

For example, the experienced teacher Selen comments on assigning the homework as follows:

> I assigned the homework at this point because it was the end of the activity; instead of going back and reminding them what we did and then assign the related homework. It is always more wise if you are going to give homework related to that activity (Student Understanding). It is better to assign it at that point. Time is important (Routine & Belief). Since the activity has just finished, it is normal (Pedagogical Principles).

Apart from the findings indicated in Tables 5.1. and Table 5.2., the experienced teachers were seen to employ a wider repertoire of the routines in relation to Student Understanding and Student Motivation and Involvement, whereas the novice teachers tended to employ more management related routines in the class. However, one of the experienced teachers, Kezban, conducted an interesting management routine in the remedial class she was teaching at the time. Kezban commented on her behaviour as follows:

> I assign some duties to some students who have already finished the activity (Group Management). You know peer correction is a good way (Belief & Pedagogical Principles). They can easily understand from each other more than the teacher (Student Understanding). Also if I did not give them this duty, they would talk, so some discipline problems may have arisen. In one way, I tried to manage the class (Group Management).

5.2.1. Teachers' Perspectives on the Routines

All the participant teachers have revealed that they employ routines in the class very often since they believe that routines are essential for any teacher to be an organized teacher. They also state that teaching routines easy the task of both students and teachers in the classroom life. For instance, the novice teacher Burcu has noted:

> Sometimes I need them, and sometimes they help because the students can also know what I will do when they do something. For example, in the mornings, I greet the class. I say hello, and then I ask some questions about what they have learnt the previous day or hour (Curriculum Integration). So, they should be ready for such questions at the beginning of my first lesson of the day. So, the students know that in the morning for ten or fifteen minutes, I can give a very short quiz for ten minutes.

However, compared to the novices, the experienced teachers were seen to be more aware of the routines they employ in the class. They used the language forms such as " this is my routine" "Every time … I do this or that" while commenting on their routines at the stimulated recall interviews. The most experienced teacher Kumru, for example, uses such expressions in her comments as follows:

> I always provide examples for the activities (Routine & Student Understanding). Especially, if I am teaching total beginners and if the students are not intermediate or advanced (Academic Skills).Exemplifying always help the students. They learn, they hear the correct version and understand that they should do it in this or that way (Student History & Student Undestanding). They follow that. In this way, I have them do it correctly. This is my routine (Pedagogical Principles).

5.3. Immediate and Reflective Decisions in response to the Unexpected Events

In this study, both groups of teachers were observed to make immediate decisions in response to some unexpected events or problems emerging on the spot. For example, the most inexperienced teacher Ece decided to conduct the homework activity in the class when she covered the plan under the estimated time:

> Actually, this was their homework, but there were five minutes to go out. And I was not sure whether they could understand what they had to do or not (Student Understanding). This is a writing activity. They have to choose three places with the help of the map. They should write three different conversations, using this everyday English and if they start now, may be they can have the opportunity to ask me, and I can give them feedback and just help them to find their own ways in writing (Student Motivation and Involvement). Five minutes is five minutes. So I tried to make use of this.

Another novice teacher, Burcu, also made an immediate decision as follows:

> I had not planned to ask the question about the participles, but we have two more minutes (Timing). It is also related to the present perfect tense (Subject Matter Content). Also, may be they have not memorized past participles. It is a kind of revision (Students' Needs).

In one of the instances, the novice teacher Zeynep helped a student to find a pen so that he could attend the lesson more properly. She was so immediate that she could not explain the reason for her action:

> I was observing the students to see if they all had the worksheet. I noticed that one of the students did not have a pencil because he was just looking at the sheet, and he did not do anything. I did not get angry with him. May be, he forgot. I do not know. I just gave him a chance to participate in the activity by giving him the pencil (Student Motivation and Involvement).

Another novice teacher, Gamze, confronted with a term she did not know and therefore, she immediately decided to assign it as homework:

> I assigned the English meaning for "halk oyunları" because I do not know it either (Knowledge), so it was an assignment for all of us, and you know today a student found it and brought it to the class. Also I did it to make them search something in English (Student Motivation and Involvement & Subject Matter Content).

In another instance, the novice teacher Gamze made another immediate decision. One of the boy students asked a girl student to kiss one of the boys in the class as one part of the guided speaking activity. However, Gamze immediately decided not to accept that example at the time:

> I did not like this example because this is not something common in our culture. It is not culturally acceptable (Knowledge & Student History). So, I decided not to accept it. But, then she decided to do it and I say OK! (Social Development)

Similarly, Selen, an experienced teacher, made an immediate decision on the spot since one of the students' mobile phone rang in the class:

> I did not react to her because I knew that she did not do it on purpose. She forgot it. She is always a wonderful lady, a great student. You know,

> we are all human beings. I wanted to tolerate it (Student History). I did not warn her, but I really felt myself very bad. I lost my motivation for a few seconds, and it was difficult for me to come to the point again because it was a terrible voice. I am not a nervous type person, so I could control my anger (Teacher Psychology).

As for reflective decisions, both groups of teachers were found to be able to make reflective decisions during their ongoing instruction. For example, one of the experienced teachers, Merve, considers the nature of the activity while making a reflective decision:

> Since I feel that we had much more time than I expected, I introduced an extra activity just before the last planned activity (Group Management & Filling the Alloted Time) because after the last activity I was planning to make a very short summary in relation to that activity. And also the extra activity was a kind of speaking activity (Nature of the Activity); therefore, it would be difficult for me to make them be quiet after such activities (Group Management). In addition, the students can not listen to the summary carefully and quietly, and thus they can not understand the summary (Student Understanding).

In another instance, the most experienced teacher Kumru confronted with an unexpected technical problem while using the OHP in the class. For this reason, she made some reflective decisions at the time:

> At this point the OHP broke down and I had to change the nature of the second activity (Group Management). They only talked about the transparency, but for what purpose? I asked the students to make a decision whether he is going to holiday or on business; a sort of puzzle; a

> reason for them to think about. It also draws their attention (Student Motivation and Involvement).

The most experienced teacher Kumru also reflects on how she felt at the time:

> I did not panic, but you know I just remember my tutor telling a story about giving a demo. He told that you have to get well prepared (Teacher Readiness). But if the OHP breaks down, there is nothing you can do. You know you can not enter the class with two OHPs or whatever it is. Since it was a picture, it was easy to handle because nothing was written on it. I thought I could show the picture to the students during the activity (Group Management & Student Motivation and Involvement).

However, Kumru announces that such an unexpected event affected the other activities included in the lesson plan:

> I had never thought about leaving the activity since it broke down. I was also planning to turn the sentences into negative forms. But may be due to OHP, I just forgot about it (Forgets). Negative forms are not emphasised in the book. It was my additional idea, but you know I just had it in my mind. If I had a chance somewhere, I was also planning to let them practice negative forms (Subject Matter Content).

Similarly, one of the novice teachers, Burcu, also made a reflective decision in the class since her partner did not inform her about what he had covered in the previous hours:

> I changed my mind, and I think may be we can do a post listening activity to talk about Ryan. What they remember about him. I was thinking about such kinds of things while I was going around and trying to save time for me to think about what I am going to do (Group Management&

Knowledge). I thought of a speaking activity as a solution because we had conducted a writing activity for an hour in the previous lesson (Academic Skills & Curriculum Integration). I use the verbs given in the listening task while asking the students questions because I was planning to discuss the text with them after the listening part (Curriculum Integration), but I changed it, and now I am trying to do question and answer part. So, I only skipped while listening part in my plan (Social Development).

The novice teacher Burcu remarked that the situation was really unexpected for her at the time:

> I sometimes have some ready made activities in my mind for such unexpected events (Routine & Teacher Readinesses for Unexpected Events). But for this situation, it was unexpected for me because the listening activity in my plan would take 20 or 25 minutes with the pre and post listening activities, but I had 25 more minutes. May be I am ready for 10 or 15 minutes but 25 minutes is very much I had more time than I expected. I had some worksheets, but I was thinking of assigning them as their homework, so I had to think many things at that time to decide (Alternative Action).

Moreover, Burcu was disappointed and got angry with her partner:

> Actually, during the lesson, I got angry with my partner. If we are partners, we should give every detail to each other about what we have covered in the lesson (Teacher Feelings) because I can not teach everything in relation to the present perfect tense (Subject Matter Content). He gave me wrong information, so I had to change, but actually I did not want to do it. Also I

> could have prepared some other activities if he had informed me about that (Appropriateness of the activity).

To conclude this part, both groups of teachers are seen to be capable of making reflective decisions, but with a difference in their concern and reasons. Parallel to the previous research findings (Fogarty et al., 1983; Johnson, 1992; Westerman, 1991), the experienced teachers are seen to be more reflective in their interactive decisions. The novices, on the other hand, are found to be more immediate in their interactive decisions. Furthermore, both groups of teachers prefer to make immediate decisions mostly in relation to the classroom management issues.

5.4. Alternative Actions

Few studies have concentrated on the alternative courses of the instructional actions in teachers' interactive teaching. Actually, it is not so easy to decide whether the teachers consider those alternative decisions while teaching in the class or while commenting on their behaviours at the stimulated recall interviews (Shavelson, 1983). Therefore, in this study, only the alternative decisions uttered by the participants at the stimulated recall interviews were analyzed.

The experienced teachers were found to be able to consider two or three alternative actions (2.8 alternatives per lesson) at most, whereas the novices (1.3 alternatives per lesson) mostly tended to consider only one alternative action while making interactive decisions. Moreover, the novices rarely considered two or more than two alternative actions throughout the study. Contrary to MacKay's (cited in Shavelson, 1983) findings, all the teachers in both groups were seen to evaluate the alternatives critically in most of the classroom instances reported throughout the study. Only in few cases, they simply either reported their alternative decisions or confirmed their decisions without commenting on their alternative actions.

As an example, the experienced teacher Merve commented on her error correction strategy regarding two more alternatives as follows:

> I corrected her sentence. May be, her friends could correct her or she could correct herself. But I chose that way. May be, other options would take much more time (Time Constraint).

In another instance, Merve made her students ask questions to each other as an alternative action to her usual teaching style, due to students' likes and preferences:

> T: Let's answer Mustafa's question please! (Elicits and Incorporates Input)
>
> T: So, Mustafa! (Focuses Attention/Effort)
>
> T: You ask someone in this class! (Explains Concept/Procedure)
>
> T: Ask your friend! (Applies, Extends, or Plans)
>
> T: WHO? (Focuses Attention/Effort)

In the preceding classroom excerpt, the experienced teacher Merve was trying to increase Student Motivation and Involvement:

> I make the student ask it to his friend. They talked in pairs. So, this was just for the variety. Other wise it would be boring for the students (Student Motivation and Involvement).

As mentioned in the previous part, the most experienced teacher Kumru had some technical problems while using the OHP in the class. Therefore, she changed the nature of the activity, trying different alternatives on the spot:

> I changed the technique because I think showing the transparency did not work. And I was not satisfied with it. I changed my alternative. The first one was OK! But it did not go as well as I was hoping. I changed it. I thought making them ask questions to me would be a better alternative. This would give the other students to ask Wh- questions as well (Student Motivation and Involvement). It had two different advantages from my point of view. So, for only five students were asking the questions at first, but after this, the whole class would be asking the questions, so all of the students would be practicing wh- questions (Group Management & Subject Matter Content).

