Student teachers' perceptions of learning to teach as a basis for supervision of the mentoring relationship

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1. Introduction

1.1. Background of the study

This study reports on an investigation of the mentoring relationship from the perspective of student teachers during their ongoing participation in a practicum program of a teachers college in Israel. The study focuses on perceptions of student teachers from four perspectives: (1) their initial perceptions of the role of the cooperating teacher, (2) the kinds of knowledge and skills they perceive to learn from observations of their cooperating teachers’ classroom practice, (3) their perceptions of these reported learning situations as triggers of support and challenge to the development of the teaching self and (4) the ways in which matched and mismatched perceptions with their cooperating teachers influence their experience of learning. Theoretically, we hope to make a contribution to the literature that seeks to understand and describe processes that student teachers undergo in learning to teach that contribute to the quality of the mentoring relationship. The aim of the study is to use this information as a basis for recommendations for supervision of mentoring relationships that promote beneficial learning experiences in light of the importance of mentoring in pre-service teacher education.

Mentoring in the context of teacher education

The concept of mentoring originated in Greek mythology. It comes from a character in Homer’s Odyssey who educated and supported Telemachus while his father was away (Achinstein & Athanases, 2006). Mentor symbolizes the ultimate teacher and guide, both goal and path, knowledge and wisdom (Daloz, 1986).

In modern times, mentors are thought to enhance and ensure the professional development of talented newcomers. Erikson’s (1950) description of the Eight Stages of Man described the motivation of the mentor as stemming from the desire that one's work and influence live on as an important life goal called “generativity.” In his formulation, the act of mentoring may contribute to one’s feeling of repaying, in some way, the intrinsic benefits derived from a profession. Daloz (1986) extended this description to a perception of the mentor as a life guide for continuing adult learning and development.
In the context of teacher education, the literature abounds with definitions of mentoring. Mentoring is often conceptualized as the individualized support, assistance, guidance and challenge that one more experienced teacher gives to a teacher with little or no experience (Awaya, McEwan, Heyler, Linsky, Lum & Wakukawa, 2003; Feiman-Nemser, 1995; Rowley, 1999). The mentor (in this study also called cooperating teacher; see section 1.4) may attend to the professional development of beginning teachers through a variety of roles. Mentors may model lessons, jointly plan curriculum, serve as coach on subject matter, discuss school issues, guide novices using a variety of teaching approaches, etc. (Achinstein & Athanases, 2006). In summary, apart from his or her task of being a teacher, a mentor may be a friend, guide, coach, and role model for beginning teachers. In practice, mentoring does not rest on robust ideas about teacher knowledge, students, or change. Mentoring strongly focuses on reducing beginning teachers’ “practice shock” (Veenman, 1984), thus assisting beginning teachers in initial survival.

The importance of the mentoring relationship

Researchers in the framework of teacher training claim that student teaching practice in the school serves as the most significant factor in the shaping of the student teachers’ experience of training to be a teacher (Ben-Peretz, 1995; Lanier & Little, 1986; Tang, 2003). A review of the literature by Lanier and Little (1986) of student teachers’ evaluations of their professional training in different times and places supports this conclusion. It was found that student teachers identify with their cooperating teachers more than with their teacher trainers or with other college personnel (Calderhead & Shorrock, 1997; Guyton & McIntyre, 1990). As Hawkey (1997) claims, student teachers are cognitively and affectively changed as a consequence of their mentoring experience.

Despite different structural and organizational forms of mentoring programs, it appears that the unique and individual relationship between student teacher and mentor teacher is what differentiates good mentoring from conventional mentoring or worse. Much has been written about the idiosyncratic nature of mentoring relationships that is dependent upon the individuals involved (Bullough & Baughman, 1993; McNally, 1994) and the difficulty of investigating what actually takes place in interrelationships between individuals (Awaya et al., 2003; Boreen & Niday, 2000; Johnson, 2003; Kilbourn & Roberts, 1991).
The many different formulations of mentoring in the literature point to the lack of agreement among researchers and educators concerning good mentoring. Although research has identified factors that contribute to good mentoring (Rowley, 1998) and educative mentoring (Feiman-Nemser, 1998; Zeichner, 1995), there is a gap in knowledge between what researchers and educators formulate as student teacher learning and what student teachers themselves are able to articulate (McNally, 1994). Few studies have focused on the perspectives of student teachers or mentor teachers themselves (Zanting, Verloop & Vermunt, 2001b). According to Pajares (1992), participants’ perceptions of mentoring relationships have not been sufficiently studied due to the difficulty of uncovering perceptions that are not explicitly known or articulated (Eraut, 1985; Zanting, Verloop & Vermunt, 2001b; Wang, 2000). One of the reasons for the difficulty of investigating the perceptions of teachers and student teachers is that teaching is a practical endeavor. Implicit decisions concerning actions that are performed in the classroom defy explicit codification (Eraut, 1985).

Research on what student teachers learn has failed to connect what student teachers report that they learn with specific mentoring relationships (Feiman-Nemser & Buchman, 1987; McNally, Cope, Inglis & Stronach, 1997; Wang, 2000; Zeichner, 1995). Student teachers have predominantly reported on the supportive, emotional aspect of the mentoring relationship, rather than on the cognitive aspect of what they learn (Elliot, 1995; Weinstein, 1989). Zeichner (1995) believes that self-reports of satisfaction from mentoring relationships by student teachers are clouded by the need to manage in the classroom on a daily basis. He expresses concern that the emphasis on immediate proficiency in existing mentoring programs stiltsthe future capacity of the student teacher for questioning and growth.

**The need for a broad framework for interpreting knowledge and skills**

Different conceptual orientations that may underlie the role of the cooperating teacher have appeared in the literature. According to Calderhead and Shorrock (1997), these orientations refer to a body of values and beliefs about teaching, how teachers think about their roles and responsibilities. Such conceptual orientations influence how we think about the preparation of teachers and, therefore, also influence the design of teacher education programs. Orientations that emphasize different aspects of the teaching role are culturally embedded and have been particularly influential as
motivating factors for educational reform in different countries at different times in history (Hargreaves & Fullan, 2000; Squires, 1999; Zeichner, 1993).

Teachers are influenced by the orientation prevailing in their country and in their school, as well as being products of their personal and educational histories. These different influences may conflict with one another. Awareness of one’s orientation and of an existing conflict between different orientations is important to teachers’ professional image. However, a teacher’s orientation to teaching is not necessarily the same as a teacher’s orientation to mentoring. Research has found that most mentors rely on their own memories of student teaching experiences when thinking about how to mentor student teachers in the present (Calderhead & Shorrock, 1997; Martin, 1996; Murdoch, 1997).

Student teachers often have widely different perceptions of their mentors’ roles and responsibilities than do their mentors. They may also have different orientations to teaching than those of their mentors. Since beliefs and values or orientations are usually implicit and not articulated, there is a need for conceptualization of the different kinds of orientations to teaching among student teachers (Hawkey, 1997; Knowles & Holt-Reynolds, 1991).

We chose Calderhead and Shorrock’s formulation of orientations to teaching and teacher education as a basis for our study. Their formulation of orientations encompasses those that have been prevalent in different times and places and includes the various kinds of knowledge and skills that are, among other things, representative of the knowledge and skills that we believe to be important for teacher preparation. Just as student teachers are constricted by their orientations to teaching, so are mentors constricted by their orientations to teaching that influence their perceptions of their role as mentors. Awareness of one’s implicit orientations is necessary in order to expand these orientations to include a larger repertoire of knowledge and skills relevant for teaching and for mentoring (Clarke & Selinger, 2005; Hawkey, 1997). The study of teachers’ and student teachers’ orientations to teaching and teacher education is another way to add to our knowledge of teachers' and student teachers’ perceptions of their evolving professional identity and self-image (Beijaard, Verloop & Vermunt, 2000; Ben-Peretz, 2003).

The orientations to teaching and teacher education of Calderhead and Shorrock (1997) are summarized here as follows:
1. **The Academic orientation** sees the quality of the teacher’s own subject matter knowledge and expertise as his/her professional strength.

2. **The Technical orientation** emphasizes the behavioral skills that teachers require, as derived from a behaviorist model of teaching and learning.

3. **The Practical orientation** views the teacher as an artist or craftsperson and attaches importance to classroom experience and apprenticeship models of learning to teach.

4. **The Personal orientation** emphasizes the teacher’s interpersonal relations in the classroom and views learning to teach as a process of “becoming,” or personal development.

5. **The Critical orientation** emphasizes the role of the teacher in promoting democratic values and reducing social inequities.

In this study, we wanted to encourage cooperating teachers to uncover and articulate their orientations to teaching through their participation in the practical experience of serving as mentors to student teachers.

Student teachers’ beliefs about education and teaching are based on a life history of participation in classroom contexts. These implicit beliefs, which are personal and based on one’s own experience, serve as “filters” through which new learning must pass (Zanting, Verloop & Vermunt, 2001a). Implicit worldviews of education and educational institutions form the basis upon which student teachers’ expectations of learning in classroom situations are formed (Pajares, 1992; Wang, 2000). Student teachers justify their actions based on expectations of success or failure from personal histories of their own lives in classroom settings (Knowles & Holt-Reynolds, 1991). In this study, we hoped to uncover the underlying orientations to teaching of student teachers as they are reflected in their reports of perceptions of learning from their cooperating teachers.

**Support and challenge**

Confrontation with new learning situations presents “internal triggers” for learning (Martin, 1996) that either support prior perceptions or challenge them. While teacher training has predominantly found mentoring to be idiosyncratic (Bullough & Baughman, 1993; McNally, 1994), there is an attempt to determine whether extremely supportive relationships, in which mentoring is based on positive interpersonal relations (Cameron-Jones & O’Hara, 1997; Stanulis & Russell, 2000) that seek to decrease tension at all costs (Awaya et al., 2003), are more beneficial than those that
are based on conflicting philosophies of education that challenge the developing perspective of student teachers (Graham, 1997; Tang, 2003; Vermunt & Verloop, 1999). It is now generally accepted that the necessary condition for good mentoring is based on a balance of support in the interpersonal relationship in conjunction with adequate opportunities for challenge to learn new things (Daloz, 1986; Tang, 2003). Our study is based on the reports of student teachers' perceptions of the learning situations with which they are confronted in the classroom that are or are not in accordance with their perspectives on teaching. We attempted to identify the learning situations that student teachers perceived as in agreement or in disagreement with their own perspectives on learning to teach. We defined the reports of perceived learning situations that were congruent with student teachers’ perceptions as “support” and those that were incongruent with their perceptions as “challenge.”

**Match and mismatch of mentoring pairs**

The attempt to investigate the interrelationship between mentoring pairs also appears in the literature. Management and other professions have investigated factors related to the match and mismatch between mentoring pairs in internship programs in an attempt to engineer best-matched pairs based on similarity of personal characteristics (Armstrong, Allinson & Hayes, 2002; Eby, McManus, Simon & Russell, 2000; Hale, 2000; Waters, 2004). Mentoring relationships in teacher training have seldom attempted to use this approach. Mentoring relationships in teacher training have usually been dependent upon random pairing or upon relationships that develop naturally over time through work together. This study attempts to investigate how different types of mentoring relationships between matched and mismatched pairs are related to student teachers’ perceptions of what and how they learn.

**1.2. General problem and research questions**

Since mentor roles have been identified mainly by researchers and teacher educators, we wanted to investigate the mentoring relationship from the perspective of the participants (Geertz, 1993) in their work together. This study focuses on gaining a better understanding of the perceptions of participants of mentoring relationships and the connections to what student teachers perceive to learn in different kinds of relationships with their cooperating teachers. The central research question concerns
the connections between student teachers’ perceptions of learning to teach and the ways to promote relationships of beneficial learning in the practicum program. The specific research questions that we attempted to answer are:

a. What are the perceptions of student teachers and cooperating teachers concerning the role of the cooperating teacher?

b. What kinds of knowledge and skills do student teachers perceive to learn from their cooperating teachers?

c. What kinds of knowledge and skills are perceived by student teachers as triggers of support and challenge to their perceptions of learning to teach?

d. How are matched and mismatched perceptions of student teachers and cooperating teachers related to differences in perceived learning opportunities by student teachers?

These questions will be answered in the four studies of the research project. The first study attempted to describe the similarities and differences in perceptions of the role of the cooperating teacher between cooperating teachers and student teachers in the initial stage of the practicum program in schools. In the second study, we sought evidence of the kinds of knowledge and skills that student teachers perceive to learn in ongoing observations of classroom situations of their cooperating teachers’ practice. In the third study, we identified student teachers’ perceptions of these classroom situations as internal triggers for learning (Martin, 1996) that are congruent or incongruent with their perceptions of learning to teach. By combining the data from the previous studies in the fourth study, we categorized the perceptions of individual student teachers and connected these with the perceptions of their cooperating teachers. This served as a basis for identifying matched and mismatched mentoring pairs. We viewed the different types of mentoring relationships that emerged as different kinds of opportunities for learning to teach.

1.3. Theoretical and practical relevance of the study

This study relates to current issues and debates in the literature about aspects of the quality of the mentoring relationship, including the difficulties of investigating latent beliefs and perceptions of individuals, different perceptions of the role of the
cooperating teacher, the conceptualization of learning situations in teacher education and the connections between different types of mentoring relationships and student teachers’ perceptions of learning to teach.

In light of increased time spent in the schools in teacher training (Farrel, 2003; McNally, 1994; Tang, 2003), practical supervision of student teachers requires a much more negotiated teaching/learning contract between the training institutions and the cooperating teachers. To accomplish this, it is necessary to identify the kinds of things that student teachers perceive to learn and the nature of situations that are perceived by them as supportive and challenging in order to promote learning opportunities of wider possibilities.

According to the literature on teacher education, what and how student teachers learn from their cooperating teachers about teaching practice remains the big unanswered question (Feiman-Nemser & Buchman, 1987; Wang, 2000; Zeichner, 1995). We wished to narrow the gap between theory and practice by building on the growing body of knowledge concerning “good mentoring” from the perspective of the cooperating teachers and the student teachers themselves (Zanting, Verloop & Vermunt, 2001b).

By answering the questions of what kinds of knowledge and skills student teachers report that they learn and how they perceive their learning experiences as internal triggers of support and challenge, we hope to add to the growing body of knowledge concerning the processes student teachers undergo in learning to teach. A deeper understanding of the role of initial perceptions of the participants and the subsequent interaction of matched and mismatched perceptions between participants form the basis for recommendations for supervision of mentoring relationships in practicum programs. Together, the four studies result in descriptions of diverse learning situations that contribute to our conceptualization of a beneficial framework for student teacher learning.

1.4. Context of the study

Mentoring can be seen on a continuum of a voluntary informal relationship to a structured formal mentoring program. Informal relationships are often formed naturally when a veteran teacher decides to take a new teacher under his/her wing or when colleagues of different amounts of experience decide to work together. These
relationships are usually of a more personal nature. Formal mentoring programs often appoint experienced teachers, pair them with mentees, provide training and prescribe clear expectations as to their role as both guide and assessor of progress (Armstrong, et al., 2002; Hale, 2000).

The mentoring program in this study may be seen as somewhere in between the two extremes. Cooperating teachers of student teachers are sought out for their experience and successful teaching practice, as well as accepted into the program on a voluntary basis. They are often paired with student teachers in a random way, but may also have an opportunity to get to know the students and request to work with certain individuals. Whereas mentors of novice teachers in Israel are encouraged to participate in a mentor course, mentors of student teachers are usually not provided with any kind of training. They are expected to learn their role on the job through ongoing contact with the Pedagogical Advisor of the student teacher who visits the school on a regular basis. As opposed to mentors of novice teachers, cooperating teachers are not expected to assess the student teachers and have no position of authority over them. They are largely exempt from the requirements of the specific orientation to teacher training that the college may promote.

The practicum program for student teachers who participated in this study is situated within the framework of the English Department of a small teachers college in the south of Israel. The desire to work according to a professional development school (PDS) model serves the goal of collaboration with the schools in the surrounding community in order to promote professional development among the participating teachers and, ultimately, contribute to school reform. The college provides an induction day for cooperating teachers in order to familiarize them with the teachers college, the college personnel with whom they will work and with the basic requirements of their mentor role. These requirements include being observed by the student teachers, allowing the student teachers to teach one of their classes on a regular basis, observing and giving feedback to the student teachers and meeting with the student teachers weekly for the purpose of lesson planning. Student teachers are present in the school one day a week over the academic school year for all three years of their teacher training. They are placed in different kinds of schools with different cooperating teachers each year in order to gain exposure to a variety of teaching contexts and experiences.
1.5. Overview of the study

The second chapter presents the first study on the initial perceptions of the participants in the beginning stage of their work together. We were interested in investigating the similarities and differences in perceptions concerning the role of the cooperating teacher between student teachers and cooperating teachers in order to aid the participants in building a common base of collaboration for their work together, as well as in identifying the barriers to the formation of positive mentoring relationships. We hoped that explicit attention to their perceptions concerning the role of the cooperating teacher would aid the participants in uncovering and articulating underlying beliefs and perceptions of which individuals are not usually aware. We stimulated discussion on the subject of the role of the cooperating teacher through a focus group technique and, subsequently, elicited a list of perceptions of the mentor role from each individual participant. A category system was developed based on the teaching orientations of Calderhead and Shorrock (1997) to analyze the lists of perceptions of the role of the cooperating teacher and to compare the resulting similarities and differences in perceptions between the two groups.

The third chapter presents the second study in which we attempted to elicit and investigate reported learning situations of student teachers from their own perspective. We requested that student teachers focus on reporting what they had learned from their cooperating teachers in their pedagogical journals. Since we noticed that data of learning situations were often embedded in other written reports of situations that were practically relevant to the student teachers (Francis, 1995), we collected the pedagogical journals in their entirety for the duration of the 2003-4 academic year of each student teacher participant. After a thorough reading of the pedagogical journals many times, the entries chosen for inclusion in the study consisted of segments relating specifically to learning situations in relationship with the cooperating teacher from a variety of sources: metaphors of self and cooperating teacher, pedagogical assignments, critical incidents, classroom observations and feedback. The inclusion of a variety of sources in the research data captured a wide range of expression of the student teachers in order to better encompass the learning experience from the perspective of the participants. We analyzed the journal entries according to a similar category system of orientations as was developed for the first study.
The fourth chapter presents the third study in which the reported learning situations were further analyzed according to congruence or incongruence with the student teachers’ perceptions of learning to teach. A third category system was developed based on the concepts of support and challenge of Daloz (1986). Support signified agreement with the learning situation as congruent with student teachers’ own perceptions of learning to teach. Challenge signified rejection of the learning situation, or incongruence with student teachers’ perceptions of learning to teach.

The fourth study is presented in the fifth chapter. This study is based on the data sets of twenty individual student teachers from the group results of the previous studies. The individual data sets were analyzed according to the student teachers’ perceptions of support or challenge, as well as according to their different orientations to teaching. Subsequently, the individual patterns that resulted were compared to the initial perceptions of the role of the cooperating teacher of the student teachers and to those of the cooperating teachers in order to identify matched and mismatched pairs. Finally, we sought to group the matched and mismatched pairs in an attempt to describe the similarities and differences between them. We assumed that matched pairs would support student teachers’ perceptions of learning to teach, whereas mismatched pairs would pose a challenge to student teachers’ perceptions of learning to teach. We believed that the descriptions of the different patterns of mentoring relationships contribute to the identification of conditions for beneficial learning in mentoring relationships.
2. The role of the cooperating teacher: Bridging the gap between the perceptions of cooperating teachers and student teachers

Abstract

The study presented in this chapter focuses on similarities and differences in the perceptions of cooperating teachers and student teachers concerning the role of the cooperating teacher in the initial stage of the mentoring relationship in the context of an Israeli practicum program for pre-service student teachers. These perceptions, particularly when they conflict, can serve as major obstacles to the formation of optimal mentoring relationships. A focus group technique was used to bring the perceptions of the participants concerning the role of the cooperating teacher to awareness and articulation. The theoretical framework of Calderhead and Shorrock (1997) was used to analyze the participants’ perceptions into categories of different kinds of teaching knowledge and skills. Perceptions of a practical and technical nature were found to be prevalent among members of both groups, whereas the student teacher group expressed perceptions of a more personal nature than the cooperating teacher group. Suggestions are given for bridging the gap in perceptions between cooperating teachers and student teachers in the initial stage of the practicum program.

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2.1. Introduction

In the framework of pre-service teacher education, research has shown that student teaching practice in the school serves as the most significant factor in the shaping of the student teachers’ experience of training to be a teacher (Ben-Peretz, 1995; Lanier & Little, 1986; Tang, 2003). There is a growing body of knowledge concerning “good mentoring” and the majority of the literature in teacher education describes optimal mentoring relationships (Feinam-Nemser, 1998; Rowley, 1999; Zeichner, 1995). While the benefits of positive mentoring are more likely to be realized in advanced stages of the relationship, the initial stage of mentoring consists of complex social interactions that can be problematic when student teachers and cooperating teachers differ in their perceptions concerning the professional purposes of their work together. Problems in relationships between student teachers and cooperating teachers have received much less attention in the literature (Clarke, 1995), and very little research has focused on the negative aspects of mentoring (Eby et al., 2000).

The impetus for our study arose out of the difficulties observed by the first author, the teacher trainer who supervises the fieldwork experiences of student teachers within a teachers college in Israel. It appeared that conflicting perceptions between student teachers and their cooperating teachers concerning the role of the cooperating teacher served as a major obstacle to the formation of productive mentoring relationships. Our assumption concerning these conflicting perceptions was supported by the findings of Eby et al. (2000) who found that protégés report more negative mentoring experiences when they perceive their mentor as having dissimilar attitudes, beliefs and values from their own. Zanting, Verloop and Vermunt (2001a) claim that implicit perceptions concerning teaching encompass beliefs and values about education and teacher training, as well as practical classroom knowledge and ideas.

One purpose for this study was to aid the student teachers and cooperating teachers in self-awareness and articulation of their implicit perceptions concerning the role of the cooperating teacher. It was assumed that this could be achieved in the supportive atmosphere of a cooperative focus group technique (Kreuger, 1988). We also wished to provide participants with an opportunity for discussion and negotiation of self-interests and needs and, in so doing, help them bridge the gap in perceptions. In
addition, we hoped to offer the participants a practical framework of teaching knowledge and skills as a language of communication.

We used the theoretical framework of orientations to teaching and teacher education of Calderhead and Shorrock (1997) to categorize the statements of the participants concerning their perceptions of the role of the cooperating teacher in order to identify similar and dissimilar perceptions. Participants’ statements, in turn, served to give concrete shape and meaning to the pre-formulated theoretical categories. In addition, we compared the perceptions of the participant groups to each other and to the optimal theoretical formulation of skills and competencies that we viewed as necessary for learning to teach.

The main research question of this study is: what are the perceptions of student teachers and cooperating teachers concerning the role of the cooperating teacher? More specific research questions that guided this study are:

a. What are the similarities and differences in the perceptions of the student teachers and the cooperating teachers concerning the role of the cooperating teacher?

b. To what extent do the perceptions of the student teachers and the cooperating teachers cover the range of different kinds of knowledge and skills according to the orientations to teaching of Calderhead and Shorrock (1997)?

2.2. Theoretical background

2.2.1. Theoretical formulations of the role of the cooperating teacher

Conventional approaches to mentoring have emphasized situational adjustment, technical advice and emotional support (Little, 1990). In line with the ideas of Dewey (1933), Feiman-Nemser (1995), Zeichner (1995) and Tickle (2000), we claim that educative mentoring also includes experiences that promote learning in the future, rather than merely solving the immediate problems in the present. Educative mentors interact with students to create opportunities for an inquiring stance that serve long-term goals of good teaching. They help students confront problems and learn from them, rather than simply ease them into the system.

Different orientations to teaching have been seen as significant factors that affect the way in which cooperating teachers view the role of the mentor. Calderhead and Shorrock (1997) and Wang (2000) report that orientations to teaching and teacher
education are culturally embedded and that teachers from different countries hold varying perspectives, dependent upon the political system and the social and educational norms prevalent in their country at a specific point in time. In addition, school cultures also serve to emphasize specific orientations over others (Feiman-Nemser & Parker, 1993; Hobbs, Bullough, Kauchak, Crow & Stokes, 1998) and often include conflicting orientations.

In search of a conceptual framework to analyze our data, we chose Calderhead and Shorrock’s (1997) theoretical scheme that describes five categories of orientations to teaching and teacher education based on underlying beliefs and values (see also section 1.1):

1. **The Academic orientation** emphasizes teachers’ subject expertise and sees the quality of the teachers’ own subject matter knowledge as their professional strength.

2. **The Technical orientation** emphasizes the knowledge and behavioral skills that teachers require. It is associated with microteaching and competency-based approaches and derives from a behaviorist model of teaching and learning.

3. **The Practical orientation** emphasizes the artistry and classroom technique of the teacher, viewing the teacher as a crafts person. This view attaches importance to classroom experience and apprenticeship models of learning to teach.

4. **The Personal orientation** emphasizes the importance of interpersonal relations in the classroom and views learning to teach as a process of “becoming,” or personal development. It takes the form of offering a safe environment that encourages exploration and discovery of personal strengths.

5. **The Critical orientation** emphasizes the role of teachers in promoting democratic values and reducing social inequities and views schooling as a process of social reform. The goal of teacher education is to help teachers become critical, reflective change-agents.

**2.2.2. Participants’ perceptions of the role of the cooperating teacher**

Mentor roles have been identified mainly by researchers or teacher educators and few studies have focused on the perspectives of student teachers or mentor teachers themselves (Zanting, Verloop & Vermunt, 2001b). The dichotomy between theory and practice gives rise to situations in which prescriptive formulations for mentoring
programs by researchers and educators that exist in the literature often have little connection to what practitioners actually think or do.

Cooperating teachers’ perceptions of teaching are closely tied to their professional self-image and perspective of what it means to them to be a teacher. These perceptions have implications for the way cooperating teachers view teacher education (Beijaard, Verloop & Vermunt, 2000). The difficulty of eliciting cooperating teachers’ perceptions of their role is related to the nature of teaching as a practical endeavor. According to Eraut (1985), some kinds of practical knowledge, such as non-verbal actions that are performed in the classroom, defy written codification. Teachers are busy with the practical task of managing the classroom in an intuitive way in accordance with their personal characteristics and the needs of the children they teach.

However, there is an emerging body of literature on the practical knowledge of cooperating teachers concerning their orientations to teaching and teacher education (Elbaz, 1983; Feiman-Nemser & Beasley, 1998). One approach is a biographical perspective that seeks to better understand how teachers’ life stories have influenced their ways of thinking (Kelchtermans, 1993). There is also an attempt to identify the characteristics of good mentoring through case studies, in-depth interviews and observations (Fairbanks, Freedman & Kahn, 2000; Feiman-Nemser, 2001; Rowley, 1999).

Current literature in teacher education focuses on the changes that cooperating teachers undergo in relation with other people, contexts and situations (Awaya et al., 2003; Boreen & Niday, 2000; Johnson, 2003; Kilbourn & Roberts, 1991) and how relationships are negotiated and renegotiated on the journey to professional development. The mentoring context is one that introduces teachers to a new role in the workplace in interaction with student teachers and teacher trainers.

According to Murdoch (1997), teachers’ professional orientation, classroom behaviors and the way they mentor student teachers are strongly influenced by the way they were taught in the past. This may conflict with the kind of teacher training proposed today which differs radically from traditional modes of training, where the trainees are simply required to adopt recommended techniques and imitate a master teacher. For this reason, the current shift from traditional instruction to student-centered learning (Van Veen, Sleegers, Bergen & Klaassen, 2001; Wang, 2000) poses
a challenge to teachers’ professional orientations and the way veteran teachers mentor student teachers.

Similarly, pre-service student teachers pass through a transition stage from student to teacher roles. Student teachers bring with them a lifelong repertoire of experiences, including beliefs, values and attitudes, as both participants and observers of educational settings that have evolved into their educational histories (Bullough, 1997; Knowles & Holt-Reynolds, 1991; Tann, 1987). These implicit beliefs, that are personal and based on one’s own experience, serve as “filters” through which new learning must pass (Zanting, Verloop & Vermunt, 2001a).

Student teachers’ existing orientations are often challenged when they come into conflict with the realities of the classroom or with the pedagogical knowledge of their training programs. Zeichner (1995) claims that before student teachers can learn new theories and practice in teacher training programs, they must confront their own existing beliefs and be willing to challenge them. Zeichner believes that these conflicts are not adequately reflected in studies of self-reports of satisfaction with mentoring by student teachers who are concerned with the immediate problems of class management.

In our study, we were interested in eliciting both self-reports of satisfaction in those areas in which student teachers and cooperating teachers expressed similar perceptions, as well as self-reports of conflict in those areas in which student teachers and cooperating teachers expressed dissimilar perceptions. In addition, we wanted to arrive at categorization and comparison of the perceptions of the participants according to the full range of teaching orientations of Calderhead and Shorrock (1997).

We chose the orientations to teaching and teacher education of Calderhead and Shorrock (1997) as a theoretical framework for our study that encompasses the wide range of skills and competencies necessary for providing student teachers and their cooperating teachers with optimal opportunities for learning to teach. Moreover, the nonhierarchical orientations provide a framework in which different approaches to the role of the cooperating teacher can be seen as complementary and mutually relevant to the shaping of teacher education programs.

2.3. Method
2.3.1. Context of the study

Our pre-service student teaching practicum experience takes place in the framework of Professional Developmental School settings in public elementary and junior high schools in Israel. We define a PDS school as one in which most of the teachers of English as Foreign Language in the school agrees to mentor two student teachers. Agreement to serve as a cooperating teacher is a commitment that includes providing the student teachers with one weekly hour of teaching time, being observed by the students, finding time to meet with the student teaching pair for purposes of lesson planning and feedback and meeting with the teacher trainer. Cooperating teachers are randomly assigned to mentor a pair of second and/or third-year pre-service student teachers who are similarly paired in a random way.

The study described herein was carried out towards the beginning of 4 consecutive academic years following a short period in which the student teachers observed the cooperating teachers, prepared lesson plans and gave their first lessons in the classroom.

2.3.2. Participants

The participants were student teachers and cooperating teachers of English as Foreign Language. The student teachers all attended the same teacher training institution, whereas the cooperating teachers taught in schools of diverse cultures (junior high and elementary, disadvantaged and advantaged contexts, major cities, towns and small villages).

The cooperating teachers (N=40) who participated in this study were largely veteran women teachers, having between 5 and 22 years of teaching experience. However, their experience as cooperating teachers was relatively small, consisting of no prior experience to a maximum of 3 years in the role of cooperating teacher.

The student teacher participants (N=78) were English teacher candidates in their second or third year of a 4-year program granting a Bachelor of Education (B. Ed.) and an English Teaching Certificate upon completion in accordance with the Israeli Commission of Higher Education and the Ministry of Education requirements. The student teachers participated in fieldwork experiences in the schools on a weekly basis and took part together in the 2-year pedagogy course given by the teacher trainer (the
first author of this study). All student teachers were reassigned to different schools with new cooperating teachers at the beginning of each academic year, thus creating the situation in which all participants engaged in the process of creating mentoring relationships anew each year.

2.3.3. Data collection

Cooperating teachers attended an orientation day in the teachers college to meet with the teacher trainer of their student teachers (the first author of this article) for an intensive day-long session. During this day, the teacher trainer led a workshop devoted to the role of the cooperating teacher. A similar procedure took place with the student teachers in their pedagogy classes.

In order to gain new information in an area in which little was assumed to be known (Miriam & Simpson, 1995), the sessions with the cooperating teachers and those with the student teachers were planned according to three steps of a focus-group design (Kreuger, 1988).

The first step sought to build rapport in the group and encourage disclosure by group members in a nurturing environment in which people got to know each other. In addition, exposure of the participants to the opinions and ideas of their peers concerning the role of the cooperating teacher was sought for the purpose of developing attitudes and perceptions through interaction with others. The participants engaged in dialogue in randomly changing pairs in response to questions posed by the teacher trainer. Questions were formulated in advance in order to set the agenda and serve as an impetus for the discussion that would follow. In the session with the cooperating teachers, participants were asked why they agreed to serve as cooperating teachers, their past and present experiences, their anticipated perceptions of the difficulties and the benefits they hoped to receive from participation in the program. In addition, they were asked to discuss what they saw as the most significant thing they do in their role as cooperating teacher and, alternatively, the most difficult. In the session with the student teachers, the same questions were adapted to reflect the student teachers’ perceptions of the role of the cooperating teacher.

The second step consisted of a focus group discussion that was led by the teacher trainer (the first author) in an attempt to bring the participants’ perceptions to awareness. Kreuger (1988) defines a focus group as a “carefully planned discussion
designed to obtain perceptions in a defined area of interest in a permissive, non-threatening environment” (p. 18). In order to elicit responses from a variety of dimensions, the teacher trainer focused the discussion around the unstructured, open-ended question: “In your opinion, what is the role of the cooperating teacher?” The teacher trainer refrained from expressing any personal opinions or making value judgments. Rather, it was emphasized that all opinions were equally valid.

In the third and final step, the participants were requested to write a list of their perceptions of the role of the cooperating teacher in their own words. This served to focus the participants’ responses and to check the accuracy of the teacher trainer’s understanding of what was expressed by the participants for the purpose of discovering the meaning that the phenomenon had for each individual.

2.3.4. Data analysis

In the first stage of data analysis, an attempt was made to better understand the similarities and differences between the two lists of statements: the one from the perspective of the student teachers and the other one from the perspective of the cooperating teachers. Pre-formulated categories of Calderhead and Shorrock (1997) were chosen to analyze the underlying conceptual orientations to teaching and teacher education reflected by each statement.

In the second stage, a coding system was developed in order to apply the theoretical formulation to the practical data. This entailed an iterative process of going back and forth between the pre-formulated categories and the participants’ statements in order to adjust the theoretical category system to the empirical data.

The third stage entailed inter-rater reliability. Another teacher educator was given the coding system and examples of statements for each category and asked to code the data to ascertain whether the categories could be applied by a person not familiar with the data. As a result of this process, some categories were refined and examples were added to clarify the categories. Coding of the data by two raters resulted in inter-rater reliability agreement of 83% for the cooperating teachers’ list of perceptions and 81% for the student teachers’ list. The combined calculation of agreement for the coding system of orientations was 82%. The statements that resulted in disagreement between the two raters (17% and 19% respectively) were categorized on the basis of discussion between the two raters. Appendix A presents the final category system:
descriptions of each category, content areas and examples of participants’ perceptions of the role of the cooperating teacher.

In the final stage, the frequencies of the total number of statements for each orientation category were calculated for each group. This gave us a picture of the relative frequency of each orientation category compared to the other orientation categories for the student teacher and the cooperating teacher groups. A higher frequency was considered to be an indication that the orientation was more important. The frequencies of the orientation categories were compared and contrasted within each of the two groups and then compared with each other.

2.4. Results

2.4.1. Perceptions of cooperating teachers

Forty cooperating teachers produced a total of 183 statements describing their perceptions of the role of the cooperating teacher. The average number of statements for each cooperating teacher was 4.6. Table 2.1 shows the frequencies of statements according to the orientation categories for the cooperating teachers as a group.

<table>
<thead>
<tr>
<th>THE ROLE OF THE COOPERATING TEACHER</th>
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<tbody>
<tr>
<td><strong>Academic</strong></td>
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<tr>
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</tr>
<tr>
<td>11</td>
</tr>
<tr>
<td>6.0%</td>
</tr>
</tbody>
</table>

The results show that the cooperating teachers hold predominantly technical (32.2%) and practical perceptions (31.7%) for their role as cooperating teachers. The categories lowest in frequency among the cooperating teachers are the critical and the academic orientation categories (6.6% and 6.0% respectively). Midway between the two extremes is the personal orientation category (23.5%).
The practical orientation category

Perceptions of the cooperating teachers in the practical orientation category were found to be among the most frequent for the group. Perceptions of a practical orientation concern knowledge that teachers accumulate through experience about children, teaching and the classroom context. This is expressed in sharing of information about pupils, discussion of problems and coping with dilemmas in interaction with the student teachers. The focus is on experiences that take place in changing classroom situations in which there are no final or absolute solutions. The practical orientation views the cooperating teacher as a guide, a helper and a listener in relation to the student teacher. Additional examples from cooperating teachers’ statements include to share ideas and experiences and to allow my students to learn from their mistakes. It is the kind of orientation that promotes future learning for both cooperating teacher and student teacher (Zeichner, 1995).

The technical orientation category

Perceptions in the technical orientation category were found to be as frequent among the cooperating teachers as the practical orientation category. Teachers feel that their years of practice have culminated in a store of classroom techniques that can be passed on to the inexperienced. Cooperating teachers with this orientation saw themselves as role models, examples and instructors of class management. Many of our cooperating teachers felt that it was their job to transmit information, tell students what is right and wrong and give ready-made “tips” that proved useful to them as teachers. The role of provider of classroom time was also found in the perception of one cooperating teacher in the statement to organize an environment for the students and, in another, to organize it so that everyone is in the right place.

The personal orientation category

The personal orientation category was found to be moderately frequent for the cooperating teacher group and ranked in frequency midway between the highest and the lowest orientations. Statements describing the personal orientation reflected the cooperating teachers’ perceptions of their role in terms of personal support, advocacy and identification with the student teachers: to understand the problems that the students face, to be more sensitive and closer to the students and to be there for them for everything they need. Cooperating teachers with a predominantly personal
orientation saw their role as friend and mother. Perceptions concerning personality characteristics were also found in this category, such as to help the students learn self-control, to love children and to learn sensitivity.

The academic orientation category
The few statements expressing an academic orientation by cooperating teachers included exposing student teachers to the curriculum, to textbooks and materials and to the teaching of writing and pupil presentations. An interesting perception of one cooperating teacher was to convey to the student teachers that the goal is to have the pupils love English. Our finding concerning the low frequency of the academic orientation among the cooperating teachers of our sample is in accordance with the findings of Clarke and Jarvis-Selinger (2005) who claim that the authoritative nature of disciplinary knowledge is no longer at the forefront in the high school curriculum. Beijaard and De Vries (1997) also report that there is some research evidence that many teachers find the pedagogical aspects of their profession as more important than the didactical or the subject matter aspects. It appears that this is even truer of teachers in the elementary and junior high schools.

The critical orientation category
Although the frequency of the critical orientation category was extremely low, a few statements in this category expressed the idea of teaching as a mission. These included statements such as to convey the spirit of teaching, a teacher is a lifelong learner and to help the pupils become better people in their life.

2.4.2. Perceptions of student teachers

Seventy-eight student teachers produced a list of 290 items describing their perceptions of the role of the cooperating teacher. The average number of statements for each student teacher was 3.7. Table 2.2 shows the frequencies of perceptions for the student teacher group according to orientations. The category with the highest frequency among the student teachers is the personal orientation category (31.0%) closely followed by the practical orientation category (29.0%). The student teachers also hold moderate perceptions in the technical orientation category (22.1%).
Relatively low on their list of perceptions are the academic orientation category (9.0%) and the critical orientation category (9.0%).