On this occasion, the most experienced teacher Kumru was seen to consider different alternative actions and critically evaluate the possible effects of these alternatives on the students' immediate performance. Besides, she favored Student Motivation and Involvement category more than any other instructional goals while weighing her possible alternatives on the spot.

However, in another instance, the novice teacher Zeynep reports thinking of only one alternative action in relation to the management of the class:

> I may have walked while they are listening. But I thought if I walked, may be they could not concentrate on the task. So, I just stood at one side (Student Motivation and Involvement).

In the preceding stimulated recall interview excerpt, the novice teacher Zeynep explains the reason why she did not employ the alternative on the spot. Moreover, she could even tell how that alternative may have resulted if she had chosen to employ it.

Similarly, the most inexperienced teacher Ece was thinking of only one alternative action while correcting the student's error:

> Sometimes, I say is it /live/ or /layv/. Then, he chooses the answer (Routine & Academic Skills). But here we were in a hurry because we have a lot to do, and I do not want to focus on such simple things (Subject Matter Content).

Another novice teacher, Gamze, remarks that the action she had carried was the only alternative she could think at the time:

> Even though time is over, I am still trying to get the answers orally (Student Mıotivation and Involvement) I thought collecting them, but they did not write the sentences on a piece of paper. I just quickly wanted to hear them. But there were mistakes, so I asked that student to write it and submit it to me but just that student (Subject Matter Content). That was the only solution I could think at that time. I do not have any time (Time Constraint).

In conclusion, both the experienced and novice teachers are able to consider another alternative while making interactive decisions; however, they differ in their rationale for considering the alternatives and in the number of the alternatives they think at the time. The experienced teachers mainly consider Student Likes, Preferences, Student Motivation and Involvement, and Pedagogical Principles while considering another alternative on the spot. The novice teachers, on the other hand, emphasize classroom management, lesson sequencing and monitoring.

5.5. Teacher Feelings

Both the experienced and novice teachers in the study believe that teachers should tailor their lessons according to the level, needs, and interests of the students. For example, the most inexperienced teacher Ece favors such changes in the lesson emphasizing student satisfaction as follows:

> I do not think so! Like the opposite. If you follow your lesson plan as you prepared, this might create some confusion for the teacher because it is sometimes necessary to change the plan according to the reaction of the class (Students' Reactions and Needs). As long as I have the feeling that the students are satisfied with the lesson in the end, there is no problem (Student Satisfaction). Boredom is very negative for me. If they get bored, there must be a problem. I have to change something immediately. Then I forget the lesson plan, and then I try to find something else (Student Motivation and Involvement).

Another novice teacher, Zeynep, addresses the roles of the teacher while commenting on the issue:

> I know that as teachers, we are decision makers. We have a lot of roles as decision makers, guides, and also we are like tailors. We always think our programs. We adapt our lessons according to the students, and we change the lesson for them (Social Development & Teacher Feeling). Sometimes, I decide according to the students' behaviours (Students' Needs). Sometimes, everything does not go according to what you plan. At that time, you have to decide on the spot (Readiness).

The novices were seen to rarely feel guilty when they could not cover the plan throughout the study. Moreover, two of the novices have stated that such changes may sometimes create some management problems especially if the decision involves a complicated instruction and pair or group work. However, the experienced teachers were observed to feel more positively about on the spot changes in the lesson plan. None of the experienced teachers reported feeling guilty in the case they could not cover the plan.

As an example, the most experienced teacher Kumru makes a series of changes in the case a need arises throughout the lesson:

> I do not think it is something negative, if I change it because I definitely feel that there is a need. In the lesson, I think I make changes according to the needs of the students. Then I make another plan because change means there was a need. If it does not fit at that time, I make up my mind at that time. If it does not fit again, then I make another change. I do something else. I do not know. Changes follow changes (Students' Needs).

Another experienced teacher, Selen, also points out that she is capable of controlling the changes in her plan while teaching in the class:

> I can just change or adapt it. I can easily control such changes. I believe that if I need to change it, I change it and I never feel guilty (Students' Needs).

To sum up, both groups of teachers feel relaxed while making changes either in the content or sequence of the lesson plan while teaching in the class; nevertheless, the novices may have some management problems while changing some aspects of the plan. For this reason, they try to follow the lesson plan more accurately than the experienced teachers.

5.6. Interactive Decision Making Models of the Experienced and Novice Teachers

Westerman (1991) claims that the three stages of decision making process, pre-active, interactive, and post-active, are closely related to one another since the teacher can use any teching method and source or knowledge about the students during the ongoing instruction to arrive the pre-determined goals.

Regarding the models developed by Westerman (1991), interactive decision making models for both the experienced and novice teachers have been developed throughout the study. These models also cover the post-active reflections of the teachers because some post-active reflections were elicited from the teachers at the stimulated recall interviews (see Figures 5.1 and 5.2.). However, the pre-active phase is not included in the models because all the teachers in the study are observed not to do a detailed lesson plan. Furthermore, they have to continue the lesson where her partners leave, and they meet their partners just a few minutes before they start teaching the class. Besides, pre-active phase is not the focus of the current study, and none of the participant teachers referred to that phase while explaining the reasons for their in-class actions.

As shown in Figure 5.1., the factors in the experienced teachers' decision making model interact with each other in multiple ways and that all the variables included in the model affect the process of interactive teaching to a great extent. Parallel to Berliner's ideas (1986), content area knowledge is seen to interact with the Pedagogical Knowledge, which is considered essential in developing expertise. In Figure 5.1., Pedagogical Knowledge is located at the center of the model affecting almost all the other related factors, whereas it is the Curriculum Integration category which affects the other variables in the novice decision making model (see Figure 5.2.).

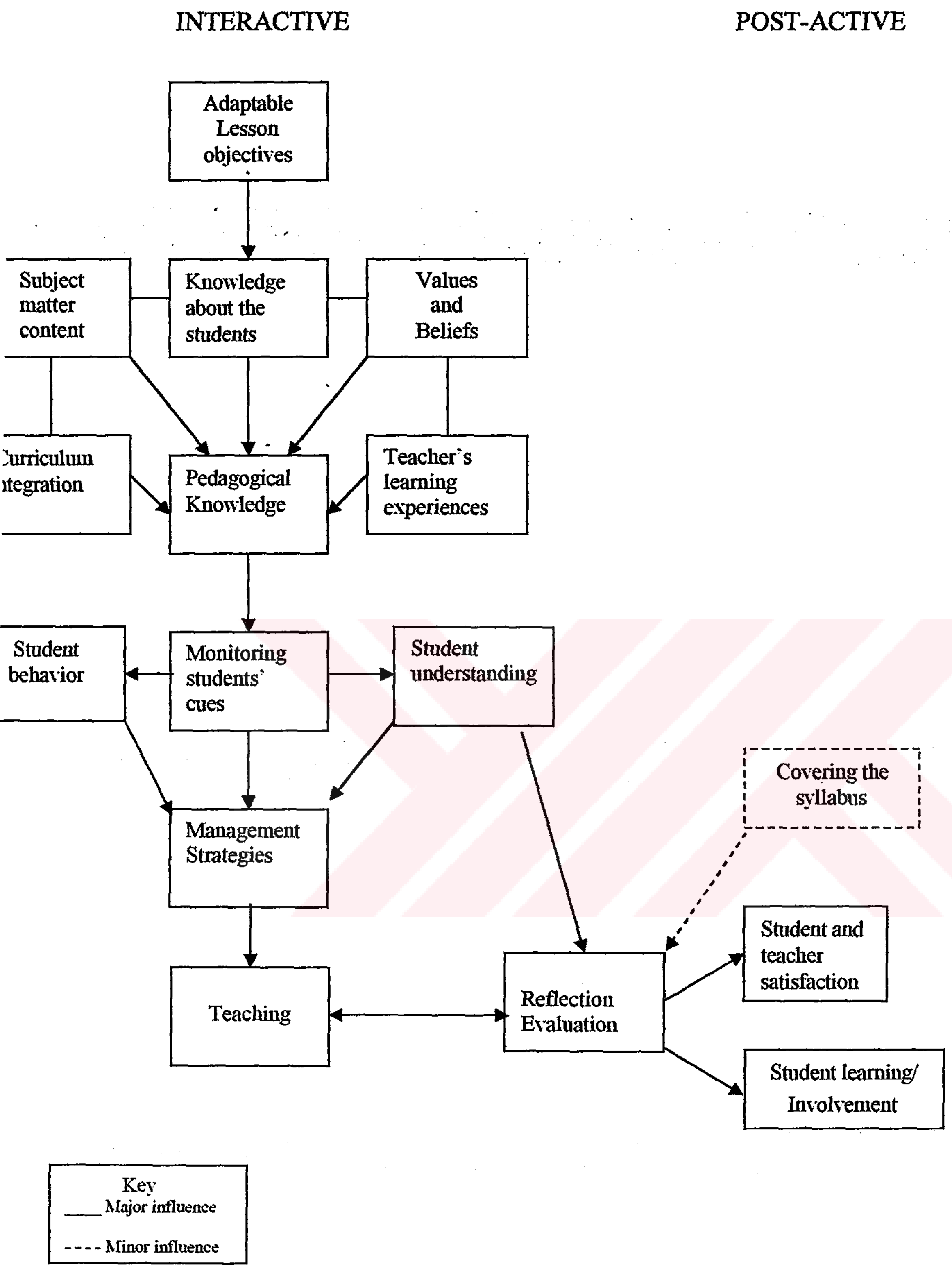


Figure 5.1. The experienced teachers' decision making model in the study

As illustrated in Figure 5.2., the novices are more concerned with student off-task behavior than the experienced teachers while making interactive decisions; therefore, they employ management strategies at an earlier stage than the experienced teachers throughout the lesson. Furthermore, the dotted lines in Figure 5.2. indicate that the Pedagogical Principles and Belief components are not as rich as their corresponding categories in the model of the experienced teacher. However, contrary to the models proposed by Westerman (1991), the novices are observed to have a great deal knowledge about their students and be able to employ this knowledge properly in their interactive decision making process (see Figure 5.2.).

As shown in Figure 5.1 and Figure 5.2, both the experienced teachers and the novices are seen to accommodate the lesson plan and their goals according to the classroom conditions, what is happening at the time, and students' needs. This may reflect that these novices have a high degree of content knowledge and a strong methodological background. Moreover, depending on their background knowledge they have provided in *snakes* (see Appendix 10 and 11), the novices are seen to follow some improvements and research in their professional field and conduct some professional studies to improve their teaching and themselves. That is to say, the novice teachers in the study may lack teaching practice experience; however, they are theoratically well equipped to teach in the class.