Table 2.2. Frequencies of perceptions of student teachers according to orientations to teaching and teacher education

<table>
<thead>
<tr>
<th>THE ROLE OF THE COOPERATING TEACHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>26</td>
</tr>
<tr>
<td>9.0%</td>
</tr>
</tbody>
</table>

The practical orientation category

Student teachers have many perceptions of learning about the practical aspects of teaching from the cooperating teachers in real live classroom situations. They see the cooperating teacher as a guide who shares information about pupils and ways to make the lesson more interesting to them so that they will participate and how she motivates them, as well as how she copes with discipline problems and problematic pupils. The verbs used by the student teachers signify perceptions of a collaborative effort to better understand how to improve, help, discuss and share dilemmas that occur spontaneously in classroom situations.

The technical orientation category

Perceptions of student teachers of learning technical aspects of classroom management also exist, but to a lesser extent. The major content areas of the technical orientation category were limited to time management, lesson planning and how to control a class. However, the statements not to interrupt our lessons and not to interfere when we are teaching that recur in the technical orientation category express the issue of trust and support and the giving of freedom to explore their own teaching style. It also explains the statement not to undermine our efforts.

The personal orientation category

Perceptions of the student teachers in the personal orientation category were found to be the most frequently mentioned. In order to understand what the student teachers meant by the statement to form a personal relationship, we looked at the statements
of the personal orientation category. The perception that predominated among the student teachers was that the cooperating teacher display personal characteristics of a positive nature. These included, in the students’ words, being confident, considerate, nice, polite, patient, calm, flexible, intelligent and charming. The statements expressed the student teachers’ perceptions that the cooperating teachers should have personality characteristics that make the student teachers feel comfortable on a personal level. This is directly related to the student teachers’ need for support, another major issue that emerged in this category, that was expressed by statements such as to be a safety net, appreciate our efforts, find time for us and be available. The student teachers’ perception of support that emerged here was that the cooperating teacher be able to trust us and give us freedom to do what we want in the classroom. A similarly related perception that recurred was to be open-minded to our ideas and different ways of teaching. According to Calderhead and Shorrock (1997), the personal orientation that is based on interpersonal relationships seeks to provide a safe environment in which the student teacher can experiment in order to undergo the process of discovering his/her personal expression in the classroom. The same issues of personal support and freedom to find their own teaching style were expressed in a negative way by student teachers in statements such as not to patronize, to be human, to say ‘hello’ in the morning and not to treat us as substitute teachers. In addition, we found that some student teachers were aware of the transition from student to teacher roles and looked to the cooperating teacher as a mirror that could help them reflect on their own personalities in the classroom. In one student teacher’s words, the role of the cooperating teacher is to show me how to reach conclusions about myself through her behavior and another student teacher wrote that the role of the cooperating teacher is to help her learn how to deal with my biases.

The academic orientation category

The academic orientation category appears low when we consider that subject matter is the core of what the student teachers need to learn how to teach. The data show that the majority of statements concerning the student teachers’ academic perceptions deal with access to materials for interesting lessons and for different levels of pupils. A possible explanation for student teachers’ low amount of perceptions of learning about how to teach subject matter from their cooperating teachers may be their perception that academic subject matter is learned in the
training institution, as reported in research by Williams and Soares (2000). The implementation of academic knowledge learned in the training institution is then seen by student teachers to be found in textbooks and other materials to which cooperating teachers have access.

The critical orientation category

Although the critical orientation category was originally meant to include perceptions about learning how to teach in ways that promote social and moral values, we redefined the meaning of the category to fit the data by analyzing the few statements made by student teachers in this orientation. We found that these statements show that student teachers’ perceptions in this area are related to knowing more about the school system and the underlying agenda of the school, about the rules of the school and what is really going on. Student teaching is predominantly concerned with classroom experiences (Martin, 1996) and student teachers who “visit” the school once a week do not see themselves as part of the school. Another minor issue that emerged in this category was the role of the teacher as a professional, to be responsible for knowing what her role as cooperating teacher is, and the teacher’s vision, how she keeps her passion for teaching and plans her lessons according to the school’s vision.

2.4.3. Comparison of perceptions of cooperating teachers and student teachers

Table 2.3 shows the number and relative frequencies of statements made by both groups in each orientation category and the comparison of results for all categories between the cooperating teachers and the student teachers. The comparison of findings of the two groups shows that the technical (32.2%) and practical orientations (31.7%) are the most frequent for the cooperating teachers, while the personal orientation (31.0%) is the most frequent for the student teachers, followed closely by the practical (29.0%) and then the technical (22.1%) orientations. There was agreement among the cooperating teachers and the student teachers concerning the relatively low frequencies of perceptions in the academic orientation category (6.0% for the cooperating teachers and 9.0% for the student teachers) and the critical orientation category (6.6% for the cooperating teachers and 9.0% for the student teachers).
Table 2.3. Comparison of frequencies of perceptions of cooperating teachers and student teachers according to orientations to teaching and teacher education

<table>
<thead>
<tr>
<th></th>
<th>Academic</th>
<th>Technical</th>
<th>Practical</th>
<th>Personal</th>
<th>Critical</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperating teachers</td>
<td>11</td>
<td>59</td>
<td>58</td>
<td>43</td>
<td>12</td>
<td>183</td>
</tr>
<tr>
<td></td>
<td>6.0%</td>
<td>32.2%</td>
<td>31.7%</td>
<td>23.5%</td>
<td>6.6%</td>
<td>100%</td>
</tr>
<tr>
<td>Student teachers</td>
<td>26</td>
<td>64</td>
<td>84</td>
<td>90</td>
<td>26</td>
<td>290</td>
</tr>
<tr>
<td></td>
<td>9.0%</td>
<td>22.1%</td>
<td>29.0%</td>
<td>31.0%</td>
<td>9.0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

The practical orientation category

Although there is clear agreement between the student teachers and the cooperating teachers that an extremely important orientation to teaching and teacher education is the practical one, the cooperating teachers perceive this, together with the technical orientation, as most important. The student teachers have a clear preference for the practical orientation over the technical.

The technical orientation category

Whereas the cooperating teachers perceive the practical and technical orientations to be equally relevant, the student teachers perceive the technical orientation to be less important. Cooperating teachers know that technical classroom management techniques, rules and regulations are just as important for successful teaching as creative decision-making processes in practical situations. Student teachers wish to explore their own ways of teaching and not be limited by fixed ways of doing things. Student teachers do not reject the technical in their lesson planning, but place more emphasis on learning from practical experience in the classroom.

The personal orientation category

The student teachers differ from their cooperating teachers in their perception for a more supportive, personal relationship. Clarke (1995) views teachers’ personalities as an important element of professional development in that teachers need to develop working relationships with their pupils, as well as with their colleagues. It is not surprising that student teachers seek support in an accepting relationship before they can absorb practical and technical knowledge that the cooperating teachers are so intent upon giving in their role of cooperating teacher. Student teachers desire
personal support. However, our findings point to an underlying reason that may explain the limitations that cooperating teachers put on personal support. A conflict in their role as cooperating teachers emerged concerning their personal orientation because of their dual responsibility to the pupils in the classroom and to the student teachers: to make sure my pupils feel they are gaining and not losing by having students teach them. This statement together with the statement, to support the students in the classroom, while not interfering, may explain the difficulty some cooperating teachers face in providing student teachers with unlimited freedom to explore their own teaching alternatives. A safer alternative for cooperating teachers is to help the students with ideas from my way of teaching. The cooperating teachers were divided in their perceptions of themselves as being open to new ideas of the student teachers, as opposed to being a role model that transmits their ways of teaching. The dual responsibility to the student teachers and to the pupils in their classroom can create a conflict of interests among cooperating teachers that helps to explain their, often ambivalent, personal orientation and the limits they put on unconditional support for the student teachers.

The academic orientation category

Agreement between the cooperating teachers and the student teachers was also found in the two remaining categories. There were very few items on the cooperating teachers’ and the student teachers’ lists that fell into the academic orientation category. This finding is not surprising when we remember that there is a traditional dichotomy in teacher education between subject matter studies and pedagogical studies in general (Ball, 2000). In addition, both student teachers and cooperating teachers expect students to learn disciplinary knowledge in the academic institution (Williams & Soares, 2000).

The critical orientation category

Among the few statements that appeared in the critical orientation category, the student teachers referred to the larger school context, while the cooperating teachers referred to values of the role of the teacher in society. The student teachers and cooperating teachers of our sample do not see beyond the immediacy of the concrete classroom situation within which they work. Our findings show that few items fell into the critical orientation category for either the student teachers or the cooperating
teachers. These findings are in agreement with the recent findings of Clarke and Jarvis-Selinger (2005) and with previous research results and various explanations that have been proposed in the literature (Richardson, 1997; Robinson, 1994; Segall, 2002).

2.5. Conclusions and discussion

In this study, areas of satisfaction with the mentoring relationship were identified according to agreement in perceptions of the mentor role between student teachers and cooperating teachers. The highest level of agreement among the participants was expressed in the practical orientation category. We found that mentoring is seen by the participants to be a predominantly practical endeavor, as reported in the literature concerning teachers’ perceptions of teaching (Calderhead & Shorrock, 1997). Research by McNally et al. (1997) reports that student teachers are impatient to apply what they have learned and are eager to engage in the real work for which their training has prepared them. The importance of the practical orientation category for student teachers’ transition from the role of student to the role of teacher occurs in the classroom through first-hand experience in student teaching. Consequently, it is important to support the student teachers in their perceptions of learning from practice. According to the results of this study, cooperating teachers do perceive their main role as guides in practical experiences in the classroom.

An additional area in which similar role perceptions were expressed by both student teachers and cooperating teachers is in the technical orientation category. Student teachers perceive technical strategies and tips to be important for class management, but to a lesser extent than cooperating teachers. Possibly student teachers see technical strategies as easily learned and implemented, whereas they are more concerned with unpredictable classroom situations that have no clear solutions and are of benefit to future learning (Zeichner, 1995). This is an encouraging result for teacher educators who often find that student teachers seek ready-made technical solutions for problems they are having in the survival stage of class management. It appears that cooperating teachers, on the other hand, often perceive themselves as role models of technical knowledge. One reason proposed by Hargreaves and Fullan (2000) for this perception is that in order to survive in many school settings of increasing demands and multiple pressures, cooperating teachers tend to hold on to
the notion that they are experts of their craft who can pass on its technical principles to eager novices. Another reason is that cooperating teachers are busy with the task of managing the classroom and handling cases quickly and efficiently (Eraut, 1985) and do not have time or opportunity to explain the rationale behind their actions to student teachers.

Conflict in the mentoring relationship, on the other hand, was identified in this study as dissimilar perceptions of the mentor role between student teachers and cooperating teachers. A significant difference was found in the personal orientation category: Student teachers expressed a greater need for personal relationships than did cooperating teachers. Student teachers need a collaborative and personally supportive relationship with their cooperating teachers as a basis for developing the confidence to find their own expression in the classroom through experimentation and risk-taking. One factor that may explain the lack of a more unconditional personal relationship on the part of the cooperating teachers is that the mentoring context introduces teachers to a new role in the workplace. In their attempt to undergo role transition from classroom teacher to cooperating teacher while retaining continuity with their other teaching roles and responsibilities, cooperating teachers are faced with a conflict of dual loyalties to student teachers and to the pupils they teach. Lack of awareness of this underlying conflict of dual loyalties is often mistakenly interpreted by student teachers as neglect of their needs and as lack of support to allow them to experiment with innovative practices in the classroom.

The answer to the second research question concerning the perceptions of the participants in comparison to the formulation of the theoretical orientations shows that the participants lack awareness of the full range of orientations to teaching. For both student teacher and cooperating teacher groups, similarities were found in the low number of statements in the academic and the critical orientation categories. Student teachers, who are concerned with transition from student to teacher roles, may identify with pupils on a personal and a practical basis in individual attempts to right past injustices in their own educational histories (Knowles & Holt-Reynolds, 1991), but are unaware of the larger collective meaning of these individual cases beyond the confines of the classroom (Martin, 1996). Cooperating teachers, who are concerned with transition from classroom teacher to cooperating teacher roles, are faced with dual loyalties. Our conclusion is that the multiple tasks of role transition required of participants in the initial stage of the mentoring relationship and their ongoing
teaching responsibilities leave little time and energy for additional concerns. For this reason, academic subject matter is seen by both groups as the domain of the teacher training institution (Williams & Soares, 2000). Critical issues of social concern are also seen by both groups as beyond the limits of the classroom (Clarke & Jarvis-Selinger, 2005; Richardson, 1997; Robinson, 1994; Segall, 2002).

The results of our study have implications for practice. Similar perceptions of practical and technical concerns should be emphasized as a common ground upon which to build the mentoring relationship in the initial stage of student teaching. This would most likely result in satisfaction among cooperating teachers who could benefit from helping hands in overcrowded classrooms, as well as among student teachers who are in need of support in the survival stage of class management. Collaboration in coping with practical classroom challenges for which there are no ready-made solutions can provide the kind of learning that Zeichner (1995) sees as educative mentoring for both student teachers and cooperating teachers.

In order to bridge the gap in conflicting perceptions, the underlying reasons for dissimilar perceptions found in this study should be brought to the attention of the participants. Cooperating teachers should be encouraged to provide student teachers with learning opportunities of challenge and exploration of personal teaching styles in a safe environment of personal support. They should be made aware of the need of student teachers for a more personal relationship in order to gain confidence to develop their individual teaching identities. Providing personal support may encourage cooperating teachers to recognize their own need for personal support. According to Hargreaves and Fullan (2000), experienced teachers are also in need of emotional support and helping relationships in order to cope with problems for which there are no expert or ready-made answers in today’s classrooms.

In order to clarify misunderstandings between student teachers and cooperating teachers, the dual loyalty of cooperating teachers to pupils in the classroom and to student teachers should be brought to the attention of student teachers. Alternatively, student teachers should be warned of relying too heavily on perceptions of learning of a predominantly personal orientation and encouraged to develop perceptions of learning in a wide range of possible orientations.

The development of mentoring relationships is a gradual process (Casey & Claunch, 2005). We recommend that initial supervision focus on the shared perceptions of the participants, move to bridging the gap in dissimilar perceptions
and, finally, advance to exposure of additional areas of skills, competencies and values. On the basis of shared perceptions for collaboration in class management and a growing awareness of the need for mutual personal support, cooperating teachers can more easily learn to relinquish control of their classrooms in order to benefit from innovative ideas that student teachers may have to offer. In more advanced stages of the mentoring relationship, we see a need to bring the academic and critical orientations to the attention of our student teachers and cooperating teachers.

Ben-Peretz (2001) describes the impossible task of the teacher educator in preparing future teachers for the multiple roles they must assume in the 21st century. Student teachers and cooperating teachers can benefit from exposure to a wide range of orientations to the role of the cooperating teacher in their work together. This kind of exposure will increase the awareness of student teachers concerning the multi-dimensional nature of their future roles as teachers, while encouraging cooperating teachers to see their roles with student teachers, as well as with pupils in the classroom, as more inclusive.

Teacher education programs must take responsibility for providing situations in which participants are encouraged to articulate their perceptions in a safe and supportive climate that allows for expression of satisfaction with mentoring, as well as concerns of conflict. Meetings between cooperating teachers of diverse school settings in the framework of the teachers college can promote a richness of conversation about different orientations and ways of working with student teachers (Clarke & Jarvis-Selinger, 2005). As Zeichner (1995) suggests, one solution for designing better mentoring programs is to build on the practical knowledge of mentor teachers in order to design best mentoring practices in collaboration with those who do the mentoring.

As researchers in teacher education, we hope that the results of our study will contribute to the body of literature that attempts to connect the perceptions of student teachers and cooperating teachers in mentor relationships with theoretical formulations of desirable mentoring practices. According to the findings concerning the perceptions of student teachers and cooperating teachers in the initial stage of mentoring relationships in an Israeli context, we recommend that initial mentoring relationships be monitored for feedback according to a chosen formulation of good mentoring practice appropriate to the socio-political environment of the training institution. Future research should investigate the ways in which similar and
dissimilar perceptions between individual student teacher and cooperating teacher pairs affect the quality of the mentoring relationship from its initial inception to more advanced stages.
3. What Do Student Teachers Learn? Perceptions of learning from Mentoring Relationships

Abstract

Students view the practicum experience, in general, and the relationship with their cooperating teacher, in particular, as the most significant aspects of learning to teach. However, what student teachers perceive to learn about teaching practice from their cooperating teachers remains largely an unanswered question. We attempted to answer this question by collecting data of reports of perceptions of learning from student teachers' pedagogical journals. Student teachers reported their perceptions of learning in the full range of academic, technical, practical, personal and critical categories according to the theoretical framework of orientations to teaching and teacher education of Calderhead and Shorrock (1997). Based on the results, recommendations are made for supervision of mentoring relationships.

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2 This chapter has been accepted for publication as: Rajuan, M., Beijaard, D. & Verloop, N. What do student teachers learn? Perceptions of learning from mentoring relationships. The New Educator.
3.1. Introduction

A shift in teacher education to increased time spent in the school (Farrel, 2003; McNally, 1994; Tang, 2003) appears to be taking place worldwide. Research shows that student teachers and teacher educators view the fieldwork experience as the most significant aspect of teachers’ professional learning (Ben-Peretz, 1995; Lanier & Little, 1986; Tang, 2003). However, as McNally et al. (1997) report, although it is clear that student teachers regard the formal and informal relationship with the cooperating teachers as the most important aspect of the fieldwork experience, what student teachers learn from them about teaching practice remains largely an unanswered question. Wang (2000) also calls for further exploration of what novices actually learn in practical teaching situations. Zeichner (1995) and Feiman-Nemser and Buchman (1987) claim that the first question that needs to be asked about practicum experiences is what the pre-service teacher is learning in the here and now about being a teacher, about pupils, classrooms and the activities of teaching. However, they believe that learning to deal with immediate classroom situations is not enough; educative mentoring must also present experiences for student teachers’ future learning.

There appears to be a gap between what student teachers themselves actually perceive or are able to describe about what they learn and what educators and researchers prescribe as learning in teacher education programs. Since teaching is a practical endeavor, implicit orientations that reflect different perceptions of teaching are seldom made explicit. Orientations to teaching and teacher education describe different clusters of attitudes, beliefs, values and skills that underlie educational practice. While different, and often conflicting, orientations are embedded in schools and in teacher education programs, student teachers develop their own perceptions that tend to emphasize certain orientations over others. In our study, these orientations are reflected in what student teachers report that they learn from their cooperating teachers in their pedagogical journals.

In order to bridge the gap between theory and practice, we sought to connect the empirical data from the perspective of student teachers with a theoretical framework of orientations to teaching and teacher education. We chose the theoretical framework of Calderhead and Shorrock (1997) for describing the wide range of content areas that are reflected in the perceptions of learning reported by the student
teachers. Calderhead and Shorrock distinguish five orientations, namely: the academic, the technical, the practical, the personal and the critical orientation. They claim that different orientations to teaching and teacher education that have often competed with each other for dominance can actually be seen as complementary and as encompassing the range of knowledge and skills that are required for learning to teach. We attempted to identify the specific content areas of the perceptions of learning reported by student teachers according to these orientations. We viewed this framework as an all-encompassing model for teacher education.

The main question of this study pertains to what kinds of knowledge and skills student teachers perceive to learn from their cooperating teachers. More specifically, the research questions that guided the study reported on in this chapter are:

a. What do student teachers perceive to learn from their cooperating teachers in the mentoring relationship?

b. Which orientations to teaching and teacher education are reflected in the perceptions of learning of the student teachers of this study?

Based on the answers to these questions, we make recommendations for mentoring and supervision of student teachers in pre-service practicum programs.