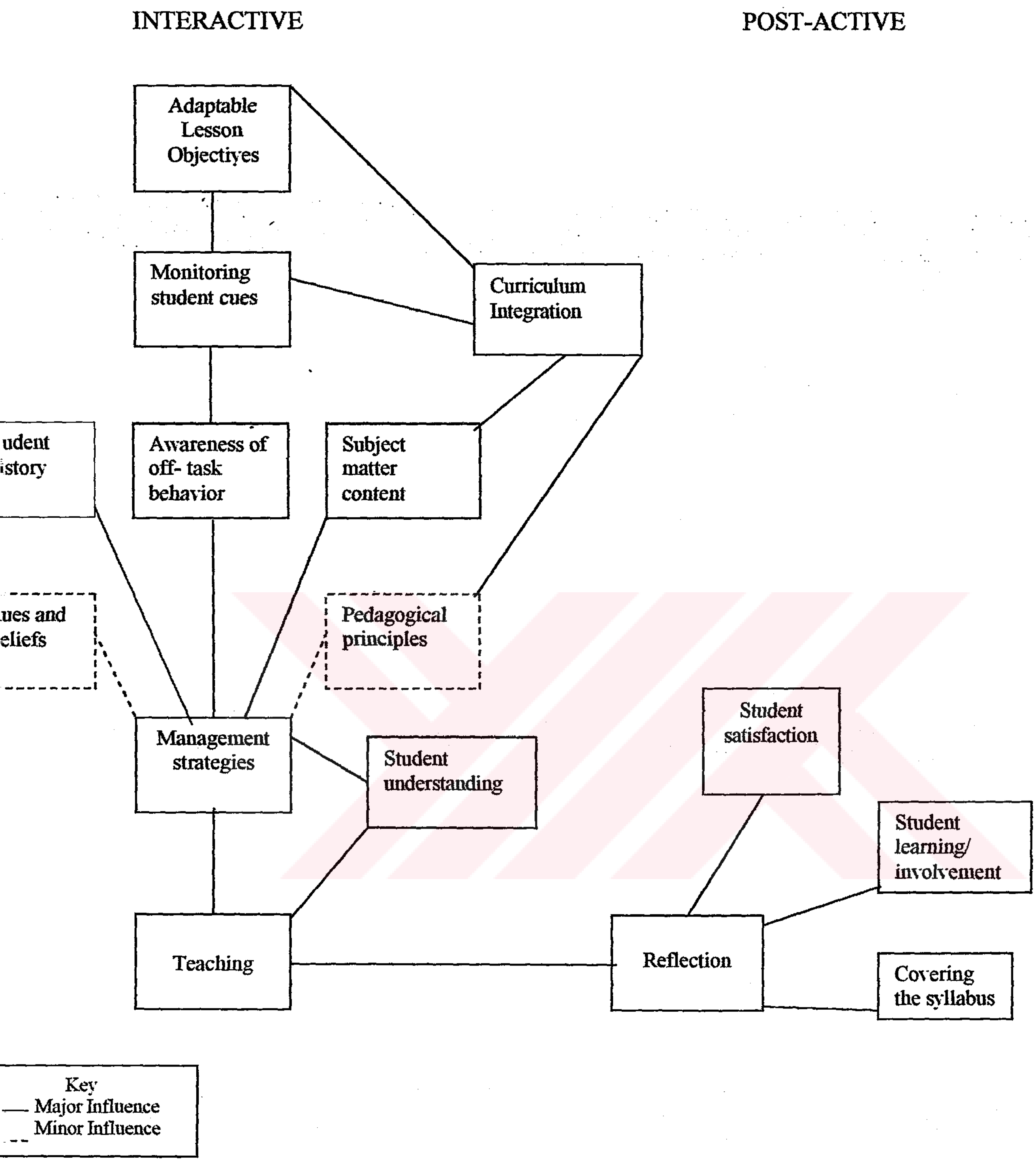


Figure 5.2. The novice teachers' decision making model in the study

Even though the variables interact with one another in the novice decision making model, it is more linear than that of the experienced teachers (see Figure 5.1 and Figure 5.2.), which confirms the findings reported by Westerman (1991) and Borko and Livingston (1989). This does not mean that the novices attend fewer categories rather they can attend multiple components as the experienced teachers do. Nevertheless, the nature of the categories and the complexity of the relationship between these categories change in relation to the expertise level of the teachers.

These decision making models are also consistent with Veenman's (cited in Westerman, 1991) findings in that teachers of different expertise level perceive the classroom events differently and thus react to these classroom events differently.

5.7. Post-Active Reflections

As for the post-active reflections, both the experienced and novice teachers were seen to evaluate the lesson regarding student learning, involvement, and satisfaction as well as the syllabus (see Figures 5.1 and 5.2.). However, as shown in Figures 5.2. and 5.3., the novices considered the syllabus more frequently than the experienced teachers while making interactive decisions throughout the study. The novice teacher Gamze comments on this issue as follows:

> I wish I had studied only "would like someone to do something" for one hour. I could have practiced more than we did (Academic Skills). With TELL, students have less time to produce and practice sentences (Subject Matter Content). But as I said, we were already behind the syllabus, so I just try to make up with the syllabus (Catching up the Syllabus).

One of the experienced teachers, Selen, addresses both her satisfaction and student satisfaction in one of her post- reflection comments:

> If I have completed the things I have to give them, this is one of the criteria. If I have finished the plan, I feel very happy. The other criterion is that if they are happy, I see this in their eyes and reactions (Student Satisfaction & Syllabus).

However, the novices emphasized only student satisfaction in their post-reflection comments. For instance, the most inexperienced teacher Ece reflects on the lesson right after the lesson by remembering the students' facial expressions and reactions:

> The faces of the students, I always observe them. If they feel happy, bored, depressed. That is very important for me, and I think their mood in the class is very important. They have to like the lesson and the teacher (Students' Likes, Preferences, & Students' Reactions). If I do not have any communication with them, there will not be any effective teaching in the class. That is what I believe. After each class, I always live the whole lesson in my mind. It is a habit. It comes to my mind. Why did I do like this? The students liked this or they did not like the other thing. I think about it. I think it is very effective (Belief). Sometimes I observe they do not like something and the next time, I say, I will not do this (Group Management).

In another instance, the novice teacher Burcu also considers student satisfaction:

> Especially when students answer correctly, or they ask good questions or create something by themselves and also when they do their homework and when they show that they are interested in the lesson and, when I do

> not see bored eyes, I am happy. I do not like bored students and boring lesson (teacher feeling & Student Motivation and Involvement).

Similarly, another novice teacher, Zeynep, tends to put her self in the shoes of her students to evaluate the lesson objectively:

> I always think myself as a student. I think that if I were a student, would I like this lesson or not? For example, if I am bored in the lesson, it shows that students are also bored. If I feel myself good in the lesson, I think that students also feel in the same way (Student Motivation and Involvement).

In this chapter, we have presented and discussed the qualitative findings. In the following chapter, we report our findings in relation to the research questions and prior research. Moreover, conclusions drawn from our data are summarized in the next chapter. The implications of the findings for in-service and pre-service EFL teachers are also mentioned in detail in the following chapter.

CHAPTER 6

CONCLUSION

6.0. Introduction

This chapter discusses the findings of the study in relation to the research questions and prior research findings. Overall conclusions drawn from the study will also be revealed throughout the chapter. Moreover, the implications of the findings will be discussed in regard to the current views on reflective teaching, pre-service and in service teacher training programs, the participant teachers, and the researcher. Besides, suggestions for further research regarding the focus, the design, and the methodology of the study will be made in this chapter. Finally, the limitations of the study, methodological or contextual, will also be mentioned in this chapter.

6.1. Overview of the Study

The present study aims to investigate the interactive thinking and decision making processes of EFL teachers from their own perspectives with respect to their expertise level. Therefore, a cognitive / interpretative approach is adopted to uncover teachers' interactive thoughts and decisions and the reasons underlying these decisions.

The following research questions constituted the basis of the study:

1. Are there any differences between experienced and novice teachers in their interactive decisions?
   a. Do experienced teachers respond to certain types of student behavioral cues I in the same way as novice teachers do?

b. Do experienced teachers make the same type of interactive decision (i.e. reflective, immediate, and routine) as novice teachers?

c. Do experienced teachers consider more instructional alternatives (i.e., goals) while making interactive decisions?

d. Do experienced teachers make more interactive hierarchical decisions than novice teachers?

e. Do experienced teachers approach (i.e., feel about) their interactive decision making behavior more positively than novice teachers?

2. What are the possible reasons (i.e., context, materials, prior knowledge, etc.) underlying the interactive decisions of experienced and novice teachers?

3. What classroom incidents cause the most frequent discrepancies between the lesson plan and the actual lesson?

6.2. Research Questions and Findings

In this part, we will discuss our findings in regard to our research questions and prior research findings. Research Question 1 summarizes the major aim of the study; therefore, some other subordinate questions (1a, 1b, 1c, 1d, 1e) were formulated to address the issue in detail. Research Question 2 refers to the possible reasons underlying teachers' interactive decisions, and in line with this question, Research Question 3 focuses on the classroom incidents which may affect interactive decision making behavior of the teachers. Research Questions 2 and 3 have been formulated as wh-questions in order not to bias the researcher while analyzing the data.

1. Are there any differences between experienced and novice teachers in their interactive decisions?

Consistent with prior research (Fogarty et.al, 1983; Johnson, 1992; Westerman, 1991), the findings have revealed some differential patterns in the interactive thinking and decision making processes of the experienced and novice teachers. Accordingly, the results of this study are also compatible with the findings of Fogarty et al. (1983) in that the complexity of teachers' thinking process changes according to their expertise level.

1.a. Do experienced teachers respond to certain types of student behavioral cues in the same way as novice teachers do?

Our findings have indicated that the experienced teachers are able to observe more student performance cues than the novices throughout the ongoing instruction (see Table 4.1.). Moreover, three new student performance cue categories, Elicited Response, Incomplete Answer, and Noise, have emerged in the study. The experienced teachers emphasized the student performance cues of Attention, Initiations, and Deficient Response more frequently than the novices. The novices, on the other hand, paid more attention to the student performance cue categories of Elicited Responses, Incomplete Answer and Noise (see Table 4.1). These results confirm the findings of Fogarty et al. (1983), Johnson (1992, 1999), Nunan (1996), and Westerman (1991) in that the novices are much more concerned with management related issues than the experienced teachers in the class

As for the instructional actions, the experienced teachers employed the instructional categories of Explains Concept/Procedure, Applies, Extends, or Plans, and Elicits and Incorporates Input more frequently than the novices and the other instructional action categories within the group, whereas, the novices utilized Gives Feedback, Focuses Attention/ Effort, and No Response categories more frequently than the experienced teachers (see Table 4.2). No Response category is the only instructional action category added to the classification scheme provided by Fogarty et al. (1983) throughout the study (see Appendix 4).

Moreover, the experienced and novice teachers are seen to differ in their priorities of the instructional actions in response to the specific student performance cues. For example; parallel to the previous research findings (Fogarty et.al, 1983; Johnson, 1999; Westerman, 1991; Leinhardt, & Greeno, 1986), the experienced teachers responded to the category of Errors using the instructional action of Gives Feedback in the majority of the cases, whereas the novices responded to the same student performance cue category by the instructional category of Focuses Attention/ Effort (see Table 4.3.).

Apart form those differences, some similar patterns have also emerged between the groups of teachers regarding the instructional actions they employ in response to specific student performance cue categories. For example, both groups of teachers implemented the instructional action category of Focuses Attention/Effort more frequently than any other instructional action categories when confronted with Deficient Responses (see Table 4.3).

The findings obtained with respect to the number of the instructional actions are seen to be compatible with the prior research findings (Fogarty et.al, 1983; Johnson, 1992, 1999) in that the experienced teachers employed a broader array of instructional actions than the novices in response to the student performance cues they observed during the ongoing instruction (see Table 4.2.).

Finally, our findings regarding the complexity of teachers' thinking processes are consistent with Fogarty et al. (1983) who emphasize that the interactive decision making process of the experienced is much more complicated than that of the novices in the study. In other words, the novices were seen to be more linear in their instructional responses to the student performance cues they observe in the class. Moreover, some of the instructional actions of the novices were observed to be unconnected to any cue category due to their concern to manage the class appropriately. Most of the student performance cues the experienced teachers utilized, on the other hand, were seen to be connected to several kinds of actions at different points through the lessons (see Figures 4.1 to 4.4.).

1.b. Do experienced teachers make the same type of interactive decision (i.e., reflective, immediate, and routine) as novice teachers?

In line with the relevant studies (Bailey, 1996; Fogarty et al., 1983; Johnson, 1992, 1999; Westerman, 1991), the findings from the qualitative data suggest that both the experienced teachers and the novices employed these three types of the interactive decisions, namely, routines, reflective, and immediate decisions during the ongoing instruction (see Section 4.2.) They, however, differed in their orientation, rationale, and preferences of these decisions.

As regards the reflective and immediate decisions, both groups of teachers were seen to make reflective decisions in the class; however, consistent with the findings of Shavelson (1983), the experienced teachers were more reflective in their interactive decisions and thus took more time than the novices while reflecting on the decisions they are making at the time. Nevertheless, both groups tended to make immediate decisions mostly in relation to the classroom management issues (see section 5.3.).

As for the routines, regardless of the expertise level, all the teachers were observed to employ teaching routines during their ongoing instruction; however, the experienced teachers were seen to be more aware of the routines they employed in the class; therefore, they were able to define those routines more clearly than the novices (see section 5.2.1.). Besides, our findings demonstrate consistency with the findings of Bailey (1996), Fogarty et al.(1983), Johnson (1992, 1999), and Westerman (1991) in that the experienced teachers employed a larger repertoire of the routines in relation to Student Understanding and Curriculum Integration, whereas, the novices tended to employ more management related routines in the class (see Section 5.2.).

1.c. Do experienced teachers consider more instructional alternatives (i.e., goals) while making interactive decisions?

In line with the findings reported by MacKay (cited in Shavelson, 1983), the experienced teachers considered more instructional alternatives than the novices while making interactive decisions. They were able to consider two and rarely more than two alternatives at most for the decision they made, whereas the novices were seen to be able to consider only one alternative in the majority of the cases. Contrary to the findings reported by MacKay (cited in Shavelson, 1983), both groups of the teachers in the study were able to evaluate their alternative decisions critically. The novices were observed to be able to criticize their alternative actions due to their strong methodological background and professional studies they were attending at the time. They, however, differed in their reasons for considering those alternatives on the spot (see Section 5.4.). For example, the experienced teachers were concerned with Student Preferences and Likes, Student Motivation and Involvement, and Pedagogical Principles while considering another alternative on the spot. The novice teachers, on the other hand, emphasized classroom management, lesson sequencing and monitoring.

1.d. Do experienced teachers make more interactive hierarchical decisions than novice teachers?

Few studies have focused on interactive hierarchical and sequential decisions (Woods, 1991, 1996). Therefore, the findings in this part can not be evaluated properly in respect to prior research findings, and our findings obtained in relation to hierarchical and sequential decisions are in need of further investigation.

As regards the current study, the experienced teachers were seen to make more hierarchical decisions than the novices (see Table 4.9.). This finding implies that the experienced teachers are more aware of the interactive decisions they make and try to build the lesson on the previous decisions they make throughout the lesson. However, no such difference was observed between the groups in terms of the sequential decisions they made in the study. That is to say, the groups tended to make sequential decisions equally throughout the study. However, both groups of teachers favored hierarchical decisions more frequently than the sequential ones.

1.e. Do experienced teachers approach (i.e., feel about) their interactive decision making behavior more positively than novice teachers?

All the participant teachers, regardless of their expertise level, have agreed that teachers should tailor their lessons according to the level, needs, and interests of the students. They are also seen to be aware of the fact that the previously written plan and the implementation of the plan do not usually go hand in hand during the ongoing instruction. Therefore, they do not hesitate to change or depart from the plan for the students' benefits. The experienced teachers, however, feel more positively about the immediate changes in their plans (see Section. 5.5.).

2. What are the possible reasons (i.e., context, materials, prior knowledge, etc.) underlying the interactive decisions of experienced and novice teachers?

In line with the findings reported by Fogarty, et al. (1983), Johnson (1992), Shavelson (1983), and Westerman (1991), our findings indicate that teachers bring a potential wealth into the teaching environment such as their beliefs, prior learning experiences, and theories, etc. In the present study, these factors were seen to affect the teachers' interactions with the students in the class, the strategies they chose to teach and manage the class, and the decisions they made in the class. The factors both the experienced and novice teachers considered while making interactive decisions throughout the study are grouped as follows:

1. Instructional Goals
2. Prior Knowledge
3. Instructional Management
4. Teacher Related Factors
5. Institutional Factors

As regards the instructional goals, all the teachers in both groups referred to each goal category at least once while commenting on their instructional actions at the stimulated recall interviews. The results concerning the instructional goals are not consistent with the findings of Fogarty et al. (1983) and Johnson (1992) in that, apart from the Group Management goal category, the novices considered all the goal categories more frequently than the experienced teachers in their interactive decision making process (see Table 4.4.). Nevertheless, in line with the pilot study findings (see Section 3.3.4.3.2), all the teachers in both groups focused most often on the instructional goal categories of Student Motivation and Involvement and Student Understanding throughout the study (see Table 4.4.).

As for the multiple instructional goals, all the teachers in both groups were capable of considering more than one instructional goal at a time; however, as suggested by the previous studies (Fogarty et al., 1983; Johnson, 1992, 1999), the experienced teachers attended multiple instructional goals more frequently than the novices throughout the study (see Section 4.4.1.)

Contrary to the findings reported by Fogarty et al., (1983), the second category, prior knowledge has reflected the least differences between the experienced and novice teachers when compared to the other categories (i.e., student performance cues and instructional goals) analyzed in the study. Moreover, the novices were able to employ and recall the same prior knowledge categories in the way the experienced teachers did, implying that these categories had also developed in the novice teachers. The experienced teachers, however, considered the prior knowledge categories of Pedagogical Knowledge and Student History more frequently than the novices while explaining the reasons for their in-class actions (see Table 4.5.). Nevertheless, contrary to the model proposed by Westerman (1991), in our decision making models (see Figure 5.1. and Figure 5.2.), the novices were also seen to have a great deal knowledge about their students and be able to employ this knowledge in their interactive decision making process. Moreover, the novice teachers paid more attention to the prior knowledge category of Academic Skills and Abilities when compared to the experienced teachers (see Table 4.5.).

Parallel to Westerman's (1991) decision making models, our interactive decision making models show that the complexity of the relationship among the goal and prior knowledge categories and some other related factors attended by the teachers during the ongoing instruction change in relation to their expertise level (see Figures 5.1 and 5.2.). However, these models reflect that both groups of teachers are seen to be concerned with student satisfaction, learning, and involvement as well as covering the syllabus at the post-reflection stage. The novices, on the other hand, are seen to be more concerned with covering the syllabus properly.

The findings with respect to classroom management are compatible with the previous research (Fogarty et al., 1983; Johnson, 1992; Nunan,1992b; Shavelson,1983; Westerman,1991) in that the novice teachers were seen to be much more concerned with the classroom management related issues especially with student off task behavior and have a good repertoire of coping strategies to deal with such behaviors. However, the experienced teachers appeared to recall the task related decisions more frequently than the novices while explaining the rationale behind their interactive decisions. As for the timing the activities on the spot, all the teachers, regardless of their expertise level, recalled it as a determinant factor in their immediate decision making (see Table 4.6.).

Among the teacher related factors, teacher style, belief, and teacher preferences were mentioned at least once by all the teachers at the stimulated recall interview. However, the category of teacher's learning experiences received attention from all the experienced teachers, whereas it was mentioned only by one novice teacher. Another teacher related category, belief appears to be one of the dominant categories, which yields some individual differences within each group (see Table 4.7.).

Overall, the experienced teachers recalled teacher related factors more frequently than the novices in the study. Moreover, one of the experienced teachers reported almost half of the teacher related categories recalled by the experienced group, which reflects that teachers' interactive decisions are also affected by some other factors such as teachers' beliefs and learning styles (see Table 4.7.). Therefore, the expertise level may not be the only reason for the differences emerged between the groups of teachers in relation to their interactive decisions.

However, the novices considered the institutional related factors more than the experienced teachers in their interactive decision making. For example, they recalled catching up with the syllabus, and sequencing the lesson content as the determinant factors for their interactive decision making, while no experienced teachers mentioned them at all in their interview comments (see Table 4.8.).

To conclude, some management, teacher and institutional related factors rather than the expertise level of the teachers are found to determine the content, quality and number of the interactive decisions teacher make during their ongoing instruction.

3. What classroom incidents cause the most frequent discrepancies between the lesson plan and the actual lesson?

Apart from the categories examined in the quantitative part, some outstanding results have appeared throughout the qualitative analysis reflecting that some classroom incidents may also affect interactive decision making behavior of the teachers. Based on the Bailey's classification (1996), the principles and classroom incidents underlying the interactive thoughts and decisions of the teachers in this study are grouped as follows (see Section 4.1.):

1. Serve the Common Good
2. Teach to the Moment
3. Further the Lesson
4. Accommodate Students' Learning Style
5. Promote Student Involvement
6. Distribute the Wealth
7. Integration of the Skills
8. Language Use

Regardless of the expertise level, all the teachers were seen to follow these principles; nevertheless, they differed in their priorities and rationale for considering the principles while making their interactive decisions. As for Serve the Common Good principle, all the experienced teachers were more concerned with the problems emerged out of language skills and student personality, whereas the novices utilized this principle when confronted with the problems related to the Subject Matter Content and Student Academic Level throughout the lessons (see Section 5.1.1.).

The findings concerning Teach to the Moment principle are compatible with the findings of Bailey (1996) in that both the experienced and novice teachers were found to spend some time to deal with the issues that the students raised on the spot since they valued Student Understanding and immediate needs throughout their interactive teaching (see Section 5.1.2).

As for the Further the Lesson principle, the experienced teachers addressed Student Understanding and appropriateness of teaching strategy, whereas the novices were concerned with time constraint and student encouragement while considering this principle (see Section 5.1.3.).

Moreover, parallel to Bailey's (1996) findings, Accommodate Students' Learning Styles, Preferences, and Needs was seen to be one of the leading principles affecting both experienced and novice teachers' interactive decision making processes. Furthermore, all the participant teachers were able to recognize students' immediate needs, preferences, and difficulties at the time. However, the experienced teachers were more relaxed while tailoring the lesson according to student needs, level, and preferences (see Section 5.1.4).

Both the experienced and novice teachers appeared to value the Promote Student Involvement principle in the study. Besides, in line with the findings reported by Bailey (1996), both groups were observed to employ almost similar strategies such as eliminating some portions of the lesson, changing some planned teaching techniques and sources on the spot, elaborating on the issues put forward by the students in the class, or conducting some extra unplanned activities to increase the degree of the student involvement in the class. Furthermore, the Promote Student Involvement principle was seen to have a considerable effect both on the quantity and quality of the interactive decisions of the teachers (see Section 5.1.5.)

As for the principle of Distribute the Wealth, both groups of the teachers were observed to consider this principle while making interactive decisions. Similarly, the teachers in both groups believe that Integration of the Four Skills is essential in any language learning process. Therefore, all the teachers did not hesitate to make interactive decisions to integrate the skills on the spot.