3.2. Student teachers’ perceptions of learning and theoretical orientations to teaching and teacher education

There is scant information in the literature on what student teachers actually say they learn in the schools in relation to their cooperating teachers. Eraut (1985) writes of the complexity and difficulty of codifying professional knowledge that is learned through and grounded in experience. Research on student teachers’ reported learning outcomes gives evidence that student teachers have a hard time articulating what they learn and refer to their developing mastery of teaching as a “holistic feeling of gained competence” (McNally, 1994). The idiosyncratic nature of what individual student teachers learn is another factor contributing to the difficulty of research in this area (Bullough, 1991; McNally et al., 1997). Zeichner (1995) claims that reports by student teachers of their fieldwork experiences are largely influenced by their need to survive in the classroom in the pre-service stage and are, therefore, not representative of the full range of learning that takes place.
Constructivist perspectives of learning in higher education, as well as in teacher education, are increasingly being recognized and interpreted as a process through which students actively construct their own interpretations in interactions with others and relate the new information to their existing understandings (Delandshire, 2002). Recent literature has focused on the epistemological meaning that students make about what constitutes knowledge and how this affects their learning (Court, 2004). In order to capture learning as it unfolds, we chose as our data source student teachers’ reports of what they learn from their cooperating teachers in the “situative” context of ongoing fieldwork experiences (Volet, 2004).

Previous attempts to connect empirical data with theoretical formulations of what student teachers learn were greatly influenced by the developmental stage theories based on Fuller's original conceptualization (1969). He described teacher learning and induction as: (1) early idealism, (2) concerns for survival, control of the class and the content of instruction, (3) recognizing difficulties including limitations and frustrations of the teaching situation, and (4) concerns about students’ learning and the impact of teaching on this learning.

Among research findings that support the existence of the initial survival stage, McNally et al. (1997) and Dunn and Taylor (1993) report that student teachers focus on matters of immediate practical significance when thinking about their learning. They value practical advice about pupils with whom they have difficulties and tips about coping in the classroom that provide the basis for initial technical survival. Getting to know the class, the pupils in it and the work and routines constitute the first stage of student teachers’ learning. Despite recent findings that support the stage theory (Conway & Clark, 2003; McNally et al., 1997), Bullough and Baughman (1993) caution against a rigid perspective of development through stages and the need to keep in mind that teacher development and learning are individual and idiosyncratic.

Conceptualizations of teacher education programs concerning what student teachers should learn have predominantly been formulated by educators, policymakers and researchers according to diverse political and socio-cultural dictates. Eisner and Vallance (1974) describe five belief orientations that guide teachers’ (as well as policymakers’) decisions according to the classification of cognitive processor, self-actualizer, technologist, academic rationalist and social reconstructionist. Similarly, Zeichner’s (1993) conceptualization of four traditions in
teacher education, the academic, the social efficiency, the developmentalist and the social reconstructionist, focuses our attention on different aspects of teaching expertise and program identities.

Calderhead and Shorrock (1997), on the other hand, propose five orientations to teaching and teacher education that combine many of the different theories of learning to teach. Although each educational orientation has taken precedence and competed with the others in different times and places in the history of teacher education, they view the orientations as equally valid and complementary to each other.

In order to connect our empirical data to a theoretical formulation of what student teachers should learn, we chose the orientation categories of Calderhead and Shorrock (1997) as background to our study. We selected these orientation categories for the following reasons. First, the orientations to teaching and teacher education of Calderhead and Shorrock are representative of the knowledge and skills that we believe to be important in teacher education. Second, the orientations to teaching encompass the diverse and idiosyncratic range of student teachers’ reported perceptions of learning. Third, the framework of orientations is nonhierarchical in that it presents a non-judgmental perspective that views the different teaching orientations as equally valuable to student teachers’ learning. The orientations to teaching and teacher education of Calderhead and Shorrock (1997) are presented here as follows:

1. **The Academic orientation** emphasizes teachers’ subject expertise and sees the quality of the teachers’ own education as his/her professional strength. It is concerned with the transmission of subject matter knowledge and assessment of pupils’ achievements. The role of the student teacher is to learn why, what and how to transmit expert knowledge.

2. **The Technical orientation** emphasizes the knowledge of behavioral skills that teachers require to control and manage classroom situations. It is concerned with rules and regulations that are often taught through microteaching and competency-based approaches and derives from a behaviorist model of teaching and learning. The role of the cooperating teacher is to model techniques of standard classroom management. The student’s role is to master these techniques and implement them in the planning stage of teaching.

3. **The Practical orientation** emphasizes the artistry and classroom technique of the teacher, viewing the teacher as a craftsperson. This view attaches importance to
classroom experience in diverse contexts. It is concerned with suggesting solutions for coping with practical classroom dilemmas, problems and unexpected situations. The role of the cooperating teacher is to share reflections and concerns for learner diversity. The student teacher is seen as an apprentice who participates in “hands-on” learning experiences.

4. The Personal orientation deals with student teachers’ developing sense of confidence to explore and discover personal strengths through interpersonal relationships in the classroom in a safe environment of support. In this view, the role of the cooperating teacher is one of support and encouragement. The role of the student teacher is to learn about teacher characteristics that are conducive to positive teacher-pupil relationships and to engage in the process of personal development.

5. The Critical orientation emphasizes the role of schools in promoting democratic values and reducing social inequities and views schooling as a process of social reform. The goal of teacher education is to help teachers become critical, reflective change-agents. It views the cooperating teacher as a professional who sees the classroom as a microcosm of society and seeks to empower student teachers to question their own values and those of the educational system.

We wanted to investigate to what extent the different orientations were represented in student teachers’ reports of what they perceived to learn form their cooperating teachers in the mentoring relationship.

3.3. Method

3.3.1. Research setting and participants

The sample of this study included 10 English as Foreign Language subject cooperating teachers from the Israeli school system and 20 second- and third-year undergraduate student teachers studying to be English teachers enrolled in the English Department of an Israeli academic teachers college. The program is a 4-year course leading to a Teaching Certificate and a Bachelor of Education Degree (B. Ed.) in Teaching English as a Foreign Language. Student teachers were randomly placed in teaching pairs and assigned to cooperating teachers. In this student teaching model, cooperating teachers volunteer for the mentoring role that carries with it the obligations of providing the student teachers with one school day a week of
observation, active participation as helpers in the classroom and one weekly hour of student teaching over the duration of the academic year. In addition, cooperating teachers are required to meet with their student teachers and the teacher trainer of the college for purposes of planning and feedback. An attempt was made to concentrate as many student teachers as possible in the same schools for the purpose of maximum collaboration and meeting time. Participating Professional Development Schools (PDS) included two mainstream elementary schools (3 cooperating teachers paired with 6 student teachers), two mainstream junior highs (6 cooperating teachers paired with 12 student teachers) and one elementary school of grades one to eight of a minority population in a geographically peripheral area in the south of Israel (1 cooperating teacher paired with 2 student teachers).

3.3.2. Data collection

Upon entrance into the practicum experience, the student teachers were requested to write ongoing reports in their pedagogical journals that focused on what they perceived to be learning from their cooperating teachers. We collected and read the pedagogical journals of each student teacher participant in their entirety for the duration of the 2003-4 academic year. The entries chosen for inclusion in the study consisted of segments from a variety of sources in the pedagogical journals relating specifically to perceptions of learning that focused on the cooperating teacher:

- Metaphors of self as teacher and how the cooperating teacher contributed to these.
- Specific pedagogical assignments in response to the probe: what I have learned from my cooperating teacher.
- Critical incidents (Tripp, 1993) that illustrate learning situations in relation to the cooperating teacher.
- Classroom observations that illustrate learning outcomes in relation to the cooperating teacher.
- Student teachers’ reports of feedback from the cooperating teacher on their teaching.

The inclusion of a variety of sources in the research data sought to provide the student teachers with alternative ways of expressing their experiences.

3.3.3. Data analysis
A category system was developed for the qualitative analysis of the perceptions of learning according to the framework of orientations of Calderhead and Shorrock (1997). Next, the perceptions of learning were categorized according to the category system with the aid of the Atlas-ti computer program (Muhr, 1997). Subsequently, a quantitative comparison of the frequencies of the reported perceptions of learning per category was performed. The process of data analysis is described in greater detail below.

**Orientation categories of student teachers’ perceptions of learning**

The purpose of the analysis of the journal entries was to identify what content areas student teachers report to learn from their cooperating teachers. The process of developing the category system consisted of the following steps:

1. Segments that focused on perceptions of learning in relation to the cooperating teacher were identified. A segment was defined broadly; anything that student teachers reported learning from their cooperating teacher was chosen for inclusion in the data bank. Each segment focused on a different content area of learning. The end of a segment and the beginning of a different segment was identified by a change in the content area.

2. Segments were labeled according to themes that described the content areas of the kind of learning that took place. Examples of themes were classroom dilemmas, subject-matter skills, personal relationships, teachers’ characteristics, rules and regulations for classroom management and social relevance. Labeling of each segment produced further divisions of segments: when more than one theme was identified in a single segment, the segment was divided into a number of segments. Similarly, long segments that had formerly been divided were recombined when labeled as having the same theme.

3. Although pre-categorization was used (the orientations formulated by Calderhead & Shorrock, 1997), there was a need to define and describe these categories according to the practical meaning given to them by the empirical data. This entailed going back and forth between randomly chosen subsets of data and the provisional categories multiple times to revise the initial categories to include all the data until “saturation” was reached (Strauss & Corbin, 1990) in order to describe the categories that emerged in more practical ways.
4. The final system of categories consisted of the original orientations of Calderhead and Shorrock (1997) that were now empirically defined according to descriptive themes reflecting practical teaching and learning content areas. Random subsets of data segments were coded according to one of the five orientations to teaching: academic, technical, practical, personal or critical. Discussion of disagreement between codes by different raters resulted in decision rules that further served to sharpen the coding system. Cohen's Kappa for the inter-rater reliability of the final category system was 0.92.

Appendix B presents the final category system, including descriptions and representative examples of themes for each category.

Comparison of categories

For the purpose of comparison of the perceptions of learning, all quotations were systematically sorted and assigned to a category with the aid of the Atlas-ti computer program. This enabled us to manage the large number of quotations by organizing them into groups around specific themes (Muhr, 1997). For an indication of the relative importance the student teachers gave to each kind of perception of learning, we used quantitative analysis: the frequencies of the total number of quotations of the orientation categories were calculated. This gave us a picture of the relative frequency of each orientation category compared to the other orientation categories for the sample as a whole. A higher frequency was considered to be an indication that the orientation category was perceived as more important by the student teachers as a group.

3.4. Results

3.4.1. General findings

The data consisted of a total of 283 statements from 20 student teachers. Student teachers reported between 3 and 30 perceptions of learning. The mean was 14.5 and the standard deviation was 6.4 for the sample as a whole. Table 3.1 presents the total number of perceptions of learning according to orientations.
Table 3.1. Total number of perceptions of learning according to orientation categories

<table>
<thead>
<tr>
<th>Orientation category</th>
<th>Number of quotations</th>
<th>Frequency in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal</td>
<td>76</td>
<td>26.9%</td>
</tr>
<tr>
<td>Academic</td>
<td>63</td>
<td>22.3%</td>
</tr>
<tr>
<td>Technical</td>
<td>54</td>
<td>19.1%</td>
</tr>
<tr>
<td>Practical</td>
<td>53</td>
<td>18.7%</td>
</tr>
<tr>
<td>Critical</td>
<td>37</td>
<td>13.1%</td>
</tr>
<tr>
<td>Total</td>
<td>283</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Perceptions of learning were reported in all of the orientation categories. The results show that student teachers reported perceptions of learning more in the personal orientation category (26.9%) than in any other category and that 19 out of 20 student teachers reported perceptions of learning in this category. The category with the second highest frequency was the academic orientation category (22.3%). Perceptions of learning in the technical orientation category (19.1%) and in the practical orientation category (18.7%) were similar in frequency and appeared midway between the two categories of highest and lowest frequencies. The lowest number of perceptions of learning was reported in the critical orientation category (13.1%) by 11 out of 20 student teachers.

The following section presents the answers to the research questions concerning the perceptions of learning reported by student teachers in each one of the orientation categories illustrated by representative examples (quotations). The codes that were used for analysis are presented in brackets after each example: the capital letter signifies the student teacher, followed by the number of the quotation of this student teacher and the orientation category.

3.4.2. Illustrations of student teachers’ perceptions of learning according to educational orientation categories

The Personal orientation
Student teachers undergo transition from identification with the pupils in the classroom to a position of authority over them. The necessity of attaining authority, while retaining a caring relationship with the pupils, places student teachers in an ambivalent situation with which they must learn to cope. Through interpersonal relationships with their cooperating teachers and observation of them in interaction with pupils in the classroom, student teachers learn about the personal characteristics that are necessary for the creation of positive teacher-pupil relationships. Student teachers of this study were impressed by the flexibility they observed in cooperating teachers’ personal relationships with pupils and how, in the words of one student teacher, they easily changed faces according to the needs of the pupils:

*I need to be flexible in my teaching and in my personality when I address pupils. I need to know when to be tough with a pupil and when to understand him. I think that in some ways my cooperating teacher did contribute to this thinking.* (G1b. Personal)

Personal characteristics of cooperating teachers that student teachers felt were worthy of emulation included being human, a mother hen, like a mother, someone to talk to, warm and caring, smiling, easy-going, the ability to laugh at oneself and to let the pupils see you as a real person rather than just one of many teachers.

The creation of positive relationships with pupils was made possible by the support and encouragement given by the cooperating teachers:

*They were there for us when we needed them. She volunteered her help. We didn’t have to ask. It came from her good will.* (G7. Personal)

As a result, many of the student teachers successfully bridged the transition from that of outsider to part of the system:

*They made us feel that we were important to the school and important to the learning process of the pupils.* (S1. Personal)

Over half of the learning outcomes reported by student teachers in this category (55.3%) reflected support by the cooperating teachers on a personal level.

**The Academic orientation**
The academic orientation category is concerned with subject matter focus, specifically, English as Foreign Language teaching. We found very few learning outcomes related to pupils’ academic achievements or assessment of them. This is in agreement with research by Weinstein (1989) who reports that student teachers overrate their pupils’ affective learning outcomes and underrate their cognitive learning outcomes.

However, we found subject matter data embedded in other technical and practical learning outcomes that focused on student teachers’ learning of subject matter and how to teach it. For this reason, we decided to extrapolate the academic from the technical and practical orientations by giving the academic preference over the other orientations when the categories overlapped. This is in keeping with the literature on the nature of practical pedagogical knowledge in which why, what and how to teach are interrelated (Ball, 2000; Beijaard & Verloop, 1996; Shulman, 1987). It is a possible explanation for why the category with the second highest frequency of quotations was found to be the academic orientation category. An illustration is presented in the following example:

*I learned how to teach pupils to write a book report by observing my cooperating teacher. The teacher wrote a clear description of what needs to be done in the book report on the board. She wrote by each question the number of points pupils will receive for that specific question. For example: 10 points for the name of the author.* (B4. Academic)

A recurring theme in this category focused on student teachers’ own need to learn more about subject matter, such as grammar:

*I described in my diary how I witnessed a bad explanation of a grammar unit. The subject was the present perfect tense. I wrote in my journal then that I very much disapproved of the fact that teachers give their lessons unprepared. I then was ashamed to observe such a weak and deficient presentation of the grammar rules.* (D1a. Academic)

In addition, another recurring theme was how to teach and assess the learning of subject matter. Examples of this were found in the areas of reading comprehension, writing of worksheets and tests, developing materials for different levels of learners in the same classroom, and planning of pupil presentations in English:

*This lesson was a critical incident because it was one of the most thought-out lessons*
I’ve seen. I think what the teacher asked them to do was very challenging and it was part of their grade and most of them did a very good job. The presentations were above their level. I saw among their grades a lot of 90’s and 100’s, but the most important thing is that the students worked as a team. I'm sure they enjoyed doing it because I saw the effort they put into presenting the project. (C6. Academic)

Another academic theme related to how to teach subject matter that emerged was the use of the native language versus the use of the target language in the classroom.

I think that it is very important to speak English to the pupils from the very beginning. It is very important to expose them to English as much as possible. When my partner and I taught, we used to speak almost always in English and the pupils loved it and asked us to speak in English even more. (T6. Academic)

The Technical orientation

The technical orientation category refers to general principles and specific instructions for rules and regulations of classroom procedure necessary for efficient classroom management regardless of diverse situations and contexts. Following is an example of a perception of learning of a technical nature:

At the beginning of the year, I was naturally only observing Sara. I have noticed that she always divided the first 5-10 minutes of the lesson for checking pupils’ homework, no matter how short she was on time. During our conversations at the beginning of the year, she often mentioned that checking their homework at the beginning of every lesson is very important. (F2. Technical)

General “tips” for classroom management are often presented by cooperating teachers and seen by student teachers as rules to be learned and implemented in all situations without question. The perception of cooperating teachers and student teachers that technical strategies can be easily transmitted and mastered may explain the large number of technical learning outcomes reported by student teachers. Examples of technical strategies for classroom management included giving clear directions, writing clearly on the board, passing out papers efficiently, having a clean and orderly classroom before starting the lesson, following a lesson plan, paying attention to the pupils in the back of the class, directing questions at each pupil, waiting for quiet before speaking, summarizing the main points of the lesson and other “tips” that seemed to work for the cooperating teacher.
This result is in accordance with much prior research (Conway & Clark, 2003; McNally et al., 1997) that has found that student teachers are interested in learning technical means of class management in order to survive the first stage of student teaching (Fuller, 1969).

The Practical orientation

The practical orientation category refers to coping strategies, suggestions and ideas for decision-making in unclear situations embedded in specific contexts for the purpose of dealing with classroom dilemmas, or, as Zeichner (1995) describes it, opportunities for future learning.

Reported perceptions of learning in the practical orientation included relating to different levels and learning styles of pupils, getting to know the pupils individually by circulating among them during group work, encouraging social interaction among pupils, creating the kind of lessons that give opportunities to all pupils to participate, understanding how the physical environment can affect pupil learning and appreciating the importance of flexibility, quick-thinking and creativity in solving unexpected dilemmas:

*I sat in the 4th grade the last hour of the day and it was a very hot day. It was impossible to sit in the classroom without the air-conditioner (which was broken) so the teacher decided to move to the library with the pupils. At first, I thought that moving to the library is a mistake because it takes a lot of time and there isn't a board there. I thought that the whole lesson would be wasted. I realized that she did the best thing because it took her 2 minutes to think and she immediately found a solution. I think that experience is one of the most important things in life and in teaching, even in the smallest things. It was a waste of 7 minutes to get settled in the new room, but if the class had stayed in the hot classroom, the whole lesson would have been useless. Quick thinking and a little bit of creativity can be very helpful in many situations that can happen in class. I think that it is very important to take care of the teaching and learning environment, both for the teacher and for the pupils. (S8. Practical)*

Student teachers learned, in their own words, that teaching requires flexibility and decision-making because anything can happen. The perceptions of learning reported in this orientation category give evidence of student teachers’ concerns with learning from experience for future reflection (Feiman-Nemser & Buchman, 1987; Zeichner, 1995).

The Critical orientation
The critical orientation category is concerned with issues that are of moral or social relevance. According to Daloz (1986), “teaching is fundamentally a moral act” (p. 238).

Segments were coded as critical when student teachers specifically made a connection to social issues beyond the immediate classroom or questioned the educational agenda or goals of the system. Perceptions of learning that included criticism or reflection on issues of the other orientations were not coded as critical. The following example illustrates a segment in the critical orientation category concerning the agenda of education:

*She often explains to her pupils, even without planning it, the rationale behind her requests. For example, when she gives them homework she often explains why it is important for them to do it. When she asks them to work on a certain project, she finds a way to relate it to their personal life, etc. I strongly believe that once the learners understand and identify with the “meaning” for their studies and efforts, it will increase their motivation to learn as well as to take more responsibility for their own learning progress.* (F16. Critical)

Another type of perception of learning in the critical orientation category was one cooperating teacher’s attention to pupils’ manners and the connection the student teacher made to the goals of education:

*First of all, I was glad the teacher reprimanded the pupil for yawning in the lesson. Our pupils’ manners are so unpleasant sometimes. We teachers are also to blame for that. We shouldn’t let the pupils get away with that. We often ignore bad manners. However, it is also our job to be educators, as much as teachers of professional subjects. It is because the educators do not aim to educate that we have what we have. Actually, we do not have educators.* (D3a. Critical)

The principle of child-centered learning was another kind of perception that emerged as reported in the following quotation by a student teacher:

*The question is why do we need to control? If an issue is interesting and the pupils identify themselves with it, why do I need to control? Maybe we are boring and the pupils are tired of listening year after year to the same boring things. Maybe our topics don’t arouse interest; maybe our methods develop recalcitrant reactions; maybe we are not as good teachers as we think. What should we do about it? ... As grown-ups, we still choose the interesting topics in a very individual way. Students don’t have this opportunity. Maybe we should give it to them and then we will not have to deal with discipline problems, but with their hunger of knowledge.* (A11. Critical)
In the final example, we present a quotation of a student teacher that shows insight into the connections between a personal problem of a pupil, a practical way of coping with the problem through classroom instruction and a critical issue that transcends the confines of the specific classroom situation:

*I spoke with his teacher about that and asked her what happened with this child. She told me that she tried to help him but no one wants to play with him or to talk with him. After that we decided to teach about friendship and how important it is to respect others and to listen to them. From that I learned that there are some students that do not have friends and they suffer from that. We as teachers should help them with that.* (R12. Critical)

### 3.5. Conclusions and discussion

The study presented in this chapter suggests a method of investigating what student teachers perceive to learn from their cooperating teachers that connects empirical data with a theoretical formulation of desired practice. The analysis allowed us to identify and describe what perceptions of learning actually look like in practice (Martin, 1996) from the perspective of student teachers.

In answer to the research questions concerning what student teachers perceive to learn, we were encouraged by the finding that student teachers reported perceptions of learning in all of the content areas that we consider important for learning to teach. The use of the *a priori* categorization, according to orientations to teaching and teacher education, directed our attention to perceptions of learning in orientation categories that we might have overlooked, specifically, the academic and the critical orientations.

In agreement with the claims of the developmental stage theorists (Dunn & Taylor, 1993; Fuller, 1969; McNally et al., 1997), we found that many of the student teachers’ initial perceptions of learning lie in the personal, technical and practical orientations. Student teachers are most concerned with personal relationships with cooperating teachers and with pupils, as well as with their own personal transition from student to teacher roles. While student teachers of this study reported many perceptions of learning of a technical orientation, they, nonetheless, also reported a similar number of perceptions of learning of a practical orientation. This reflects not only a desire to learn ready-made strategies for survival, but also a willingness to cope with complex situations in changing contexts that have no clear solutions.
Our results concerning the academic orientation category were unexpected. Our former study on student teachers’ and cooperating teachers’ perceptions of the role of the cooperating teacher (Rajuan, Beijaard & Verloop, 2007; see chapter 2), as well as the research of Williams and Soares (2000), found that neither student teachers nor cooperating teachers believe that it is the role of the cooperating teacher to impart subject matter knowledge. Nevertheless, in this study, student teachers did report a large number of perceptions of learning in the academic orientation category. This may have been partly due to our analysis that gave preference to the academic category when these perceptions of learning were embedded in other technical and practical classroom issues. According to Ball (2000), Beijaard and Verloop (1996) and Shulman (1987), the nature of practical pedagogical knowledge is such that the content and process of teaching are interrelated. Cooperating teachers’ classroom practice and their attempt to teach student teachers how to teach apparently cannot be divorced from the content of what they teach. Similarly, the needs of student teachers of this study to learn more about subject matter and how to teach it, that emerged from student teaching experiences, led them to seek out these learning opportunities in interaction with their cooperating teachers.

Results of this study concerning perceptions of learning of a critical nature show a higher frequency than expected in comparison to past research that found that student teachers are least concerned with critical issues that go beyond the confines of the classroom (Martin, 1996; Rajuan, Beijaard & Verloop, 2007). As opposed to Buchman’s claim (1986) that only experienced teachers are capable of a critical orientation in which they sustain concerns of advanced and sophisticated issues that surpass the confines of the classroom, our results show that even in the beginning stages of learning to teach, perceptions of learning in the critical orientation do arise. Student teachers aspire to more idealistic goals than what they observe in the classroom (Farrel, 2003; Martin, 2004; Shkedi & Laron, 2004). The practicum experience presents student teachers with situations that “trigger” future learning (Schön, 1983; Zeichner, 1995).

The category system of this study yielded results that both support past studies regarding the initial stage of teacher education and highlight the idiosyncratic nature of learning among individual student teachers (Bullough & Baughman, 1993; McNally et al., 1997). We conclude that student teachers in the initial stage of student teaching report perceptions of learning that reflect not only personal relationships and
technical means of survival, but also a wider range of perceptions of learning that emerge spontaneously in practicum experiences. We present these results as support for increased time spent in the schools in teacher education programs.

We believe that the results of this study, while limited to a description of twenty student teachers in an Israeli learning community that may be influenced by the larger socio-political orientation in which it is situated, have implications for teacher education.

Based on the results of our categorization of perceptions of learning, and in line with what McNally et al. (1997) suggest, we recommend that teacher education programs place more emphasis on eliciting “situative” perceptions of learning that emerge from the perspectives of student teachers. By encouraging our student teachers to report and reflect on their perceptions, we hope to promote awareness and purposefulness behind their pedagogical decisions (Montecinos, Cnudde, Ow, Solis, Suzuki & Riveros, 2002).

As suggested by Calderhead and Shorrock (1997), we believe that the framework of orientations to teaching can serve as a professional language to aid practitioners in talking about their practice, as well as to encourage the articulation of implicit assumptions and beliefs connected to that practice. In agreement with Hawkey (1997), we suggest that teacher education programs provide their student teachers and cooperating teachers with a common professional language for establishing some underlying consistency between the members of mentoring relationships in their work together. In addition, we recommend exposing student teachers and cooperating teachers to a wide range of knowledge and skills necessary for learning to teach in accordance with the chosen goals of the specific teacher education program. This is essential in light of “the impossible role of the teacher educator” to meet the multiple demands of the schools in the 21st century (Ben-Peretz, 2001).
4. Student teachers’ perceptions of their mentors as internal triggers of support and challenge for learning

Abstract

This chapter describes a study of the different ways in which student teachers perceive the practice of their mentors as internal triggers for learning in their practicum experiences in the schools. Reported observations from pedagogical journals of student teachers were described according to various kinds of teaching knowledge and skills (Calderhead & Shorrock, 1997) and were further categorized as providing either support or challenge to student teachers’ perceptions of learning to teach (Daloz, 1986). The student teachers identified support and challenge in each one of the categories of teaching knowledge and skills, thereby supplying evidence for different kinds of emotional and cognitive triggers for learning. Based on the findings, we make recommendations for supervision of mentoring relationships.

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3 This chapter has been submitted for publication as: Rajuan, M., Beijaard, D. & Verloop, N. Student teachers’ perceptions of their mentors as internal triggers of support and challenge for learning.
4.1. Introduction

Individual student teachers perceive their mentors and what they learn from them in practicum experiences in the schools in idiosyncratic ways (Bullough, 2000; McNally et al., 1997). Their experience of what their mentors do and say in the classroom may conflict with what they consider desirable and good. In addition, different ideologies, or conceptual orientations, to teaching are culturally embedded in schools and in teacher education programs (Calderhead & Shorrock, 1997) and may conflict with student teachers’ beliefs and perceptions about learning to teach.

In light of the many conflicts facing the student teachers during their practicum, the support of the mentor is of utmost importance. The major source of support, as reflected in the literature, has been emotional support provided by the mentor in the interpersonal relationship that develops between mentor and mentee (Abell, Dillon, Hoplins, McInerney & O’Brien, 1995; Awaya et al., 2003; McNally et al., 1997; Tetzlaff & Wagstaff, 1999). In addition to emotional support, Elliot (1995) believes that the potential of cognitive support for learning in mentoring relationships has been neglected. In his formulation of support, Elliot encompasses the affective and the interpersonal aspects of support, as well as the cognitive and the professional aspects that trigger learning.

In contrast to the focus on supportive relationships, the literature on mentoring also presents the advantages of dissonance for the learning process. The discrepancy between the personal beliefs of the “private self” and the needs of the “professional self” to succeed in the classroom creates situations of challenge (Beijaard, Meijer & Verloop, 2004). The complex role of the mentor includes not only support of student teachers in conflicting situations, but also the use of such situations for challenging student teachers to learn new things that serve as triggers to student teachers’ processes of learning to teach (Martin, 1996). Similarly, Vermunt and Verloop (1999) view the good mentor as a constructive challenger who creates situations in which student teachers explore alternative learning and thinking strategies that open up new possibilities for learning.

Other researchers have written about the need for a balance between support and challenge in mentoring relationships (Cameron-Jones & O’Hara, 1997; Daloz, 1986; Graham, 1997; Martin, 1996; McNally & Martin, 1998; Tang, 2003; Vermunt & Verloop, 1999). Tang (2003) believes that learning takes place in those experiences
when personal perceptions of the core self come into conflict with the teaching self. She advocates the idea of learning from dissonance, rather than from more comfortable relationships in which student teachers and cooperating teachers hold similar views. The unique interrelationship between support and challenge provided by the mentor produces different triggers for student teachers’ learning. Support without challenge can create a comfortable learning context in which little new is learned and the student teacher remains in an unchanged state of stagnation. Challenge without support may result in experiences of frustration and negativity in which student teachers may retreat from learning. Although various theories emphasize different aspects of support and challenge, based on the work of Daloz (1986), most researchers agree that the optimal situation for student teachers’ learning consists of a balance between challenge to the teaching self and support in the interpersonal relationship between mentor and student teacher.

Prescriptive descriptions of support and challenge in the literature from the perspective of researchers and educators may overlook the idiosyncratic meanings that student teachers attribute to specific mentoring situations. Martin (1996) claims that both support and challenge are relative terms based on the perception of different individuals and that we have little information on what support and challenge actually look like in practice from the perspective of student teachers. She further claims that in order to mentor student teachers successfully and to research how they learn, it is necessary to contextualize both support and challenge according to the individual needs of student teachers. Hawkey (1997) also believes that further research is needed in the area of mentoring relationships that facilitate student teachers to elicit their perspectives to examine how mentoring interventions impact student teachers’ perceptions of learning.

In this study, we define internal triggers of learning as those situations that student teachers view as significant and choose to write about in their pedagogical journals. Since we are interested in the perceptions of student teachers, we limit ourselves to “internal triggers,” those that student teachers identify for themselves, as opposed to “external triggers,” those that are identified or intended by their mentors.

In order to investigate what internal triggers of learning actually look like in practice, we attempted to describe the reported perceptions of the student teachers according to a wide variety of knowledge and skills necessary for learning to teach. For this purpose, we adapted the various kinds of teaching knowledge and skills
associated with the formulation of different orientations to teaching and teacher education of Calderhead and Shorrock (1997) as categories of analysis. The categories include the academic, the technical, the practical, the personal and the critical orientations as described in chapter 3.

These internal triggers, as reported in the pedagogical journals of the student teachers, are perceived by them as either supportive or challenging to their perceptions of learning to teach. We based our investigation on the assumption that student teachers feel supported when their perceptions of teachers and teaching are confirmed by their observations and, alternatively, that they feel challenged when their perceptions of teachers and teaching are inconsistent with their observations. We define perceptions of both support and challenge as internal triggers to the ongoing learning processes of student teachers.

The main question of this study is: what kinds of knowledge and skills are perceived by student teachers as triggers of support and challenge to their perceptions of learning to teach? More specific research questions to be answered by this study are:

a. How do student teachers describe situations in their mentors’ practice according to different categories of teaching knowledge and skills?

b. How do student teachers perceive support and challenge in their mentors’ practice according to these categories?

4.2. Method

4.2.1. Research setting and participants

The sample of this study included one class of 20 second- and third-year undergraduate student teachers studying to be English teachers enrolled in the English Department of an Israeli academic teachers’ college. The program is a 4-year course leading to a Teaching Certificate and a Bachelor of Education Degree (B. Ed.) in Teaching English as a Foreign Language. Student teachers were randomly placed in teaching pairs and assigned to mentors (experienced teachers who were or were not mentors before). In this student teaching model, the mentoring role consists of providing the student teachers with one school day a week of observation, active participation as helpers in the classroom and one weekly hour of student teaching over
the duration of the academic year. Participating schools included two mainstream elementary schools (3 mentors paired with 6 student teachers), two mainstream junior highs (6 mentors paired with 12 student teachers) and one elementary school of grades one to eight of a minority population in a geographically peripheral area in the south of Israel (1 mentor paired with 2 student teachers).

4.2.2. Data collection

Upon entrance into the practicum experience, the student teachers were requested to write ongoing reports in the form of critical incidents in their pedagogical journals that focused on what they perceived to be learning from their cooperating teachers according to the guidelines suggested by Tripp (1993). From experience, however, we found that student teachers often seemed to reject the need for purposeful reflection on their teaching and learning (Doecke, 2004; Montecinos et al., 2002). While not all student teachers wrote critical incidents as requested, we found that their perceptions of learning were often embedded in other written reports that were practically relevant to them (Francis, 1995). For this reason, we decided to collect and read the pedagogical journals in their entirety for the duration of the 2003-4 academic year of each student teacher participant. The entries chosen for inclusion in the study consisted of segments relating specifically to perceptions of learning that focused on the cooperating teacher from a variety of sources in the pedagogical journals:

- Metaphors of self as teacher and how the cooperating teacher had contributed to these.
- Pedagogical assignments to write specifically about learning outcomes related to the cooperating teacher in response to the probe: what I have/haven't learned from my cooperating teacher.
- Critical incidents that illustrate learning outcomes in relation to the cooperating teacher.
- Classroom observations that illustrate learning outcomes in relation to the cooperating teacher.
- Student teachers’ reports of feedback from the cooperating teacher on their teaching.
The inclusion of a variety of sources in the research data sought to open up the range of expression of the student teachers in order to better encompass the experience from the perspective of the participants.

4.2.3. Data analysis

The data were analyzed qualitatively and quantitatively. For the analysis of the data we developed two category systems, one for categorizing the data according to teaching knowledge and skills and another for categorizing the data according to support and challenge. We used the Atlas-ti computer program to systematically sort the segments according to both category systems (Muhr, 1997). This enabled us to calculate and compare the proportion of support and challenge within and across the knowledge and skills categories.

Category system of teaching knowledge and skills

The process of developing the system of categories for the analysis of teaching knowledge and skills entailed going back and forth multiple times between randomly chosen subsets of data and the a priori formulation of Calderhead and Shorrock (1997). Representative themes that emerged from the data aided the task of revising the initial categories to include all the data until “saturation” was reached (Strauss & Corbin, 1990). Cohen's Kappa for the inter-rater reliability of the final category system was 0.92. Appendix B presents the final category system, including descriptions and representative examples of themes for each category (see also chapter 3 for more details about the development of this category system).

Category system of support and challenge

We based our decisions for classification of support and challenge on the student teachers’ spontaneous expressions of positive or negative assessments in their reports of their observations, as well as on their reports of feeling comfortable (Martin, 1996) or in conflict (Elliot, cited in Martin, p. 48) as indicators of internal triggers of learning (Martin, 1996).

The procedure for coding support/challenge relied on inter-rater agreement that resulted from the process of going back and forth between random selections of data and the coding system in order to sharpen the definitions of support and challenge for
this study. Cohen’s Kappa for inter-rater reliability for the final coding system was 0.78. Appendix C presents the category system for support and challenge, including descriptions and representative examples of quotations for each category of teaching knowledge and skills.

4.3. Results

The data consisted of a total of 283 segments from 20 student teachers, ranging from 3 to 30 segments per student teacher. The mean was 14.5 with a standard deviation of 6.4 for the sample as a whole.

4.3.1. Identification of support and challenge

Table 4.1 presents the total number of segments according to the categories of support and challenge. It was found that 55.8% of the total observations of mentors’ practice supported the student teachers’ initial perceptions of teaching, while 44.2% challenged their perceptions. The majority of student teachers reported perceptions of both support and challenge in all of the categories of teaching knowledge and skills. Student teachers reported the highest number of perceptions in the personal orientation category, thereby reflecting the highest percent of perceptions of both support (26.6%) and challenge (27.2%) in this category as compared to the other categories. The lowest amount of support was perceived in the critical orientation category (10.8%), which contained the smallest number of perceptions. Those that least challenged them were found in the technical orientation category (13.6 %) that contained a moderate number of perceptions. The largest discrepancy within categories between support and challenge was found in the technical orientation category.

Table 4.1. Total number of segments of support and challenge according to categories of teaching knowledge and skills

<table>
<thead>
<tr>
<th>Knowledge &amp; Skills</th>
<th>Support</th>
<th>Challenge</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Row %</td>
<td>Col %</td>
</tr>
<tr>
<td>Academic</td>
<td>36</td>
<td>57.1 %</td>
<td>22.8 %</td>
</tr>
<tr>
<td>Practical</td>
<td>26</td>
<td>49.1 %</td>
<td>16.5 %</td>
</tr>
</tbody>
</table>
4.3.2. Descriptions of support and challenge according to teaching knowledge and skills

This section presents the results of the study illustrated by representative examples (quotations of segments). The codes that were used for analysis are presented in brackets after each example: the capital letter signifies the student teacher, followed by the number of the quotation of this student teacher, the category of teaching knowledge and skills and the category of support/challenge.

Support and challenge according to academic knowledge and skills

The academic orientation category contained the second highest amount of statements compared to the other categories. Student teachers reported more observations of support (57.1%) than of challenge (42.9%) in this category. Examples of how to teach English as foreign language that supported student teachers’ perspectives were found in the areas of reading comprehension, how to write worksheets and tests, the need to develop materials for multiple levels of learners in the same classroom and how to organize pupil presentations in English:

*This lesson was a critical incident because it was one of the most thought-out lessons I’ve seen. I’m sure they enjoyed doing it because I saw the effort they put into presenting the project.* (C6. Academic – support)

A purely academic theme, the use of the native language versus the use of the target language in the classroom, emerged as a source of challenge. Student teachers were challenged by the incongruence between college policy to use English as the medium of instruction, the reality of the EFL classroom in which little English was used by some of the cooperating teachers and the student teachers’ own beliefs and abilities concerning this issue:
Alice speaks Hebrew all the time. I think that it is very important to speak English to the pupils from the very beginning. (T6. Academic - challenge)

Support and challenge according to technical knowledge and skills

The technical orientation category, while moderate in size compared to the other categories, contained the largest discrepancy between support (68.5%) and challenge (31.5%) within the category. Examples of a technical nature that supported student teachers’ perceptions of how to manage a classroom included giving clear directions, how to write on the board, how to pass out papers, having a clean and orderly classroom before starting the lesson and always checking homework:

I have noticed that she always divided the first 5-10 minutes of the lesson for checking pupils’ homework, no matter how short she was on time... checking their homework at the beginning of every lesson is very important. (F2. Technical - support)

The lowest amount of challenge compared to the other categories was found in the technical category (13.6%). Student teachers felt challenged by issues of control in situations that they perceived that their mentors could not handle, including what punishments are appropriate for misbehavior:

I didn’t learn what punishments I can use that will be productive and also will solve discipline problems. I don’t know what to do if pupils start fighting in the classroom or if a pupil says a bad thing or doesn’t do his/her homework. (G11. Technical - challenge)

Support and challenge according to practical knowledge and skills

The practical orientation category, that was found to be moderate in size compared to the other categories and equal in size compared to the technical orientation category, contained an almost equal proportion of support (49.1%) and challenge (50.9%). Practical strategies for coping with unclear classroom dilemmas that supported student teachers’ perceptions included the mentors’ ability to relate to different levels and learning styles of pupils, encouraging social interaction among pupils, creating the kind of lessons that give opportunities to all pupils to participate, and appreciating the importance of flexibility, quick-thinking and creativity in solving unexpected dilemmas:
It was impossible to sit in the classroom without the air-conditioner (which was broken) so the teacher decided to move to the library with the pupils. I thought that the whole lesson would be wasted. I realized that she did the best thing because it took her 2 minutes to think and she immediately found a solution. I think that experience is one of the most important things in life and in teaching. (S8. Practical - support)

Practical situations that challenged student teachers’ perceptions and led them to react negatively included incidents in which student teachers reported that their mentors should come prepared with more alternatives, listen to their pupils more and not be so quick to judge them, not embarrass them in front of their classmates, not use sarcasm, speak to pupils about problematic behavior after class and not threaten punishment unless they intended to be consistent in implementing it:

Gail insisted that he receive the punishment and that there was nothing he could do about it. Surprisingly, a short time later, she changed her mind and took everything back. One thing I have learned from this incident is, do not punish unless you intend to do it! It’s like breaking a promise and by that, the person who makes the promise loses his credibility. (I18. Practical - challenge).