As for the choice of the language in the class, both experienced and novice teachers employed the mother tongue, Turkish, in the class almost for the same reasons mainly to define abstract and culturally different words and prevent student misunderstanding so that the activity goes smoothly and facilitate student understanding on some problematic issues. However, some individual differences have appeared among the teachers within each group in regard to the extent of the language use. That is to say, expertise level of the teachers was not seen to affect their interactive decision making behaviour in terms of the language choice in the class (see Section 5.1.10.).

6.3. Conclusion

In this study, we have investigated the interactive thoughts and decisions of the experienced and novice EFL teachers. In exploring this issue, we adopted a cognitive / interpretative approach and conducted stimulated recall technique.

The study has yielded some different patterns in the interactive thinking and decision making processes of the EFL teachers with regard to their expertise level. Differences between the groups centered primarily on the number and preferences of the instructional actions the teachers employed in response to the student performance cues. Furthermore, as reported by Fogarty et al. (1983), the experienced teachers responded to the student performance cues using a more connected and elaborated representation of the instructional actions than that of the novices in the study (see Figure 4.1. to 4.4).

As suggested by the relevant literature (Borko & Shavelson, 1990; Westerman, 1991), the study highlights that what the students say and do and how they act in the class affect the interactive decision making behavior of the teachers to a considerable extent. Nevertheless, how teachers perceive these student performance cues are also observed to influence their interactive decisions and thus their teaching to a greater extent since each teacher perceives the surrounding classroom events from his or her perspectives on the bases of his or her professional background, personal traits, beliefs, learning theories, and so on.

As noted by Chamberlin (1998), the results also indicate that the teachers respond to the classroom events in the way they interpret those events on the spot. In line with the prior research findings (Johnson, 1992, 1999; Westerman, 1991), all the teachers in the study, are seen to be involved in a continuous cycle of interpretation so that they can make appropriate instructional decisions to shape their in-class behaviors.

Moreover, in the light of the interactive decision making models developed in the study (see Figures 5.1 and 5.2.), both the experienced teachers and the novices are found to accommodate the lesson plan and their goals according to the classroom conditions, what is happening at the time, and students' immediate needs. This finding clearly shows that the novice teachers in the study may have limited teaching experience; however, they have a strong methodological background which enables them to teach in the class appropriately.

Furthermore, both the experienced and novice teachers are seen to consider the same goal and prior knowledge categories and principles while making interactive decisions. However, they reflect some differences in the preferences of the categories as well as the reasons for considering the categories and principles at the time. Moreover, the experienced teachers are observed to attend multiple instructional goals more frequently than the novices while making interactive decisions.

Finally, some other criteria such as teacher belief and learning theory, classroom management, and institutional factors rather than the expertise level of the teachers have also appeared to affect the interactive decision making behavior of the teachers.

6.4. Implications of the Study

6.4.1. Implications of the Study and Current Views

This study is designed as a descriptive one which has focused on the interactive decision making behavior of EFL teachers from their own perspectives. The study also aims to emphasize that decision making is a dynamic process taking place before, during, and after classroom teaching.

The current study has enabled the participant teachers to revise their established and fossilized facts and thus reformulate some of their teaching principles. In terms of Johnson (1999), such a reflective study may facilitate robust reasoning among the participant teachers. That is to say, teachers expand their understandings of themselves, their teaching, their students, and their classrooms, and their schools. Moreover, the teachers will be able to use their knowledge in different ways, for different purposes in different instructional contexts only when are they engaged in critical reflection and recognize that anything a teacher does in the class is centered on "it depends" principle. In robust reasoning, they are engaged in a continual process of criss - crossing their professional landscape, having a multiple perspective since teachers' reasoning is rooted in a rich social context, affected by their experiences, knowledge, and belief they have held about teaching and learning process. Parallel to robust reasoning Johnson (1999) states that

> reflective experiences of professional development activities create invaluable opportunities for teachers to question their beliefs and assumptions about teachers, students, learning, and teaching; to reexamine the subject matter they are teaching from a purely pedagogical vantage point and develop sound explanations for their classroom practices; to explore the theoretical foundations and pedagogical and social implications of their classroom practices; and to critically reflect, in a deliberate and detailed way, on the connections between the knowledge, beliefs, and criteria that guide their classroom practices. (pp. 53-54)

The study has also revealed the fact that teaching is a complex, situated, interpretive, and dynamic process which shapes teachers' reasoning and thus directs their further teaching practices. Moreover, the study has provided some opportunities for the teachers to situate their theoretical knowledge of teaching and learning within the context of their experiences of teaching and learning. Overall, the research on teacher decisions and thinking has made important contributions into our knowledge of teaching, planning, and reflecting on teaching.

In this study, every decision teachers make has appeared to depend on their interpretations of the events surrounding them. As Nunan (1996) claims, interpretations of the teachers are central to the understanding of teaching process. Freeman (1996a) also notes that teachers constantly

> interpret their worlds: They interpret their subject matter, their classroom context, and the people in it. These interpretations are central to their thinking and their actions. Classrooms and students are not just settings for implementing ideas; they are the frameworks of interpretation that teachers use for knowing: Knowing when and how to act and react, what information to present or explain and *how and* when to respond or correct individual students, how to asses and reformulate what they have just taught and so on. (p.98)

As claimed by Kagan (1988), the differences observed between the experienced and novice teachers' perceptions and interpretations of the classroom events also affect their reactions and interactive decisions to some extent.

Similarly, Ulichny (1996) comments that

> the interpretive framework the teacher brings to the class is based on her past experiences as a teacher and learner, her professional knowledge and

> folk wisdom about teaching, and aspects of her personality. These factors shape the quality and kind of information she receives from the class. The ongoing interpretation of how well the class is performing the task at hand influences immediate decisions on how to direct and re-direct interaction as well as how to plan subsequent. (p.195)

6.4.2. Implications for Pre-Service and In-Service Teacher Training Programs

As Johnson (1999) claims, pre-service teachers do not acquire the knowledge within the social context where it is to be used; therefore, they do not have any chance of using that knowledge in the interpretive ways required of real teachers in real classrooms. For this reason, the curriculum of pre- service teacher education should be rearranged to cover decision making as a compulsory component so that decision making skills of the pre-service teachers can be improved systematically using reflective teaching activities. This will also enlarge their perspectives on different problems that may emerge throughout their teaching, and thus they will be more prepared to cope with the unexpected events in the class. Moreover, through such a process, pre-service teachers can become objective investigators of their own teaching from the very beginning of their teaching profession.

Regarding the findings obtained throughout the study, a kind of in-service teaching training program can be designed for each group, the experienced and the novice teachers, to help them make more appropriate and systematic interactive decisions through reflective activities suggested by the relevant literature (Fogarty et al., 1983; Johnson, 1999; Bailey, 1996; Westerman, 1991; Woods, 1996) and the current study. For example, the novices, in this study, should be trained in how to attend multiple goal categories appropriately, and the experienced teachers should be familiarized with the current teaching theories and trends.

Moreover, the interactive decision making models provided in the study (see Figures 5.1 and 5.2.) suggest that teacher training programs should cover

* Creating an awareness among the teachers towards their implicit theories and beliefs they hold,
* Understanding the value of past teaching experiences and reflective activities in methodological courses,
* Encouraging the teachers to reflect on their actions regarding their underlying reasons and be able to consider some other appropriate alternative forms of action,
* Recognizing that each teacher has a unique way of perceiving and interpreting the classroom events and some other related institutional, curricular, and administrational factors.

6.4.3. Benefit to the Participants

As Richardson (1990) says, teachers change through deliberate reflection, critical inquiry, and weighing of alternative possibilities within specific contexts. That is to say, through reflective procedures, teachers can clearly see what happens in the class and reflect on their work appropriately and grow professionally as a result of the reflection.

This study is certainly seen to give voice to the participant teachers while reflecting on their instructional actions. Furthermore, the teachers report that they are satisfied with what they have done throughout the study since they had the opportunity to observe and criticize themselves objectively at the stimulated recall interviews.

For example, the novice teacher Burcu reveals that

> Observations are very good for us to see our teaching from a different point of view. We can see our own teaching style and criticize ourselves. Watching me on the screen was an opportunity to comment on my lesson. Sometimes it is difficult to see our own lessons from a different point of view because we always look at the class from the teachers' perspective. But when we watch our lessons on the screen, we can understand the students' needs and problems more easily. For example, when I watched my lessons on the screen and heard my own voice, I could find some alternatives for the same lesson the next time. After the observation, I did the same lesson in a different way because I considered some other alternatives while watching my own teaching.

Another novice teacher, Gamze, also believes that such reflective procedures help teachers to learn about their own teaching:

> Seeing myself; making decisions during teaching has opened a new window in my wall of perspectives. Watching myself as a teacher on the video helped me to reflect on my behaviors and decisions taken during the class hour. I would like to thank the researcher for guiding me to monitor myself and helping me make new decisions on my teaching .The most significant of these new decisions was trying to involve less active students in the lesson by encouraging them with reinforcing words and praising them for whatever is achieved.

Similarly, Selen, an experienced teacher, remarks that

> of course it helped me in terms of self criticism. I had the chance of seeing my reflection in a mirror. I became aware of my positive points

> and began thinking about my negative points in the class. I asked to myself: What else can I do?

The teachers in both groups also reported that the stimulated recall interviews enabled them to understand their teaching practice and develop their professionalism through sharing their insights with the researcher and their colleagues. In other words, the stimulated recall technique is seen to facilitate exploratory teaching among the participant teachers since, as Allwright and Bailey (1991) claim, understanding our own practice is the main rationale suggested by exploratory teaching.

Moreover, especially, the experienced teachers have asserted that they remembered and revised their methodological knowledge and some teaching and learning theories while reflecting on their actions. The experienced teacher Selen for instance, notes that

> the study reminded me that we, as teachers, should be balanced, interactive, positive, motivated, well organized and tolerant in the class. I also had the chance of revising my teaching and learning principles.

Besides, the stimulated recall interviews were seen to raise a kind of awareness among the teachers towards their interactive teaching and decision making behavior as well as the factors affecting their teaching. As an example, the experienced teacher Kezban realizes that she stands a lot in the class:

> "You see I am always standing, but I do not have to stand during the whole lesson. I should change it. Anyway ..."

In another instance, Burcu, a novice teacher, utters:

> When I watched it, I could see that my voice sound uninteresting and I talked too much. If one of my colleagues told me the same thing, I could

feel uncomfortable but when I saw my own mistakes it is easy to change my style or correct my mistakes.

6.4.4. Benefit to the Researcher

The study has also contributed a lot into my teaching because I observed eight different teachers, which means eight different private and professional worlds. No matter whether the teachers were experienced or novice, they had different backgrounds, preferences, learning experiences, and future expectations; therefore, it was really a wonderful experience for me to study with them. Moreover, their reflections on their instructional actions have also enlarged my perspectives on different aspects of teaching.

Above all, I have improved my interviewing skills and really learnt not only how to videotape a class but also how to create a positive interview atmosphere to encourage the participant teachers to articulate their real thoughts rather than the interpretations of these thoughts. The stimulated recall technique has also helped me to review my listening skills I employ while interacting with the students in the class. That is to say, I have learnt how to listen to people without interrupting them and developed some strategies to show the students that I am really listening to them.