Support and challenge according to personal knowledge and skills

The personal orientation category was the largest category compared to the others and also supported the student teachers’ perceptions of learning the most (26.6%). Over half of the observations reported by student teachers within the personal orientation category reflected student teachers’ perceptions of emotional support given by the cooperating teacher (55.3%). Student teachers were also supported in their transition from feeling as outsiders in the school to forming relationships with teachers and pupils that gave rise to feelings of belonging or, as one student put it, part of the system:

They made us feel that we were important to the school and important to the learning process of the pupils. (S1. Personal - support)

Observations that most challenged the student teachers’ perceptions compared to the other categories were also found in the personal orientation category (27.2%).
However, the perceptions that challenged the student teachers were less than those that supported them within this category. Student teachers were challenged when they perceived negative relationships between mentors and pupils. They expressed this in words such as not showing a human side, not listening, only a teacher of subject matter, etc. as presented in the following example:

This pupil was very upset by the way that his teacher treated him and from that moment, he lost his respect for her. Miriam could have handled this situation differently by talking with the pupil after the lesson and by listening to the pupil before judging him. (R7. Personal – challenge)

Support and challenge according to critical knowledge and skills

The smallest category compared to the others, the critical orientation category, provided student teachers with the lowest amount of support (10.8%). This was the only category within which student teachers reported more challenge (54.1%) than support (45.9%).

One example of support in which critical knowledge and skills were displayed was related to the mentors’ attention to pupils’ manners and conduct and the connections that the student teacher made to the goals of education:

First of all, I was glad the teacher reprimanded the pupil for yawning in the lesson. Our pupils’ manners are so unpleasant sometimes. We teachers are also to blame for that. We often ignore bad manners. (D3a. Critical - support)

The following example illustrates a situation concerning the hidden agenda of education, which presents challenge of a critical nature to the perceptions of the student teacher:

The question is why do we need to control? If an issue is interesting and the pupils identify themselves with it, why do I need to control? As grown-ups, we still choose the interesting topics in a very individual way. Pupils don’t have this opportunity. (A11. Critical - challenge)
4.4. Conclusions and discussion

The present study suggests an alternative way by which to view the concepts of support and challenge from the perspective of student teachers. Our results show that, overall, the proportion of support to challenge is perceived by the student teachers of our study as balanced, with a slightly higher proportion of support than challenge. The student teachers identified different emotional and cognitive kinds of support and challenge in each one of the categories of teaching knowledge and skills, thereby providing evidence for a wide range of triggers for learning. The \textit{a priori} categorization, according to orientations, directed our attention to a wide variety of emotional and cognitive kinds of support and challenge that we might have otherwise overlooked.

Although student teachers did not report perceptions of a technical nature the most, they were most highly supported in their perceptions of learning by technical knowledge and skills that they observed cooperating teachers use successfully to manage the classroom. This result is in accordance with much prior research (Conway & Clark, 2003; McNally et al., 1997) that has found that student teachers are in need of support in learning technical means of class management in order to survive the first stage of student teaching (Fuller, 1969). Student teachers reported very little challenge in the technical orientation category expressing their readiness to accept the tips and strategies observed.

Student teachers reported a similar amount of practical perceptions to that of technical ones. However, in contrast to high support in the technical category, student teachers were challenged by many classroom dilemmas in the practical orientation category. The reported negative and ambivalent reactions to half of the observations in the practical category give evidence of student teachers’ concerns with learning to deal with dilemmas that have no clear solutions (Feiman-Nemser & Buchman, 1987; Zeichner, 1993). We are encouraged by this finding and believe that a balanced amount of support and challenge in practical learning situations should be emphasized in supervision with cooperating teachers. Student teachers’ reports of their perceptions in actual classroom situations can be used as a tool to trigger dialogue and promote learning in supervision of mentoring relationships.

In the personal knowledge and skills category, student teachers reported the highest amount of perceptions, thus expressing their dominant concern for issues of a
personal nature. They perceived personal support from their mentors moderately more than challenge, but were often challenged by the kinds of personal relationships that they observed their mentors developing with pupils. Student teachers more readily identify with pupils in the classroom due to their position of transition from student to teacher roles. Cooperating teachers can be made aware of this in supervision through exposure to the perceptions of student teachers.

The small critical knowledge and skills category was the only category in which student teachers reported more observations that challenged their perceptions than supported them. The results describe specific conflicts between student teachers’ initial idealism and the culture shock they experience upon encounter with the reality of school life and the need to control the classroom (Farrell, 2003; Martin, 2004; Shkedi & Laron, 2004). Issues of a critical nature that emerge from student teachers’ reports should be used as a focus of discussion in the supervision of mentoring relationships.

We conclude that student teachers in the initial stage of student teaching are not only concerned with support in personal relationships and in technical means of survival, but also with a wide range of challenges to their perceptions of learning to teach, many of which conflict with what they perceive their cooperating teachers to be doing. This tension between the need to succeed in class management and the need to narrow the gap between their own, often idealistic, perceptions and what they encounter in learning situations with the cooperating teachers characterizes the student teachers of this study.

The illustrations describe what support and challenge actually look like in classroom practice from the perspective of student teachers. They show that different student teachers perceive their mentors’ practice in different ways (Martin, 1996). Student teachers of this study reported support in learning to teach when their observations of their mentors were in agreement with their beliefs and expectations. In contrast, they were challenged by many of the things their mentors said and did that they did not consider desirable and good. Individual student teachers report different kinds of observed teaching knowledge and skills as either support or challenge in accordance with their individual needs. The quotations used in this chapter indicate that some student teachers may be in need of more support, whereas others may be in need of more challenge in different kinds of teaching skills. These needs are often
different from the kinds of triggers to learning that mentors provide. It is important to make mentors aware of this.

The specific results of this study are limited to a sample of twenty student teachers in the context of an Israeli practicum program that may be biased by the larger socio-political orientation in which it is situated. While this study chose to focus on a specific group of student teachers for the purpose of supervision with the members of the mentoring relationships involved, further research could investigate the kinds of support and challenge reported by student teachers in different socio-cultural contexts.

Despite the context of this study and the specific conception of the mentor role in this context, we believe that our study has implications for the enhancement of learning from mentoring relationships. Participants of mentoring relationships can be made aware of the potential benefits of learning from a wide variety of different kinds of supportive and challenging triggers for learning as they are revealed in studies such as this one.

In line with what McNally et al. (1997) suggest, we recommend that teacher education programs place more emphasis on eliciting “situative” reports of perceptions of learning that emerge from the experiences of student teachers. Student teachers can be encouraged to identify which situations present support and which present challenge to learning to teach. By encouraging our student teachers to report on their perceptions of learning, we hope to promote awareness and purposefulness behind their pedagogical decisions through articulation and reflection on what they are learning (Montecinos et al., 2002).

Mentors can be made more aware of the needs of their student teachers through exposure to a framework for learning, such as the one suggested here, that represents the goals of the training institution. In agreement with Hawkey (1997), we propose using the concepts of support and challenge as a common professional language for establishing some underlying consistency between student teachers and mentors in their work together.
5. The match and mismatch between the perceptions of student teachers and cooperating teachers: Exploring different opportunities for learning to teach in the mentoring relationship

Abstract

The study described in this chapter focuses on ways in which matched and mismatched perceptions of learning between student teachers and cooperating teachers contribute to different opportunities for learning to teach. We analyzed student teachers' perceptions of learning to teach as reported in their pedagogical journals according to three coding systems that were developed in previous studies. Two of these systems were based on the orientations to teaching of Calderhead and Shorrock (1987) and the third was based on the concepts of support and challenge of Daloz (1986). We focused on 20 mentoring pairs from the total sample of our prior studies. We found that matched perceptions between student teachers and cooperating teachers strongly supported the perceptions of learning among student teachers, whereas mismatched perceptions greatly challenged the perceptions of learning among student teachers. We also found a third pattern of perceptions that was neither matched nor mismatched, but mixed in terms of support and challenge in a wide range of different kinds of teaching knowledge and skills. The findings of this study show that the mixed pattern of overlapping and differing perceptions provides the most beneficial opportunities for learning. We conclude with recommendations based on the findings for the design of supervision to participants of mentoring relationships in practicum programs.
5.1. Introduction

In teacher education, student teachers often complain that what they perceive to learn at the university does not match what they see their cooperating teachers doing (Sands & Goodwin, 2005). In addition, student teachers often feel that they do not learn what they need to learn from their cooperating teachers in order to survive in the school setting. School personnel complain that their expectations of student teachers do not match what teacher education programs prepare student teachers to do and learn (Sands & Goodwin, 2005). Despite the mismatch in perceptions of learning, there is scant literature on matching in mentoring relationships in practicum programs. Mentoring is an intense interpersonal relationship. Different personality characteristics, backgrounds, values and job-related needs may cause participants in mentoring relationships to hold diverse perceptions concerning the mentoring role (Armstrong, Allinson & Hayes, 2002; Eby et al., 2000). Since these perceptions are rarely communicated explicitly, agreement between mentor and mentee is often hard to reach (Waters, 2002).

Another source of difficulty stems from the fact that different people will reap different learning benefits from the mentoring relationship. Hale (2000) suggests that in researching the benefits of mentoring, there is a need to identify the personal goals of mentors and mentees in order to consider which learning objectives are met. He claims that there is very little research on the connections between mentoring and learning.

Prior to this study, we conducted three other studies. The first study focused on the difference between initial perceptions of student teachers and cooperating teachers regarding the role of the cooperating teacher. For the purpose of analyzing the perceptions of the participants, we developed a coding system based on the orientations to teaching and teacher education described by Calderhead and Shorrock (1997). The orientation categories are academic, technical, practical, personal and critical (see Chapter 2 and Appendix A for a detailed description of these categories). It was found that more perceptions of student teachers than of cooperating teachers fell into the personal orientation category, whereas the perceptions of cooperating teachers fell predominantly into the technical and practical orientation categories. Both student teachers and cooperating teachers reported a high number of perceptions in the practical orientation category. Few perceptions were found in the academic and
critical orientation categories among the student teacher and cooperating teacher groups.

The second and third study focused on what student teachers perceive to learn from their cooperating teachers in the mentoring relationship. Perceptions of learning reported by student teachers in their journal entries were categorized according to the orientations to teaching and teacher education of Calderhead and Shorrock (1997) (see Chapter 3 and Appendix B for a detailed description of these categories). For the third study, an additional category system was developed for categorizing these reports of learning according to student teachers’ perceptions of whether the learning situation with which they were confronted served to support their own perceptions of teaching or rather to present them with a new way of thinking that served to challenge their perceptions of teaching (Daloz, 1986) (see Chapter 4 and Appendix C).

It was found in the second study that student teachers reported perceptions of learning in a wide variety of different kinds of knowledge and skills in all the orientation categories. This was in contrast to their initially limited perceptions of what they perceived to learn from their cooperating teachers in the first study. The first study showed that student teachers’ perceptions of learning from their cooperating teachers were especially limited in the academic and critical orientation categories. The wide range of learning outcomes found in the second study was unanticipated and appeared to evolve from the experiences student teachers underwent in the practicum program. The largest gap in perceptions was seen in the third study, namely in the student teachers’ report of relatively low support and high challenge in the personal orientation category. This reflected student teachers’ need for a more supportive relationship with their cooperating teachers for building confidence to explore their individual teaching styles.

Building on our previous studies of the participants of the mentoring relationship as groups, we now wanted to investigate individual cases of mentoring pairs. In this fourth study, we focus on the match and mismatch between perceptions of student teachers and cooperating teachers concerning the role of the cooperating teacher in the student teaching practicum and the reported perceptions of learning of individual student teachers as recorded in their pedagogical journals. We assumed that matched perceptions between student teachers and cooperating teachers would be related to a high degree of support in student teachers’ perceptions of learning, whereas
mismatched perceptions would be related to a high degree of challenge in their perceptions of learning.

The research question of this study is: how are matched and mismatched perceptions of student teachers and cooperating teachers related to differences in perceived learning opportunities by student teachers? We hope this study makes a contribution to a better understanding of the ways in which perceptions of participants of mentoring relationships interact to create different kinds of opportunities for learning to teach.

5.2. Match and mismatch in mentoring relationships

Although based on traditional craft apprenticeship schemes of the past, mentoring, as a modern term, has been seen as an informal teacher/student relationship. Eby et al. (2000) claim that, like all interpersonal relationships, mentoring is complex and dynamic and, therefore, often problematic.

The norm for creation of a mentoring relationship in many professions is when a novice seeks help from a more experienced person with whom he/she feels comfortable on an interpersonal level. Due to mutual attraction, a relationship of trust and support develops. Armstrong et al. (2002) report research findings that claim that informal mentoring relationships provide more career development and psychosocial functions than formal mentoring. In order to maximize the benefits for all parties involved, organizations have started to research how to provide the best match between protégés and mentors in formal mentoring schemes (Armstrong et al., 2002; Waters, 2004). Armstrong et al. cite opinions that forced pairing may violate the true spirit of mentoring, whose nature is a natural development among people of mutual attraction in an informal setting that cannot be “engineered” in formal programs. Hale (2000) also agrees that “engineering” relationships is extremely difficult and may be impossible. He defines a “good match” as one that leads to learning for both participants.

“Match” has come to mean similarity in specific factors that have been the focus of management research, such as gender, age, place in the hierarchy, culture and learning styles (Armstrong et al., 2002; Hale, 2000). According to this approach, members of mentoring relationships who hold similar views or who are similar in certain psychological personality characteristics would be expected to better understand the
needs of the other, be more open to giving and receiving feedback and be more flexible in making the attitudinal and behavioral adjustments that ensure the continuation of a stable relationship (Waters, 2004). In a sample of participants of executive development programs, Eby et al. (2000) found that dissimilar values, attitudes and beliefs between mentor and protégé was the most significant factor contributing to negative mentoring. The authors support their findings with empirical studies that found that as perceived or actual mentor-protégé similarity increases, so does the amount of mentoring received.

The research findings in business and management fields that attempt to identify personal characteristics that promote positive mentoring relationships between individuals have yielded some correlations. However, the correlations are not of high significance. The latest, and most promising, hypothesis is based on cognitive styles of individuals. Armstrong et al. (2002) found that intuitive and analytical thinking styles correlate with high levels of idea generation, mutual liking and perceived similarity for matched pairs of both styles. They explain the positive results of mentoring relationships between participants of matched pairs by the similarity in cognitive style that contributes to similarity in communication skills, modes of perception and strategies for problem solving.

Coward, Davis and Wichern (1978) found that high school students of field-independent and field-dependent cognitive styles perceived their “same style” teachers as possessing more characteristics of the “ideal” teacher. However, there was a small tendency for field-dependent students to prefer teacher traits in which they themselves were deficient, supporting a need for further exploration of an effective combination match. Field-dependent teachers were more positive about their field-dependent students than were field-independent teachers (Saracho, 1998). Lemos (1996) studied the match and mismatch between students’ and teachers’ learning goals in the classroom and concluded that students bring to the classroom a pattern of previously learned goals that are often mismatched with teachers’ goals. Similarly, in nursing, the potential of matching cognitive teaching styles of nurse educators to student nurses’ learning styles has been promoted (McMillan & Dwyer, 1990).

In the counseling profession, Putney, Worthington and McCullough (1992) found that interns in training sites perceived their supervisors as more effective dependent upon a match with their own theoretical styles that were either of a cognitive-behavioral orientation or a humanistic orientation.
In teacher education, some approaches to mentoring see the mentoring relationship as a natural development in which people choose to work together based on interpersonal relationships (Awaya et al., 2003; McNally, 1994), as well as on friendships that develop between student teacher and cooperating teacher (McNally, 1994). Hale (2000) calls this a laissez-faire approach that allows relationships to evolve on their own.

In contrast to the laissez-faire approach, the interventionist approach (Hale, 2000), in which forced pairing is used, describes the norm in most practicum programs for pre-service teachers. The rationale in the literature among proponents of forced pairing views the problematic nature of conflicts and tensions that arise between mentoring pairs who hold divergent beliefs as beneficial to learning.

Graham (1997), for example, writes of the philosophical differences between student teachers and cooperating teachers that compete against and complement each other. She believes these differences can be capitalized upon to help students achieve productive learning by viewing these tensions as sites of inquiry. She further believes that divisive philosophical differences and different tolerance levels for uncertainty are predictable and necessary for growth among teachers at all stages of development.

Tang (2003) also supports the idea of learning from dissonance, rather than from more comfortable relationships in which student teachers and cooperating teachers hold similar views. Cooperating teachers who challenge student teachers create the kind of learning experiences that present student teachers with the opportunities to productively engage in problem solving and reflection resulting in novel solutions.

Despite theoretical rationales in the literature, in reality, pairing in practicum programs in teacher education is usually based on the most convenient solution: random assignment of student teachers that one does not know well to cooperating teachers and to schools based on practical considerations, such as location of residence.

To date, there are no conclusive findings concerning the factors that promote the best match between mentoring pairs. As Garvey (1994) claims, similarity may contain both strengths and weaknesses: those who work well together and make fast progress may have a narrowing effect on each other that perpetuates their current view of the world.

Among Hale’s (2000) considerations for matching is the awareness that both support and challenge are needed over time in recognition of the potential danger that
too much similarity may lead to comfort. He also raises the consideration of whether
the mentor should serve as a role model, since the aim is not to reproduce copies of
particular mentor styles. He concludes that too much similarity of approach and
viewpoint may not promote learning.

Daloz’s (1986) classic formulation of mentoring relationships in higher education
directed our focus to the processes that come into play in how adult student learning
occurs. The unique interrelationship between support and challenge provided by the
mentor produces different opportunities for student teachers with different learning
outcomes. Support without challenge can create a comfortable learning context in
which little new is learned and the student teacher remains in an unchanged state of
stagnation. This kind of experience may be seen as either positive or negative by
individual student teachers. Student teachers may feel comfortable or in a state of
equilibrium that produces little motivation for change. Challenge without support
may result in experiences of frustration and negativity in which student teachers may
retreat from learning with disappointment or alienation. According to Daloz (1986),
the optimal situation for learning consists of supportive interpersonal relationships
that contain opportunities of challenge for student teachers to develop coping skills in
accordance with their evolving identities as individuals.

We hoped to gain some insight into what student teachers perceived to learn in
relationships with cooperating teachers of matched and mismatched perceptions of
their role as cooperating teachers.

5.3. Method

5.3.1. Setting and participants

This study uses data sets of the studies described in the previous chapters. From
the total sample of these studies, the data sets of 10 cooperating teachers and 20
second- and third-year student teachers were used for this study. The 10 cooperating
teachers were all English subject matter teachers from the Israeli school system and
the 20 second- and third-year student teachers were enrolled in the English
Department of an Israeli academic teachers college. Student teachers were randomly
placed in teaching pairs and assigned to cooperating teachers, thus yielding 20
mentoring pairs. In this student teaching model, cooperating teachers volunteer for
the mentoring role that consists of providing the students with one school day a week of observation, active participation as helpers in the classroom and one hour of student teaching over the duration of the academic year. Student pairs share the weekly teaching hour and experiment with different models of team teaching in order to arrive at a model that suits them best. In addition, cooperating teachers are required to meet with their student teachers and the teacher trainer of the college for purposes of planning and feedback.

An attempt was made to concentrate as many student teachers as possible in schools for the purpose of maximum collaboration and meeting time. Participating Professional Development Schools (PDS) included two mainstream elementary schools (3 teachers paired with 6 students), two mainstream junior highs (6 teachers paired with 12 students) and one elementary school of grades one to eight of a minority population in a geographically peripheral area (1 teacher paired with 2 students).

**5.3.2. Data sets used**

The data of the first study (Rajuan, Beijaard & Verloop, 2007; see also Chapter 2) consisted of cooperating teachers’ and student teachers’ perceptions concerning the role of the cooperating teacher in the student teaching practicum. Cooperating teachers’ and student teachers’ perceptions of this role were brought to awareness through a focus group technique and categorized according to the orientations to teaching and teacher education described by Calderhead and Shorrock (1997) that consisted of the academic, technical, practical, personal and critical orientation categories.

For coding the data according to these orientations, we went back and forth between the categories and the participants’ statements concerning their perceptions. As a result of this process, some categories were refined. The coding of the data by two independent raters resulted in an inter-rater reliability of 83% for the cooperating teachers’ list of perceptions and 81% for the student teachers’ list. The remaining perceptions were categorized on the basis of consensus between the two raters. Appendix A presents the final category system, including a description of the content areas and examples of participants’ perceptions of the role of the cooperating teacher.
The second study focused on what student teachers reported in their pedagogical journals about what they had learned from their cooperating teachers during the teaching practicum (see Chapter 3). The reported perceptions of learning were categorized again according to the orientations of Calderhead and Shorrock (1997), following a similar process of going back and forth between the categories and the data. The category descriptions that resulted from this process are shown in Appendix B. The data were coded independently by two raters. Cohen's Kappa for the inter-rater reliability of the final category system was 0.92.

An additional category system was developed for coding the student teachers’ perceptions of learning in terms of support and challenge in the third study (see Chapter 4). In line with the literature on support and challenge (Daloz, 1986), support refers to congruence with the student teachers’ perceptions of learning, whereas challenge refers to incongruence with the student teachers’ perceptions. The procedure for developing the category system was similar to that for the orientations. The data were coded independently again by two raters. Cohen’s Kappa for the inter-rater reliability of this category system was 0.78. Appendix C contains the final category system, including examples of support and challenge of reported perceptions of learning for each orientation category.

5.3.3. Determining match and mismatch in student teachers’ and cooperating teachers’ perceptions

In this study, we used the data of the prior studies to display the patterns that describe the perceptions of learning for each student teacher. Patterns consist of the combined analysis of the reported perceptions of learning according to the two coding systems used in the studies presented in chapters 3 and 4: the number of quotations in each orientation category together with the amount of support and challenge for each category (see also Appendices B and C).

A vertical analysis (Miles & Huberman, 1994) was carried out to determine the dominant orientation of each pattern: the orientation category containing the highest amount of support or challenge was designated as the dominant category. We then performed a comparative analysis between the dominant orientation category of each pattern and the initial perceptions of the role of the cooperating teacher (analyzed into orientation categories; see Chapter 2 and Appendix A) of the cooperating teacher-
student teacher pair, as well as a comparison with the perceptions of learning of the student teacher. Much overlap of same orientations between student teachers’ dominant orientation in perceptions of learning and cooperating teachers’ perceptions (both analyzed into orientation categories) was seen as matched, whereas very little or no overlap between student teachers’ dominant orientation to learning and cooperating teachers’ perceptions was seen as mismatched. The next step consisted of horizontal or cross-case analysis (Miles & Huberman, 1994) for grouping the patterns of the student teachers according to the highest degree of support or challenge. This resulted in three groups: patterns of high support (matched orientations), patterns of high challenge (mismatched orientations) and patterns of balanced support and challenge (mixed orientations).

5.4. Results

We found that matched perceptions between student teachers and cooperating teachers contained a high degree of support as perceived by the student teachers, whereas mismatched perceptions contained a high degree of challenge to student teachers’ perceptions. We also found a third pattern of perceptions that was neither matched nor mismatched, but mixed, in terms of support and challenge in a wide range of different kinds of teaching knowledge and skills of different orientations.

We present and illustrate each pattern in the following sections. A summary of the patterns is presented in Table 5.1 with the examples that were chosen for illustration in bold type.

Table 5.1. Patterns of student teacher perceptions according to proportion of support and challenge

<table>
<thead>
<tr>
<th>Student teacher</th>
<th>Support</th>
<th>Challenge</th>
<th>Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Malka</td>
<td>42.9 %</td>
<td>57.1%</td>
<td>Mixed</td>
</tr>
<tr>
<td>2. Shira</td>
<td>57.9%</td>
<td>42.1%</td>
<td>Mixed</td>
</tr>
<tr>
<td>3. Etti</td>
<td>88.9%</td>
<td>11.1%</td>
<td>Matched</td>
</tr>
<tr>
<td>4. Helen</td>
<td>41.2 %</td>
<td>58.8%</td>
<td>Mixed</td>
</tr>
<tr>
<td>5. Shosh</td>
<td>66.7%</td>
<td>33.3%</td>
<td>Mixed</td>
</tr>
<tr>
<td>6. Nina</td>
<td>82.6%</td>
<td>17.4%</td>
<td>Matched</td>
</tr>
<tr>
<td>7. Leora</td>
<td>50.0%</td>
<td>50.0%</td>
<td>Mixed</td>
</tr>
<tr>
<td>8. Anna</td>
<td>25.0%</td>
<td>75.0%</td>
<td>Mismatched</td>
</tr>
<tr>
<td>9. Tamar</td>
<td>88.2%</td>
<td>11.8%</td>
<td>Matched</td>
</tr>
<tr>
<td>10. Lital</td>
<td>25%</td>
<td>75%</td>
<td>Mismatched</td>
</tr>
<tr>
<td>11. Daniel</td>
<td>14.3%</td>
<td>85.7%</td>
<td>Mismatched</td>
</tr>
<tr>
<td>12. Rouda</td>
<td>75%</td>
<td>25%</td>
<td>Matched</td>
</tr>
</tbody>
</table>
The results show that the majority of mentoring pairs (10 cases out of the total 20) had a mixed degree of support and challenge in a wide range of different orientation categories. In these cases, the proportion of support to challenge was more closely balanced (between 33.3% and 67.7%) than in the other cases. The seven matched pairs contained a high degree of support (75% and more) in predominantly one or two orientation categories. The three mismatched pairs contained a high degree of challenge (75% and more) in predominantly one or two orientation categories. The summary of the patterns is presented in Table 5.2.

Table 5.2. Patterns of student teacher-cooperating teacher pairs according to degree of support/challenge (N=20)

<table>
<thead>
<tr>
<th></th>
<th>Matched Pairs (N=7 cases)</th>
<th>Mixed Pairs (N=10 cases)</th>
<th>Mismatched Pairs (N=3 cases)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Support</strong></td>
<td>High 75% and more</td>
<td>Average 33.3% to 67.7%</td>
<td>Low 25% and less</td>
</tr>
<tr>
<td><strong>Challenge</strong></td>
<td>Low 25% and less</td>
<td>Average 33.3% to 67.7%</td>
<td>High 75% and more</td>
</tr>
</tbody>
</table>

**5.4.1. Matched mentoring pairs of high support and low challenge**

Seven student teachers were found to be in the group of high support (75% and more) and low challenge (25% and less) in their orientations to teaching. In these cases, we found much similarity between the student teachers’ and the cooperating teachers’ initial perceptions of the mentor role.

Three student teachers from this group held a predominantly technical orientation that was matched to the dominant technical orientation of their cooperating teachers.

We present here one example of a student teacher from this group. In Table 5.3, we see that Nina reports support in 19 (82.6%) of her perceptions of learning to teach...
and challenge in 4 (17.4%) of her perceptions. This result of high support is based on the large number of reported perceptions of learning (9 out of 23) in the technical orientation category.

Table 5.3. Example of student teacher’s pattern of high support and low challenge

<table>
<thead>
<tr>
<th>Nina</th>
<th>Support</th>
<th>Challenge</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>4</td>
<td>23</td>
</tr>
</tbody>
</table>

An entry in Nina’s journal supports our analysis of her perceptions of learning in which her cooperating teacher reinforces her initial technical orientation:

*Although my metaphor has not changed, quite the opposite, it only got stronger; there are a few aspects that did change during this semester. Sharon, perhaps unconsciously to me, taught me a lot about how and when to provide certain scaffolding more efficiently. I learned from her “technical” things, which enables me to be a more helpful and useful mediator than before.* (Technical – support)

*Scaffolder* is used as one of the terms describing the helping role of the cooperating teacher in the research findings of Abell et al. (1995). They describe the role of the scaffolder as “the mentor’s knowledge of paths already mapped out to follow” and “paths or models already outlined in their heads” (p.182) that include predetermined ways of doing things and technical tips that can be passed on to the novice.

In her reported perceptions of learning, we feel that Nina has relinquished her initial desires (see Table 5.4 for Nina’s initial perceptions) as she reports situation after situation in which she successfully learns *technical things* suggested by her cooperating teacher. These include everything from how to use the blackboard to how to plan questions in advance. According to the advice of her cooperating teacher, Nina learns that there is no room for spontaneous discussion or questions that arise naturally in the classroom:

*I learned from her “technical” things, which enables me to be a more helpful and useful mediator than before. For example: there were times when I wanted the pupils*
to figure out by themselves what the main point of the lesson or the discussion was. I did not want to be the one who tells them. Therefore, asking them leading questions was a good technique. However, Sharon made it very clear that my good intentions were not enough. I needed to organize my thoughts ahead of time. The questions should be clear and I should also consider all kinds of possible answers and the ways of dealing with them. (Technical – challenge)

There is a feeling throughout that Nina is being taught to believe that control can be gained by the use of technical planning. The strict allotment of time for checking pupils’ homework reappeared throughout the year in Nina’s reports of learning and emerged as one of the major concerns of the cooperating teacher that was eventually adopted as a mantra by Nina:

At the beginning of the year, I was naturally only observing Sharon. I have noticed that she always divided the first 5-10 minutes of the lesson for checking pupils’ homework, no matter how short she was on time. During our conversations at the beginning of the year, she often mentioned that checking their homework at the beginning of every lesson is very important. Therefore, while planning my lessons plan, I always divide the time to check their homework, no matter how many things I plan to do with them. (Technical – support)

At the end of the year, Nina writes:

I am sure that in the future there will be situations when time will not be on my side. I am also positive that sometimes it would look very tempting to skip that part of the lesson, however, I hope that Sharon’s “mantra” will keep influencing me even then. (Technical – support)

Another example concerns an academic method for teaching reading in a foreign language. It is not the purpose here to assess the merits of this reading approach, but rather to illustrate that any approach can be presented in a highly technical manner and be seen by the student teacher as the only right way of doing things. Nina’s initial questioning of the merits of this method gives way to complete agreement under the influence of her cooperating teacher:

Last semester I observed one of Sharon’s lessons in the 8th grade. She had mentioned before that this class is considered rather weak. However, I noticed that she practiced what I am about to mention with her other classes as well, no matter what their English level was. Sharon read a certain text (a story) from the book and the pupils were supposed to follow her reading. While reading, she often made sure that the pupils were following her by asking questions about certain words or about the general meaning of some paragraphs. I remember sitting there and wondering whether she chose the right method. For some reason, I was sure that providing
pupils with as many opportunities as possible to practice their reading skills is the most important thing. When I talked with Sharon about it, she told me something that really influenced my personal point of view. She told me that reading a text for the first time without earlier preparation would achieve exactly the opposite. Most of the pupils would not be able to read it fluently. Therefore, they might lose their self-confidence and she will definitely lose precious time of the lesson. After our conversation, I realized that when one of the pupils reads, the rest of the class would probably lose interest as well as patience and, eventually, would stop following the reader. After all, it is hard to find poor reading appealing. (Academic – support).

The approach to reading suggested by the cooperating teacher is perceived by the student teacher as the preferable way regardless of individual pupil’s levels and abilities (practiced... with her other classes as well, no matter what their English level was), a means of time management (she will definitely lose precious time of the lesson) and indicative of the cooperating teacher’s low expectations for the success of her pupils (Most of the pupils would not be able to read it fluently. Therefore, they might lose their self-confidence). The focus is predominantly on technical routines for class management in which pupils in the class are seen as a homogenous group that are expected to achieve defined goals.

In Table 5.4, we present Nina’s initial list of perceptions concerning the role of the cooperating teacher.

Table 5.4. Example of student teacher’s list of initial perceptions according to orientation categories

<table>
<thead>
<tr>
<th>Nina</th>
<th>Academic</th>
<th>Practical</th>
<th>Technical</th>
<th>Personal</th>
<th>Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Nina’s initial perceptions are divided between technical and personal concerns. However, it appears that the personal concerns are related to Nina’s desire that her cooperating teacher be more flexible and open to her ideas. This, together with the reported perceptions of learning, leads us to believe that the cooperating teacher’s style is predominantly technical. Table 5.5 contains the list of initial perceptions of the role of the cooperating teacher of Sharon, Nina’s cooperating teacher.
Table 5.5. Example of cooperating teacher’s list of initial perceptions according to orientation categories

<table>
<thead>
<tr>
<th>Sharon</th>
<th>Academic</th>
<th>Practical</th>
<th>Technical</th>
<th>Personal</th>
<th>Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Spend more time with the students</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The students have to observe throughout the whole year</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The students have to apply what they have learned and learn from mistakes</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>4. Contact between the cooperating teacher and teacher trainer to discuss the students: their needs and problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

The cooperating teacher's perceptions of the role of the cooperating teacher, as articulated in the list, focus mainly on organization of time frames in which student teachers observe and meetings take place. Student teachers are expected to change their behaviors to the right way of doing things as a result of learning from mistakes. There is an assumption here that there is a right and a wrong way of doing things and that mistakes can be objectively known. There is no attention to the content of meetings, personal relations or pupils and their learning in context. For these reasons, the cooperating teacher’s orientation is seen as predominantly technical.

In this example, we can see high support in the technical orientation category in congruence with the student teacher’s initial perceptions that were divided equally between the technical and the personal orientations and the cooperating teacher’s perceptions of her role as predominantly technical. Although Nina opened up to new perceptions of learning in all of the orientations, she attained minimum growth in that the dominant orientation remained the technical one. We relate this to the congruence between the student teacher’s and the cooperating teacher’s initial match in orientation that served to reinforce each other.

This pattern illustrates the limitations of retention of the initial orientation and the relinquishing of new ideas and ways of teaching of the student teacher in conformity with the orientation of the cooperating teacher.

5.4.2. Mismatched mentoring pairs of high challenge and low support

Only 3 student teachers were found to be in the group of high challenge (75% and more) and low support (25% and less) in their initial orientations to teaching. All of the 3 student teachers’ predominant orientation was personal, with a mismatch with
their cooperating teachers, whose initial orientations included only a few perceptions of their role in the personal realm. Lee (2005) found that student teachers on the whole perceive a more personal relationship with the pupils they teach than do their cooperating teachers. He views this finding as a sign of retention of optimism and idealism among student teachers.

Daniel is an example of a student teacher whose pattern of perceptions of learning describes a situation of extreme challenge (18 perceptions; 85.7%) and little support (3 perceptions; 14.3%), as seen in Table 5.6.

Table 5.6. Example of student teacher’s pattern of high challenge and low support

<table>
<thead>
<tr>
<th>Daniel</th>
<th>Support</th>
<th>Challenge</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Academic</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Practical</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Technical</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Personal</td>
<td>6</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Critical</td>
<td>4</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>18</td>
<td>21</td>
</tr>
</tbody>
</table>

Daniel, who initially had few perceptions of learning in the personal orientation, grew increasingly unhappy with the relationship he observed between his cooperating teacher and the pupils in the classroom:

*She prefers to keep teacher-pupil relationship open in front of the whole class. More than once, she seemed to have embarrassed a pupil in front of the class, and, moreover, hinted at private matters. It is one matter to set a certain incident as an example for all. It is another thing to humiliate a pupil, especially in front of the class. But things are never simply black or white, and an inexperienced student can be wrong.* (Personal – challenge)

Daniel feels he is left with no alternative. Even if he is wrong about controlling the class by embarrassing pupils, he has not learned another way of doing it. For him, the student teaching experience continues in the same way throughout the year:

*One day while she substituted a class she never taught before; she got in, yelled, threatened. The first kid who had the nerve to talk back pleased her so; for then she was able to show the class how threatening she is. The class was quiet, the kids were afraid, and I was left to continue the lesson, while she went to give grades. This is a sample of how the year went by. And needless to say, what happened after she left. I do not yell, I do not wish to threaten kids until they cannot look into my eyes. All that is left is to wonder, if there is any other way.* (Personal – challenge)
Again, Daniel is left with no alternative to the approach of his cooperating teacher that challenges his perceptions of learning in the personal orientation.

In addition, Daniel’s criticism of his cooperating teacher’s academic authority also reflects a disagreement with the personal characteristic of being *always right*.

Things I’ve learnt from my cooperative teacher are firstly to be always right, and not to admit you are wrong. Even when having a class discussion about their test, and a group of pupils was wondering why their answer was wrong, she would not accept their supported argument, giving no reason why theirs is wrong. (Academic – challenge)

Daniel comes to understand that his cooperating teacher is an influential person in the system whose agenda is investment in the pupils whose achievements will qualify them for entrance into the high school. Daniel is one of the few student teachers who perceives the bigger picture beyond the immediate classroom in his insight into the academic goals of his cooperating teacher as representative of the school system:

*Nira is an excellent teacher perhaps in the matter of teaching a language in one or two ways. She does not believe in most of the others, because her ways work for most pupils, and the rest... maybe won’t continue to high school.* (Critical – challenge)

The incongruence between Daniel’s values and the inequality of the system as represented by his cooperating teacher’s attitude toward the weak pupils contributes to Daniel’s frustration and unwillingness to compromise.

Looking at Daniel’s initial perceptions in Table 5.7, we see that although he didn’t initially emphasize the personal orientation, the extreme lack of a personal orientation that he observed in the behavior of his cooperating teacher (see Table 5.8) influenced him to place more emphasis on the personal orientation as his fieldwork experiences progressed.

<table>
<thead>
<tr>
<th>Daniel</th>
<th>Academic</th>
<th>Practical</th>
<th>Technical</th>
<th>Personal</th>
<th>Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Guide the students’ intentions and abilities to a higher/better level</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Share reflections on our and her teaching</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>3. Check usefulness (effectiveness) from observations (feedback)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Meetings with pupils and talks with</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
Daniel’s cooperating teacher, Nira, lists many perceptions in the practical orientation category and some in the technical orientation category, as can be seen in Table 5.8. There are no perceptions of her role in the personal orientation category.