Throughout the study, I have become more aware of the factors teachers should take into consideration while teaching in the class. For example, we, as teachers, should be sensitive about the immediate needs and problems of the students because if they do not concentrate on the lesson, they can not learn anything properly. Moreover, the study has indicated that what we teach does not always correspond to what we have planned since teachers and students change every minute due to their interaction with each other in the class. Therefore, we should be more tolerant of the unexpected classroom events and more flexible in adapting the lesson plan appropriately.

The findings have also made me think about my established facts about teaching and learning. Besides, I have had the opportunity to refresh my knowledge in the light of the relevant literature that I read before, during, and after the study was conducted. Therefore, I now feel myself more competent in discussing some professional issues such as teaching, learning, teacher thinking, reflective teaching, research paradigms, decision making process, and types of teachers.

To be honest, the pilot and the actual studies have really contributed a lot into my teaching, personal and professional development, research skills, and theoretical knowledge on teaching, learning, and decision making behavior.

6.5. Suggestions for Further Research

This study can be replicated from different theoretical and methodological perspectives to gain more insights into the interactive decision making process of EFL teachers. As for the nature of the classes, the study can be conducted at different proficiency levels such as intermediate and advanced to see how the same teacher differs in his or her interactive decisions with regard to the level of the class s/he has been teaching.

A follow up study can be done to see how the interactive decisions of teachers direct their further interactive decisions in the following class hour. The relationship among the three stages of decision making process- pre-active, interactive and post-active decisions- can also be examined among teachers to get richer data on teacher thinking and decision making process.

Some other studies can be conducted in the classes where the lesson plan is strictly imposed and where the teacher is more flexible in adapting the lesson plan, partly or completely, to explore the effects of the lesson plan on the interactive decisions of the teachers.

Interactive decisions should also be studied in regard to teachers' belief system since they perceive and interpret the classroom events in the context of BAK. That is to say, teachers hold certain beliefs, assumptions, and knowledge about what should happen and what should not happen in the classroom. Moreover, teachers have individual ways of making sense of what they say and do in the class (Woods, 1996). Shavelson and Stern (1981) also assert that teachers will rely on their beliefs to direct their action when information is not available. Furthermore, beliefs have a filtering effect on everything teachers think about, say, and do in the classrooms.

In another study, the teachers can be asked to construct a concept map which visually depicts the complex nature of their reasoning to find out how they perceive and interpret the classroom events. Moreover, the pre-active and post-active decision making process of EFL teachers can also be investigated with regard to teachers' perceptions in a further study.

As Richardson (1990) says, teachers should decide what change is worthwhile and control that change properly, using their own personal experiences, the experiences of other teachers, and their knowledge of the relevant prior research. Therefore, in a further study, both the experienced and novice teachers can be given opportunities to discuss the videotaped classes together so that they can exchange their ideas and feelings on the issue. Such debriefing interviews between the experienced and novice teachers help them to evaluate their teaching and decision making process more objectively.

As another alternative, case studies on only one class or teacher can be conducted to obtain more in-depth data on the decision making process of teachers from multiple perspectives. It would also be interesting to compare the teachers involved in professional studies such as attending conferences with the ones who are not concerned with professional studies to see the effect of such studies on their decision making behavior as well as their thinking process in the class.

Another study can be conducted in regard to pre-service teacher education programs. In such a study, pre-service teachers can be shown some segments of classroom teaching of experienced teachers and asked how they would respond to the same situation if they were teaching the class. This procedure covers more than simple classroom observations since it provides real teaching experiences for the pre-service teachers who have no or limited teaching experiences. As suggested by Johnson (1999), they watch these videotapes to recognize the routines and student performance cues which emerge during interactive teaching.

As regards the data collection tools, the repertory grid method can be conducted to assess the change in the thinking process of the participant teachers due to the procedure they undergo at the stimulated recall interviews. As another alternative tool, some hypothetical situations can be used to elicit richer data on the issue because the videotaped data may not reveal exact representations of interactive decisions all the time.

Finally, hierarchical and sequential decisions should be explored in-depth in another study since our data on hierarchical and sequential decisions are in need of further confirmation and support.

Depending on the data collected in the study, some other research questions can be formulated to be explored in further research:

* How do pre-service teachers respond to student performance cues?

* How does the knowledge the novice teachers get from the pre-service education contribute into their interactive, pre-active and post-active decision making behavior?

* How are the three stages of decision making, pre-active, interactive, and post-active interrelated?

* To what extent do the implicit personal theories of teachers affect their interactive decisions?

* Do EFL teachers differ in their decision making process at different stages of the lesson (i.e., presentation, practice, etc.)?

* How do EFL pre-service teachers make use of the routines in their limited teaching?

* Do the experienced teachers make more lengthy comments than the novices while commenting on their instructional actions at the stimulated recall interviews?

* How do the experienced and novice teachers differ in their perception of the classroom events?

6.6. Limitations of the Study

As in all studies, this study should also be interpreted in the light of several limitations. First of all, the participant teachers may have commented on their video-taped actions with the thoughts that occurred at the time of watching the video-tape but not with the thoughts they had considered during the class. Moreover, sometimes, our manner of asking some questions may have led the participants to answer the questions in the way we expected. These leading questions may also have limited the possible responses of the participant teachers.

As for another limitation, some hot spots appeared throughout the study. That is to say, at the stimulated recall interviews, the participants sometimes uttered what they should have done instead of what they had actually done in the class. In Woods' (1991) terms, usually the interpretation of what happens is to a greater extent colored by the view of what should happen.

Similarly, Edgerton and Langness (1974) claim that

> as the field worker observes and participates, he becomes aware of the complexities and contradictions in what people say and in what they do. What people say is right and proper and is referred to as "ideal culture", and these ideals, or values as they are sometimes called, are an important insight into how and why people behave as they do. Yet the fieldworker will also discover that many people do not behave as their ideals would have them do. This behavior is also important not only because it points to the realities rather than the ideals of life, but because it can give insights into areas of change or tension in the culture. (31)

In addition, there are two more possible threats in using the stimulated recall interview. Firstly, the verbal statements of the participants may not have reflected what was going on in the class rather they may have reflected how the teachers perceive and interpret the classroom events from their own perspectives on the bases of their beliefs, knowledge, teaching and learning theories, and real life experiences. Secondly, this verbalization process can change the process of interactive decision making the researcher is interested in (Flower & Hayes, 1980; Hosenfeld, 1979; Woods, 1996).

The videotaping procedure may also have produced some unintentional effects on the data collected throughout the study. That is to say, it may have affected the usual teaching style of the teacher and behaviors of the students participated in the study. For example, some teachers felt that they had to talk English throughout the study since they were being video-taped. Even though this observer effect bias was taken into account while analyzing the data, it was not so easy to determine the points where the researcher bias involved in the study. Furthermore, these biased points could be identified only towards the end of the data collection period since the general style of the participant teachers and students became much clearer in the end.

As for the data collection period, the videotaping procedure was completed in only one semester on purpose due to the difficulties we had in the pilot study. Therefore, we could not have the chance of observing how teachers performed in the class at different times of the year.

Another limitation is that the data were coded only by the researcher throughout the study. However, an independent rater should also have been invited to code all the data or just a sample of the data to check the *inter-rater reliability* for the category descriptions and the coding procedures employed throughout the study.

The personal characteristics of the participants were also seen to bias the data. That is to say, the data collected for some teachers in the study yielded more accurate and representative results since those participants were more talkative, open, reflective, and able to articulate their thoughts in a more connected way. Therefore, we tried to find some strategies to direct the talkative participants and encourage the silent ones to reflect on their actions at the stimulated recall interviews. Piloting the study, reading the relevant studies, and formulating appropriate interview questions helped us to eliminate this bias throughout the study.

Regarding the data collection procedure, some unexpected problems appeared throughout the study. For example, some stimulated recall interviews were delayed one or two days due to teachers' regular schedule or the private problems emerged right after the videotaping procedure such as illnesses, sudden meetings, or substitute classes. Moreover, in some cases, some teachers were being self-defensive while commenting on their behaviors since they thought that they were being criticized in terms of their teaching style or theories they hold.

As regards the presentation of the data throughout the study, it was not so easy to select more representative examples among the collected data because each teacher was video-taped three times and the transcription of each teacher was almost 100 page length. For this reason, the most remarkable, interesting, and surprising examples were chosen to illustrate the interactive decision making behavior of the teachers more appropriately; however, these examples may not seem to be so remarkable and interesting to other people due to their different teaching backgrounds and perspectives on teaching.

Finally, all the interpretations of the participants were reported from our own perspectives. Therefore, the interpretations reported in the study may have been shaped through the interactions between us and the participants. Moreover, some of the data may reflect our values, belief, and implicit theories rather than those of the teachers.

It should also be emphasized that this study is in no way a comprehensive description of classroom decision making process since classroom teaching itself is a complex and multidimensional process between students and teachers.

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Appendix 1

Stimulated Recall Session Questions

Questions Asked During the Sessions (Tape-recorded)

1. What were you aiming at here?
2. Why did you take that action at the time?
3. What were you getting at with that question?
4. What was your decision here?
5. What was the reason for that decision?
6. What factors, or conditions, you think, may have caused the event?
7. Did you think some other instructional alternatives while making this decision?
8. If yes, how many alternatives did you think while making this decision?
9. What were these alternatives?
10. Which one seems to be the most appropriate alternative now?
11. What theories or beliefs did you consider while responding to the event?
12. What knowledge or goals did you draw upon in responding to the event?
13. Were you satisfied with your action and its consequences?
    a. If yes, why?
    b. If no, why? (please refer to the videotaped instance)
14. Can you identify any routine here?
15. Is this the routine what you had planned?
16. Was this the only available routine?
17. Is summarizing a kind of routine for you?

*These questions are asked for each classroom event the participants remarked or the researcher points out in some cases.

Appendix 2

Semi-Structured Interview Questions

Prior to the First Video-Taping Sessions (Tape-recorded)

1. Do you always plan your lesson in a written form or just as mental scripts or images?
2. Have you covered all the things in your plan?
3. What are things you changed or omitted from the lesson plan? Why?
4. Do you have any theory of instruction while planning the lesson or choosing the teaching method?
5. Can you understand how the students feel toward the lesson? If yes, how do you understand?
6. Do you have any teaching routines?
7. What are the common routines you generally employ in the class?
8. Do you believe that these routines are important in classroom teaching?
9. Do you think changing or adapting your lesson plan in the class may create any uncertainty for you? If yes how?
10. Do you often monitor your instructional actions in the class?

    If yes how?

    If no, why?

Appendix 3

Semi-Structured Interview Questions

After the First Video-Taping Sessions (Tape-recorded)

1. How do you feel about changing or departing from the lesson plan?
2. Do you remember any class in which you completely changed the plan?
3. If yes, why did you make such a great change?
4. How can you decide on the effectiveness of any class?

   (i.e., on the bases of what criteria?)
5. Do you have any other things to tell about your classroom teaching in relation to interactive decision making?

Please rank the following instructional goals from the most to the least important one from your perspective. Please try to think aloud while ranking them:

....................Social and affective needs of the students

....................Student motivation ....Covering the plan

....................Subject matter content ....Student understanding

....................Curriculum integration ....Student language skills

....................Classroom management ....Using L2 appropriately

....................Motivating the students

**NOTE: The list of the questions can be adapted according to the participants' teaching in the videotaped classes and their comments. That is to say, some items may be added, changed, omitted, or modified on the bases of the particular instances observed during the study.

Appendix 4

A Classification Scheme for Four Dimensions of Interactive Instruction

Category	Definition	Example
Student Performance Cues		
Deficient responses	a behavior or response is not made after being elicited by teacher.	teacher asks students to read aloud and they do not respond
Initiations	students initiate spontaneous behavior or response.	student praises another's response
Errors	response that is incorrect, insufficient or superfluous.	given task using map symbols, student misplaces symbol on map key
Attention	level of student attention is either above or below appropriate level.	students show high enthusiasm for writing last sentence of a story
Instructional Actions		
Gives feedback	teacher provides student with information regarding student's performance.	after noticing students make incorrect placement of map symbol on key, teacher showed correct response and compared it to the student's
Explains concepts \ procedure	teacher provides or elicits an explanation or procedure for task completion not referring to a student response.	after students were unable to respond to questions about a game, teacher explained procedure for playing
Checks knowledge	teacher queries student about knowledge of a concept, topic, or procedure.	after incomplete student response to math question teacher asked for a more complete answer
Focuses attention \ effort	teacher directs student attention or encourages persistence.	after noticing a student's attention wandering, the teacher placed a work card directly in front of him and asked a question
Applies, extends, Or plans	teacher applies new concepts, extends instruction to include them, or plans future instruction	teacher noticed students didn't understand "north," "south," "east," and "west," and planned future lesson on that topic
Elicits and incorporates input	teacher encourages student initiations and uses them in lesson	students were enthusiastically composing the ending sentence of a story and teacher asked for each student's ending and wrote them on the board
Instructional Goals		
Student motivation/ and involvement	teacher considers increasing or maintaining student motivation and involvement in making. decisions	teacher allowed student to work independently in one subject to keep his interest in other subjects
Group management	teacher makes a decision with consideration for the effect of overall group process on the lesson	teacher answered irrelevant student question to facilitate return-to task for whole group
Curriculum integration	teacher makes a decision with consideration for the sequence of lesson content	teacher decided to continue an unsuccessful activity to make next lesson easier
Social development	teacher makes a decision considering student's social and developmental needs.	teacher allowed student to answer question ahead of others to develop communication skills
Subject matter content	teacher makes a decision considering nature of lesson content.	teacher probed for more specific answers in composition lesson, to show every sentence should not start with the same word
Student understanding	teacher makes decisions with primary consideration for increasing student understanding	teacher used unplanned example in class thinking to facilitate understanding of lesson
Prior Knowledge		
Important content	teacher recalls considering knowledge related to lesson content.	teacher recalled previous class activity of use in present reading lesson
Pedagogical principles	teacher recalls considering knowledge related to instructional principles.	during math lesson, teacher recalled varying questioning procedure for the benefit of those most in need of help
Student history	teacher recalls considering knowledge related to student social behavior or attention span	teacher recalls particular student's shyness, in eliciting classroom student responses
Academic skills	teacher recalls considering knowledge related to level of student academic skills and ability	teacher gave special project, recalling particular abilities to be used to improve student's other abilities
Knowledge	teacher recalls considering student probable knowledge of content or concepts.	teacher knew that, because of where students lived, they were probably familiar with particular concepts in class
Preferences	teacher recalls consideration of knowledge related to student's preferred activities	teacher used map in lesson because of knowledge that class liked maps

From Fogarty, Wang, & Creek, (1983)

Appendix 5

The Lesson Plan of the Experienced Teacher Kumru

(The Third Session)

Class: 305 (Beginners / level 1)

Level: Book 2

Unit: 2 (p.16)

Practicing have got/ has got

Materials: Textbook & OHP& whiteboard & handout

Techniques: lecture, question and answer

No previously arranged homework;

Summarize the previous hour;

Do the exercise part if possible

Appendix 6

The Lesson Plan of the Novice Teacher Ece

(The Third Session)

Class: 303

Level: 2

Unit: 6

Subject: Present and practice "What is it like?"

Materials: textbook, tape recorder

Techniques: pair work, question and answer

Summarize the lesson in the beginning

Appendix 7

Teaching Order for Level 1 Classes at YADIM

ACADEMIC YEAR 2002-2003 LEVEL 1/BLOCK 3

Books: Headway (Pre-Intermediate) &Vocabuilder (Pre-Intermediate) (Prof. Dr. F. Özden Ekmekci)

WEEK	UNIT	COURSEBOOK	WORKBOOK	EXTRA MATERIAL
1 **17-21 Feb.**	2 3	Present Simple Present Continuous Have/Have got Past Simple Past Continuous	Linking words: but, however ***Writing:** Description of a person Linking words: while, during, for ***Writing:** A story	Vocabuilder: Unit 5
2 **24-28 Feb.**	4 5	Much/Many/How much/How many Some/Any Something/Anyone/Nobody/Everywhere A few/A little/A lot of Articles:a/an/the Infinities/Gerunds (want/hope/enjoy/like/look forward/ would like Going to/Will		Stop & Check 1 (Units 1-4)
3 **3-7 March**	6 7	What's it like? Comparative & Superlative Adjectives Present Perfect/Past Simple For/Since Tense Revision		Vocabuilder: Unit 6
4 **10-14 March**	8	Have (got) to Should Must		Stop & Check 2 (Units 5-8)
5 **17-21 March**	9	Time & Conditional Clauses (as soon as, when, while, until) What if...? Conditional (Type 1)		Vocabuilder: Unit 7
6 **24-28 March**	10	Infinitives/Gerunds (manage/used to/go) Infinitives of Purpose What, etc. + infinitive Something, etc. + infinitive		
7 **31 Mar-4 April**	11	Passives (Present/Past)		Vocabuilder: Unit 8
8 **7-11 April**		ACHIEVEMENT		

COMPULSARY	OPTIONAL
❖ Workbook exercises ❖ Vocabuilder ❖ The grammar teaching items in the Grammar Refernce Section of the Student's Book ❖ Extra grammar teaching items ❖ Stop & Check and Progress Tests ❖ Summary of an article to constitute 10 marks of Quiz 2.	❖ Dictation and Error Correction of sentences ❖ and short paragraphs to develop students' listening and writing skills. ❖ MPU material for extra practice of grammar points, listening, reading and writing.

Appendix 8

Teaching Order for the Remedial Total Beginners at YADIM

Books: Headway (Elementary, pre-intermediate, and intermediate)

(Liz& John Soars- Oxford University press)

Block 2 ELEMENTARY

First week: 4-7 December

Verb TO BE

WH and yes-no questions

Possessive adjectives

Jobs ; Nationalities; Countable nouns (a.an)

Numbers

Adjectives: fast, big, dirty, dangereous, noisy, modern, (un)friendly, exciting, cheap, expensive, slow, clean, quiet, young, old, safe, boring, married, single, easy, difficult, hard, free, ordinary, sick, ill, small, interesting, boring, early, late, ready, busy, hot, cold, warm, cool, lovely, (un)happy, different, open, shut, sad, (un) lucky, wrong, right, incredible, delicious, tasteless, funny, amusing, worried, glad

Extra material based on the grammar items will be prepared by the class teachers

Speaking: use pictures to encourage the students

Listening and reading texts of Unit 1 and 2 will be done again

Writing about someone:

(A family, best friend, a teacher, a famous character, a school subject between 50-60 words)

Appendix 9

An Example Excerpt from the Content Analysis of Kumru's Classes

TEACHER KUMRU 3 EXCERPT

Instructional Action	Student Performance Cue	Instructional Decision	Prior Knowledge	Teacher Concerns
Good morning!				
(She enters the class)	(SS are talking among each other)			
(There is a tape recorder and OHP on the desk)				
(She tries to arrange the OHP)				
Alright!				
(She gets the transparencies out of her file)	SS: Işıkları söndürelim mi?			
Yes, please!	(SS know what the teacher is planning to do in that lesson)			
	(A late comer comes in)			
(She silently allows him to enter the class)				
Now!				
We will do some practice with the same structure.				
(She is standing behind her desk holding the transparencies)				
This is Nick's room!				
(She shows the picture on a transparency)				
(She puts it on the OHP)				
You see! This is Nick's room!				
Can you see it all?				
Herkes görüyor mu?	SS: Yes!			

Right!				
Now!				
I want you to tell me!				
(She walks around)				
	S (silently): Dışarı çıkabilir miyim?	I did not allow him to go out because it was at the very beginning of the lesson.		I usually give them permission if they ask for it during the lesson, in the middle or towards the end. I do not ask why they want to go out. But this was at the very beginning and he also interrupted me. May be this was the first time I said no for such a permission.
NO!				
OK!				
I want you to tell me what he has got in his room.	SILENCE			
Or! What he has in his room?		This is in fact what I did not like about the book. It gives has got and have got together and from my point of view, it may cause some confusion among the Ss. Luckily It did not. So I felt that I have to underline or highlight that they can use both for the same purposes.		
You can use both structures!				
HAS or HAS GOT!				
Alright! In his room!	SILENCE			
Have a look at the picture!				
Can you se it?	SS: YES!			
Let's give an example, first of all!				
An example!	SS: He or She....			
HE!				
Yes, you!	S: He has got some books.			
Yes!				
Some books				

TEACHER KUMRU 3 **EXCERPT**

Instructional Action	Student Performance Cue	Instructional Decision	Prior Knowledge	Teacher Concerns
(While going around):				
Yes, Şamil!	(Şamil does not raise his hand)			
	Ş: He has some books.			
Who has some books?	Ş: He has some books.			

Good!		
Yes, you!	(A S raises his hand)	
	S: He has two keys.	
Good!	(SS are silently engaged in the activity)	
Yes, you please!	S: He has a /driving licence/.	
Very good!	(Wrong pronunciation)	
Driving licence!		
(She corrects his pronunciation)		
Alright!	M (without taking a turn) :	
	/Tape recorder/!	
Say it!	(Wrong pronunciation)	I made him repeat the word correctly. Other wise, I would not understand if he is still doing the same sort of mispronunciation.
	M: /Tape recorder/!	
	(Wrong pronunciation)	
Say it!		
	M: He has /tape recorder/!	
	(Wrong pronunciation)	
Tape recorder!		
(She corrects it)	M: Tape recorder!	
Alright!		
(She looks around)	SILENCE	
Yes! Begüm!		
(She goes near her)	B: He has a key.	
He has?	B: A key!	
(She looks at the class):		
This is the third time you are saying KEYS!		Emre is stutter. This is natural way of speaking for him. I usually wait for him. I do not interrupt him, or I behave naturally that I am waiting longer. Whenever he wants to speak, I give him the turn. He is eager and he is also a teacher in a private course.
Listen to your friends!		
And! Don't repeat!		
(She looks at Begüm)		
If it is said, don't say it again!	SILENCE	

What else?	S: He has a /shoes/. (Wrong pronunciation)			I announce the time limits for the pair and group work activities. Other wise I do not assign any time limit.. I do not know I usually come to the proper end.
SHOES! (She corrects it) (She shows her shoes to mean not A but a pair of shoes)			I know they have learnt the phrase a pair of because we studied it together in the previous lesson. They know a pair of glasses, shoes. Just to make them remember that information.	
Say it again! (She shows two with her fingers) How many shoes does she have? Some shoes, OK! He has some shoes or some pairs of shoes.	S: He has a S: Some shoes!	I showed my shoes to make them recall. Those gestures might help them.		

TEACHER KUMRU 3 EXCERPT

Instructional Action	Student Performance Cue	Instructional Decision	Prior Knowledge	Teacher Concerns
Give short answers! For example! (She is now standing near the four SS) Bir örnek yapalım: You can give the name of the thing. O nesnenin ismini de verebilirsiniz ve ya! What la sorarsanız, Yes/No sorusu olmaz tabii ki! YES/NO sorusu olacak tabii ki!				
Are there any sunglasses in the suitcase is perfectly alright! Ama biz nasıl soracağız?:	(One of the four SS) : Are there any sunglasses in the suitcase?	I accepted that structure bot the purpose of the activity was to practise have got, has got and does he have I think. I always exemplify the first one in front of the class. In a way to make it clear and		

Dos he have? Veya

Does he have sunglasses in his suitcase.?

One version! OR!

Has he got sunglasses in his suitcase?

OK?

Bunu sorduktan sonra başka sorular sorabilirsiniz!

OK! Whatever!

HE!

Short answer!

Give short answers!

Short answers!

(To the FS): Devam edebilirsiniz isterseniz!

T: Two..?

(She looks at the SS)

OK! Two pair of shoes!

(The OHP was broken down)

OPS!!!

(She checked the electricity and the OHP)

Ne çabuk ısındı!

(To the Four SS):

Siz hatırlıyorsunuz değil mi?

OK! Go on!

(She is now behind the four SS)

(To the class):

I will show you!

(To the four SS):

Don't look!

Same S: Have I got?

FS : Has he got sunglasses?

S: Yes, he has got!

FS: Has he got shoes?

S: Yes, he has got.

FS: How many shoes are there?

S: There are two shoes.

Another S: Pair of shoes!

narrow down the practice point.

I am explaining the second activity in English because I have already used all the structures. They know them. Nothing is different.

At this point the OHP broke down and I had to change the nature of the second activity. They only talked about the transparency. But for what purpose? I asked the SS to make a decision whether he is going to holiday or on business. A sort of puzzle. A reason for them to think about. It also draws their attention.

I did not panic, but you know I just remember my tutor telling a story about giving a demo. He told that you have to

		get well prepared. But if the OHP breaks down, there is nothing you can do. You know you can not enter the class with two OHPs or whatever it is. Since it was a picture, it was easy to handle because nothing was written on it. I thought I could show the picture to the SS during the activity.		

TEACHER KUMRU 3 **EXCERPT**

Instructional Action	Student Performance Cue	Instructional Decision	Prior Knowledge	Teacher Concerns
	F: His name is Mike.			
(She is standing in the centre and looking at the activity in the book)	He comes from /Canada/. (Wrong Pronunciation)			
	He has got a sister.			
	He works for a computer company.			
Very good!				
(She sits next to Fatma and looks at her sentences in her notebook; She also listens to her silently)	F: He likes skiing and ice hockey.			
	He /goes/ Europe on holiday. (Wrong pronunciation)			
He goes to Europe. (She corrects her pronunciation)	F: He goes to Europe on holiday.			
	He is playing ice hockey now.			
He is playing ice hockey now.				

Very good!			
Now! You can report back about each person, ha!			
(She is still sitting)			
Now! This is your homework! :			
I want you to take one of these		I assigned the homework at this point because it was the end of the activity. Instead of going back and reminding then what we did and then assign the related homework. It is always more wise if you are going to give homework related to that activity.	I had not decided on the homework before the lesson. In the lesson, two SS exemplified the characters and they did it correctly in the spoken form, so I do not think it would be difficult for them to write it. A written form is also necessary. Combine the four skills in a way. They did it orally, took notes. Written form was left and if they do it at home, it would be good for them. Just to integrate four language skills.
And write it as a paragraph, OK!	(SS are silently listening to her)		
Şimdi Mike and Nicol'ü yaptığımıza göre:			
Write about either Lucy or Jeff and Wendy!			
İkisinden birini yazıyorsunuz!		I did not finish the activity because my purpose was to make them practice the structure with each other. I think they had enough practice.	
Alright!			
Good!			
(She leaves the book on her desk)			
Now!			
Let's do this with a...!			
Şimdi kendimizden birini merak ediyor muyuz?	NO RESPONSE		
Kendi içinizden birini?	NO RESPONSE		
Where does he live?			
How many brothers and sisters has she got? Or			
Does she have?	NO RESPONSE		
Alright!			
Şimdi merak ettiğiniz birine soruları soralım!	NO RESPONSE		
OĞUZ! Oğuz'u çok merak ediyoruz. (She aughs)	(SS laugh)		

TEACHER KUMRU 3 EXCERPT

Instructional Action	Student Performance Cue	Instructional Decision	Prior Knowledge	Teacher Concerns
You stand up, here Oğuz!	(O stands up in front of the class)			
(To the class):				
OK!				
And you get ready to ask him questions!				
Now! Şimdi!				
Aynı soruları!				
You are going to ask questions to him!				
And Oğuz there to answer us!		Oğuz!	Oğuz is interesting. And he said something " I am learning English, but I am not speaking yet." Or something like that. So I gave him a chance to talk English. He answered all the questions. He is a very interesting student and sometimes funny. He has good relations with the other SS. Once he told that he likes English very much, but he needs some practice. It was some sort of this. May be that's why he is not a shy student, very frank.	
(She sits on the desk of Oğuz)	(Oğuz is standing in front of the class facing the other SS)	I sat because my role finished. I generally ask the SS to stand up and come to the board in such activities. But if he or she wants to sit, I let him sit.		
Evet! Emire'den başlayalım!	E: Where do you come from?			
She is very quiet there!	O: I come from Mersin.			
	(Different SS ask questions)			
Alright!	S: How old are you?			
	O: I am 23 years old.			
	S: Are you married?		I had thought about this activity before. I usually personalise the activities into the real life of the SS. Then, they become much more interested and motivated. They like doing it. They are curious.	
(She laughs)	(SS laugh)			
(She gives the turns to the SS with her hand without talking)	O: No, I am not.			
	S: Where was you born?	I did not correct the question at first because Oğuz was very eager to answer it. He knows the answer. I let him finish and then I asked him to repeat the question. I did not want to interrupt their interaction at the time.		
	O: I was born in Ceyhan.			
Ask it again!	Same S: Where were you born?			
OK!	O: I was born in Ceyhan.			
	S: What do you do in his free time?			
In whose free time?				
(She points at Oğuz)				
In his free time!	Same S: In your free time!			
	O: I play basketball and tennis in my free time.			

Very good!				
	S: How many brothers or sisters do you have? O: Sorry! I have not got any brothers or sisters. S: Do you have any girl friend?			
Now! (She smiles) It is free to ask anything you want to ask! Artık bitti. You can ask these questions! Yes, Oğuz! (To Oğuz): You may answer! Or NOT! Your choice!	O: Yes, I have got a girl friend.	We have covered the structure that we planned, so it was totally free now and it was a short activity. It was also towards the end of the lesson, *a few minutes left* in fact.		As I mentioned before I am never worried about timing because it happens naturally. I can always end the lesson properly. I have never had any problem in timing the lessons.

TEACHER KUMRU 3 EXCERPT

Instructional Action	Student Performance Cue	Instructional Decision	Prior Knowledge	Teacher Concerns
OK! (To Oğuz!): Thank you sit down! That's it!				As I said earlier, I was planning to cover the negative form. I covered everything in fact. Negative forms are not emphasised in the book. It was my additional idea, but you know I just had it in my mind. If I had a chance somewhere, I was also planning to let them practice negative forms.
	O: You welcome!			
Alright! Now! I want you write very briefly about Oğuz! Now! Write it now! About Oğuz! What does he do in his free time?		This was not something I planned. Since there were few more minutes left, I decided on the spot that it would be a good exercise to complete the whole		

What do you remember?	(SS silently open their books)	activity. To integrate speaking, listening, and writing as a whole.
What ever do you remember?		
Oğuz is......		
Yaşını soran olmuş muydu?	SS: Yes!	
(She goes around)		
Oğuz is 18 years old and		
Herkes hatırladığını yazsın!		
Don't ask eachother!		
But, just write		
What you remember about him!	(SS are silently on their task)	
(Now, she is at her desk preparing her materials)		
(Then she goes around and checks their tasks)		
(After checking a student, she speaks loudly to the class):		
Bir güzel ipucu gördüm.		
Yani ilave edebilirsiniz.		
(She points at Sefa)		
Sefa işte demiş:		
Oğuz is my classmate!	SILENCE	Oğuz is my classmate. I announced it to the class because it was a very good introduction sentence. As I was monitoring, I was making few corrections. A few SS started their sentences with "he" and we converted it into Oğuz. I just wanted to inform them this is a good starting sentence. They can start like this.
Giriş olarak güzel!		
He is and sonra...		
Direk!		
Oğuz kim bu Oğuz?		
Oğuz is my classmate!		
(She continues to check the SS silently)		
(After few seconds, she comes to the center of the class):		
Evet!		
Tamamlayamayanlar bunu evde		

tamamlasın!		
Öbürüyle beraber!	SILENCE	I assigned it as homework for the ones who could not finish since time was over.
Alright!		
(She comes near the OHP)		
Yusuf!		

Appendix 10

The Snake Chart of the Experienced Teacher Kumru

(1) My ~~British~~ English language teachers in prep. and in middle school: Their democratic attitudes to ss had a great influence on my motivation & had the opportunity to express myself ideas without pressure. I still use some of the techniques that they used at that time in mid 60's. (Miss Bowman, Mrs Ayas. Mr. Cheeseman)

(2) In middle school - joining ~~Joining~~ English choros which allowed me to learn many English songs and perform them in front of audience. Years after I can still see the differences between our native and British language teacher in their approaches to ss. This makes me feel sorry for our educational system.

(3) In high school Mr Mclardy freed our minds and souls by giving hw. based on our creativeness in litrature (such as writing poems, stories of our own)

(4) - Fate = I took the enterence exam of the "teacher training college" just to have an experience for the university exam.

5-) Gazi teacher training college = my awareness in grammer, teacher behaviour and methodology / diploma.

6- My teaching experience throughout the years

(7 1986) A Turning point in teaching writing. : I joined the fulbright summer course in Robert college in Ist.

(8 Joining seminars in various cities

9. Aston University "Distance Learning MA programme" - awareness on the difficulties of academic studies -

Experience in ELT literature and getting satisfaction.

10 - Optaining a ELT diploma Çukurova Uni-

11 - Optaining a post graduate diploma "Aston uni"

12. Giving seminars based on the studies I had done.

13 Working as a Cambridge uni. COTE tutor for two years improved my editing.

14 Based on the needs of YADIM I created "Rotatory Development" in teacher development unit and giving a joint seminar on it "this term "Rotatory Development" had not existed in ELT before."

15 - The struggle between my director and myself when "Rotatory Development" paper was to be published. →

Appendix 11

The Snake Chart of the Novice Teacher Ece

I was always very interested in my elder sister's books (English)

I always used to practice with her vocabulary items

One of my teachers in highschool influenced me deeply

She began to be a model for me.

Although I wasn't very good in English, I tried to work harder and harder

My German ~~Eng~~ language knowledge was another reason to choose English at university.

I liked the language more and more (especially ~~after~~ when I had the opportunity to speak to native speakers

Now

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PAPER and ARTICLES

Sept., 2001 "*Interactive Thoughts and Decisions of EFL Teachers: A Pilot Study*" The Fifth Teachers Develop Teachers (TDTR) Research Conference, METU, Turkey. (Unpublished)

May, 2001 "*Learning to Teach: On-line Decisions of Student Teachers*" The Second International ELT Research Conference, Çanakkale University, Turkey. (Unpublished)

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