Table 5.8. Example of cooperating teacher’s list of initial perceptions according to orientation categories

<table>
<thead>
<tr>
<th>Nira</th>
<th>Academic</th>
<th>Practical</th>
<th>Technical</th>
<th>Personal</th>
<th>Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. First of all, to plan, observe and comment on everything</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. To do again what the teacher trainer does</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. All of the planning and carrying out of the lesson should be done together</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. The way they spoke, moved, body language, etc.</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. To help to develop relationships with the children on a daily basis while teaching</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. To give tools to come to class with</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>7. The teacher should spend as many hours as she can with the students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>8. The student can see us not as a model, but in the ways of coping with everyday problems</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Discussing with the students how to help each pupil</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. To help the student become part of the teacher’s teaching and work so that students will become an active part in the teacher’s work and not passive observers</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Discussing everything with the students</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In summary, lack of support for Daniel’s personal orientation, as reflected in the lack of a personal relationship between the cooperating teacher, Daniel, and the pupils in the classroom, influenced Daniel’s perceptions and finally resulted in critical reflection on the agenda of the education system. Daniel’s personal frustration and friction with the school culture is seen in his pattern of perceptions of learning. It highlights the conflict between the personal expectation to reach each child and the academic agenda of the school to promote the best pupils. We believe that a high degree of challenge and little support for his teaching orientation contributed significantly to Daniel’s decision not to continue his student teaching the following year.
5.4.3. Mixed mentoring pairs of balanced support and challenge

The 10 remaining student teachers of our sample (50% of the total sample) presented learning patterns that were more widely distributed over the range of different kinds of teaching knowledge and skills and could not be classified into the matched or mismatched groups. We grouped them together on the basis of their balanced proportion of support and challenge (between 33.3% and 67.7%). For these student teachers, we could not determine a dominant orientation since they had reported initial perceptions of the role of the cooperating teacher spread over the range of the orientation categories. Further, there was some overlap with the orientations of their cooperating teachers, but no orientation appeared dominant among these cooperating teachers. We concluded that these mentoring pairs shared an average degree of match and mismatch in their initial perceptions that resulted in learning patterns of a wide range of items in the different orientation categories. For each orientation category, there was a degree of support and challenge that tended to cluster around 50%. We present one case of a student teacher and a cooperating teacher in the mixed group whose orientations and resulting learning patterns are composed of a mixture of orientations with various degrees of support and challenge in each category.

Leora begins with a metaphor of *combining everything* that reflects her learning pattern and explains how this takes shape in practice:

*I see myself as a conductor who tries to contribute wonderful music by combining all the pupils to be a part of the lesson, to participate and to feel comfortable to do so. My experience of teaching made me think that, as a teacher, I need to combine everything. The pupils are very different from one another and have different styles of learning.* (Practical – support)

*I need to be flexible in my teaching and in my personality when I address pupils. I need to know when to be tough with a pupil and when to understand him. I think that in some ways my cooperating teacher did contribute to this thinking. Each lesson that we taught she had remarks about something else.* (Personal – support)

*For example: It was about different ways to ask the pupils questions and different ways to make a worksheet with different aspects and levels. A lot of things we have to take into consideration when we teach.* (Technical – support)

*Dafna talked with us several times about different problems these pupils have and*
that she has to consider them when she asks them things. She knows when to be warm and gentle like a parent and when to be a policewoman and to play tough. I guess I changed my metaphor because a teacher needs a lot of things to deal with and can do it by being a lot of things together at the same time. (Personal – challenge)

Leora’s learning pattern in Table 5.9 shows a range of orientation categories and the balanced degrees of support and challenge in the academic, practical and technical categories. In congruence with the general results for this group of student teachers as a whole, Leora is most challenged by the personal orientation category, showing that she also desires a closer relationship with the pupils she teaches.

Table 5.9. Example of student teacher’s pattern of balanced degrees of support and challenge

<table>
<thead>
<tr>
<th>Leora</th>
<th>Support</th>
<th>Challenge</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>N</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Academic</td>
<td>7</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Practical</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Technical</td>
<td>4</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Personal</td>
<td>2</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Critical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
</tbody>
</table>

In addition, Leora’s journal illustrates that the main area of challenge for her was a personal incident with the cooperating teacher that triggered reflection on her position as a student teacher in relation to her cooperating teacher, as well as her place in the school system:

In the student teaching week, we needed to teach 8th grade. We never observed that class before, but we knew that it’s a difficult class because Dafna mentioned it. Dafna told us what she wants us to teach in every class and in that particular class, she wanted us to do a jigsaw exercise. We didn’t know how they would work in groups and how they would behave with us, but we agreed to do it because Dafna requested it. We didn’t question it and it wasn’t a good lesson. The students were very noisy when doing the exercise and I felt that we didn’t teach them anything. (Practical – challenge)

Undergoing an experience of failure in a supportive environment presented Leora with an opportunity to turn the failure into a site for inquiry and learning:

I have learned from this incident that not asking more questions and not telling the cooperating teacher what our feelings and fears about doing this exercise in that class are caused us problems in teaching. (Personal – challenge)
The experience also promoted the development of coping skills:

*I have learned that we need to have different activities with us in case what we planned doesn’t work.* (Technical – challenge)

*That incident is useful in our future relationship with the cooperating teacher: To be honest and open with her about what we feel and think,...* (Personal - challenge)

*...ask her more questions about what exactly we are teaching and how we can do it, ask for help in planning our lesson plans in order for us to have varied ideas and knowledge of what is good and what’s not.* (Technical – challenge)

*Educational: we taught the jigsaw like we learned in pedagogy class. We should have taken into consideration the discipline problems and prepared an alternative activity.* (Practical – challenge)

Leora strives for empowerment and *voice* in her future relationships with teachers in the school system.

*Personally, I think we should have had a conversation with the cooperating teacher and not only listen to her. The social interaction with our cooperating teacher should be more open. We should ask questions even if we think they will sound stupid to her. Moral: our dilemma was whether to use group work in that class and we should have been more honest about our fears.* (Personal – challenge)

The personal incident serves as a trigger for technical, practical and academic considerations. We can see that Leora’s attitude is one of questioning and thoughts about the future, rather than dwelling on the specific failure in the present. She takes responsibility for questioning her cooperating teacher and comes to the realization that she should not always blindly do what she is asked.

Looking at Leora’s initial perceptions of the role of the cooperating teacher in Table 5.10, we find that she has expressed perceptions in the practical, technical and personal orientation categories, but that the personal orientation is the most important to her.

**Table 5.10. Example of student teacher’s list of initial perceptions according to orientation categories**

<table>
<thead>
<tr>
<th>Leora</th>
<th>Academic</th>
<th>Practical</th>
<th>Technical</th>
<th>Personal</th>
<th>Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Supportive</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2. Open-minded</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
3. To give us ideas that can help  X
4. Guide us  X
5. To be friendly  X
6. To keep us posted about the students and the school  X

When comparing Leora’s initial perceptions to those of her cooperating teacher, we find that Dafna also has initial perceptions of her role in the personal orientation category, but that her perceptions of her role cover the full range of the orientation categories (see Table 5.11).

Table 5.11. Example of cooperating teacher’s list of initial perceptions according to orientation categories

<table>
<thead>
<tr>
<th>Dafna</th>
<th>Academic</th>
<th>Practical</th>
<th>Technical</th>
<th>Personal</th>
<th>Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Encourage the student</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2. Support the student</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>3. Guide and assist in lesson planning</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Reflect on the student's work through explanations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>5. Build up new ideas and general subjects in new lesson plans</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Discuss behavior problems of pupils in class</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>7. “Tip” the students with ways to attain class management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Leora’s learning pattern includes a wider range of orientations than her initial perceptions which are in accordance with the wide range of orientations of her cooperating teacher. This may be due to the overlap in the personal orientation that provided Leora with adequate support to open up to new learning possibilities offered by her cooperating teacher.

5.5. Conclusions and discussion

The research question focused on the relationship between the initial perceptions of the participants concerning the role of the cooperating teacher and the subsequent perceptions of learning of the student teachers. Through the development of a research method to describe the relationships between initial perceptions and subsequent perceptions of learning, we found that the interrelationship between initial perceptions of student teachers and cooperating teachers was a relevant factor in the
development of different opportunities for learning to teach in the mentoring relationships of our study. Three kinds of mentoring relationships emerged according to the match and mismatch in the perceptions of the participants.

In the group that included the majority of mentoring pairs in our sample, student teachers and cooperating teachers were neither matched nor mismatched in their initial perceptions of the role of the cooperating teacher, but held both same and different perceptions. The learning patterns of the student teachers in this group contained mixed combinations of support and challenge in each one of the teaching orientations. This means that the majority of student teachers were at the same time supported and challenged in a wide range of different kinds of knowledge and skills necessary for learning to teach to which they were exposed in relationship with their cooperating teachers. According to the wide range of different teaching orientations and to the quality of the reports of student teachers in this group, we concluded that the mixed pattern provided student teachers with the most beneficial opportunities for learning to teach.

The next most frequent pattern found in our sample was that of matched pairs that were limited in range to one or two teaching orientations. The technical orientation was dominant in many of the learning patterns of this group and was highly in agreement with the initial perceptions of both student teachers and cooperating teachers. This pattern presented a limited range of learning possibilities.

Student teachers of the small group of mismatched pairs also reported many perceptions of learning that were limited to one or two teaching orientations that strongly challenged their perceptions of teaching. Predominant among the orientations of these learning patterns was the personal orientation that was mismatched with the perceptions of the cooperating teachers. The case described in this chapter presented evidence of dysfunctional mentoring relationships leading to extreme challenge to student teachers.

In summary, the findings of this study show that extreme match and mismatch in perceptions that are confined to one or two orientations to teaching contribute to limited opportunities for learning to teach. The limited perceptions of the cooperating teachers of the matched and mismatched groups concerning their role as cooperating teachers is in accordance with the findings of Hebert and Worthy (2001). They claim that one of the problems that emerged in the review of the research literature on mentoring programs was that mentors held limited views concerning their roles and
responsibilities. Abell et al. (1995) claim that the multidimensional role of mentors contributes to the success of the mentoring experience. Similarly, Armstrong et al. (2002) found that the more functions the mentor performs, the more beneficial the relationship.

Both matched and mismatched pairs provided limited opportunities for learning to teach for different reasons: the former was due to an extreme amount of compromise and conformity, the latter was due to an extreme amount of confrontation and irresolvable conflict.

We can see the result of matched pairs in our sample as a possible explanation for the reason that forced pairing sustains itself over the duration of the school year. It might be that mentoring relationships develop in the direction of emphasis on similarities and resolution of differences in teaching orientations in an attempt to create a supportive and comfortable mentoring relationship. It appears that participants of mentoring relationships prefer a learning environment of little conflict and challenge. In agreement with Tang (2003) and Hale (2000), we fear that an extremely high amount of support may lead to stagnation and entrenchment in previously held beliefs for student teachers. Student teachers, rather than cooperating teachers, undergo a greater process of compromise due to the inherent power relations and to their place in the hierarchy. They may try to match the perceptions of the cooperating teachers in order to survive in the classroom in the beginning stage of student teaching. Conformity to the perceptions of the cooperating teacher, resulting in passive socialization into teaching, is one of the dangers formulated in the functionalist approach to teacher socialization by Zeichner and Gore (1990).

Mismatched pairs, on the other hand, may create situations of insurmountable confrontation between the student teachers’ perceptions and those of the cooperating teacher. Entrenchment in previously held beliefs in confrontation with a conflicting reality in the school may result in culture shock (Shkedi & Laron, 2004) among novices who must either relinquish their idealism or leave the system in the absence of adequate support by their cooperating teachers.

In our study, student teachers of mixed pairs were exposed to a wider range of diverse kinds of teaching knowledge and skills of different orientations and perceived balanced amounts of support and challenge (Daloz, 1986; Tang, 2003) that offered sites of inquiry and exploration. Mixed mentoring relationships provided opportunities of openness in which novices could more easily develop their own
teaching orientations. This situation led to greater flexibility of thought and less preconceived beliefs concerning ways of behaving in the classroom.

Our results point in the direction of the interventionist approach (Hale, 2000) of forced pairing in which the best match between mentor and novice would include same and different kinds of perceptions concerning the role of the cooperating teacher and a wide range of different kinds of knowledge and skills that are seen as necessary for learning to teach. Random forced pairing in our sample produced only fifty percent of relationships that were seen as beneficial. In light of practical considerations in which groups of student teachers must be placed with cooperating teachers before teacher educators become acquainted with them, forced random pairing can serve to prevent situations in which friendships of similarly oriented individuals are chosen as mentoring pairs by participants. In regard to the developing relationships, we recommend that they be carefully monitored for signs of extreme match or mismatch in orientations to teaching. We propose supervision of mentoring relationships as a possible remedy for highly matched and mismatched mentoring pairs. Exposure to a framework of differing orientations such as the one presented here can serve to guide cooperating teachers in their role as mentors and expose student teachers to a wide range of knowledge and skills in accordance with the goals of the training institution.

Although some kind of forced pairing that is not random could serve to increase the possibility of creating a larger number of mixed pairs, we do not believe that there is an ideal formula for matching of individuals. In accordance with our results, we view the theoretical formulations of match and mismatch based on similarity of orientations to teaching (Armstrong et al., 2002; Hale, 2000) as too dichotomous to encompass the wide range of individual characteristics of participants of mentoring relationships. Further, we believe that no one factor contributes exclusively to the formulation of the relationship between match and mismatch. We believe the relation between match and mismatch of mentoring pairs should be seen on a graded continuum of a variety of dynamic factors. The method developed in this study for the analysis of perceptions of learning that describes perceptions of student teachers across the range of different orientations, as well as in depth according to the assessment of the student teacher, suggests an initial step in the direction of a framework for supervision of mentoring relationships.
We recommend providing participants of mentoring relationships with opportunities for developing greater awareness and articulation of their perceptions for their work together in open, supportive and nonjudgmental contexts. We also recommend bringing the different orientation categories to the awareness of participants in order to encourage a more multi-dimensional perspective concerning the role of the cooperating teacher.

Student teachers often relinquish exploration of individual teaching styles in order to create mentoring relationships of comfort and agreement. We recommend increasing the awareness of this phenomenon among cooperating teachers in our supervision with them. Focus on the technical orientation during the survival stage may be a necessary condition for immediate class management, but we want to encourage our student teachers to focus on concerns for future learning as well. We also want to encourage the cooperating teachers to support the student teachers in their beginning efforts to explore and develop their own teaching orientations.

Awareness of different orientations to teaching is preferable for student teachers not only for reflective teaching in changing classroom situations, but also for preparation for teaching in diversified socio-economic and multicultural contexts that are becoming increasingly more prevalent in the Israeli school system, as in most places in the world today. Mixed pairing promotes a dialectically interpretive approach (Zeichner & Gore, 1990) to the formulation of a personal orientation to teaching that should be seen as a goal of teacher education.

Mismatched pairing may produce mentoring relationships that are in need of intensive attention and supervision by the teacher trainer in charge. Student teachers must be supported in their personal and idealistic orientations to teaching (Day, Elliot & Kington, 2005; Shkedi & Laron, 2004) by receiving help in integrating their initial perceptions with the reality of the school system through a dialectic or interpretive approach (Zeichner & Gore, 1990).

Garvey (1994) suggests using individual profiles of learning styles to negotiate relationships between mentors and protégés. The student teacher patterns of perceptions of learning, as developed in this study, appears to be an effective instrument for giving feedback to student teachers, information to cooperating teachers and a tool of assessment for teacher trainers concerning the impact of the mentoring relationship on what student teachers perceive to learn.
Congruity between internal perceptions of individuals and the external reality of the teaching world will affect what student teachers perceive to learn. Student teachers who aspire to something that they cannot attain may have greater problems in the mentoring relationship than those who achieve some reasonable match. Initial perceptions and orientations to teaching appear to be contributing factors in determining how individuals will manage in student teaching. We suggest further research on additional factors that may contribute to matching that promote beneficial learning opportunities in mentor relationships. In addition to the perceptions of student teachers and cooperating teachers, we recommend further research on the implicit and explicit perceptions of teacher trainers and of the training institution.
6. General discussion

6.1. Conclusions

In light of the increased time spent in practicum experiences in the schools in teacher education programs, the question of what and how student teachers actually learn from their cooperating teachers has gained greater significance (Farrel, 2003; McNally et al., 1994; Tang, 2003). There is little research on the connections between mentoring relationships and specific outcomes of student teacher learning (McNally et al., 1997). Moreover, different formulations of “good mentoring” (Feinam-Nemser, 1998; Rowley, 1999; Zeichner, 1995) by educators and researchers are often disconnected from what actually takes place in the field among participants of mentoring relationships. In addition, theoretical formulations of learning are often disconnected from what student teachers perceive or are able to articulate.

The studies presented in this research project attempted to describe the interrelated processes that student teachers undergo in the formation of the teaching self in mentoring relationships from the perspective of the participants themselves. The studies focused on answering four main questions:

a. What are the perceptions of student teachers and cooperating teachers concerning the role of the cooperating teacher?
b. What kinds of knowledge and skills do student teachers perceive to learn from their cooperating teachers?
c. What kinds of knowledge and skills are perceived by student teachers as triggers of support and challenge to their perceptions of learning to teach?
d. How are matched and mismatched perceptions of student teachers and cooperating teachers related to differences in perceived learning opportunities by student teachers?

We chose the theoretical formulation of teaching orientations of Calderhead and Shorrock (1997) as a beneficial model for teacher education in order to describe the different role orientations of cooperating teachers, as well as the different content areas of knowledge and skills necessary for student teachers. The nonhierarchical formulation of orientations to teaching and teacher education of Calderhead and Shorrock (1997) that complete and supplement each other include the academic,
technical, practical, personal and critical orientations to teaching and teacher education.

Our first study, concerning the initial perceptions of the mentor role of the cooperating teacher from the perspective of student teachers and cooperating teachers, found that both groups shared similar perceptions of the mentor role in the practical orientation category. Our participants perceived the process of learning to teach as a practical endeavor, as claimed by Calderhead and Shorrock (1997). Cooperating teachers were busy with the ongoing responsibilities to the pupils in their classroom, whereas student teachers were eager to engage in the “hands on” experiences for which their training had prepared them (McNally et al., 1997). The technical orientation to teaching was also found to be common to both groups. However, the student teachers of our study perceived technical tips and strategies to be less important than did the cooperating teachers. They also perceived the technical orientation as less important than the practical orientation, whereas the cooperating teachers viewed these two orientations as equally important.

Dissimilar perceptions were found predominantly in the personal orientation category with student teachers desiring a more personal relationship with their cooperating teachers and stronger support to explore their own teaching styles in the classroom. Student teachers were dissatisfied with the limited amount of time cooperating teachers allotted them and with the reluctance of cooperating teachers to relinquish control of the classroom to them. The statements of the cooperating teachers exposed underlying reasons for what appeared to the student teachers as neglect. Dual loyalties to the pupils in the classroom and to the student teachers emerged as dilemmas with which cooperating teachers had to cope in their ongoing roles as classroom teachers, in addition to their roles as cooperating teachers.

We found that both the cooperating teachers and the student teachers of our sample lacked perceptions of the mentor role in the academic and the critical orientation categories. The academic orientation was perceived by the participants as the domain of the training institution and not related to the role of the mentor in the schools. Williams and Soares (2000) reported similar findings in their research. The critical orientation was seen by the participants as beyond the confines of their everyday roles in the classroom (Clarke & Jarvis-Selinger, 2005; Richardson, 1997; Robinson, 1994; Segall, 2002).
Based on the findings of the first study, we concluded that our student teachers and cooperating teachers shared perceptions of a practical and technical orientation to teaching, with cooperating teachers placing more emphasis on perceptions of a technical orientation than student teachers. Student teachers differed from cooperating teachers in their greater perceptions of relationships based on a personal orientation. In comparison to the theoretical model concerning the full range of teaching orientations of Calderhead and Shorrock (1997), the initial perceptions of both student teachers and cooperating teachers were found to be very limited in the academic and critical orientations.

Our second study sought to answer the question of what student teachers actually perceive to learn from their cooperating teachers. Student teachers of our study reported the largest number of perceptions of learning in the personal orientation category, thereby providing evidence for their dominant concern with their own personal transition from the role of student to the role of teacher, as well as the important place which personal relationships with their cooperating teachers assumes in this process. However, we found that student teachers’ perceptions of what they learn also cover the full range of content areas of the other teaching orientations, as formulated by Calderhead and Shorrock (1997). We attributed this unanticipated result to the time spent in the schools in which student teachers were exposed to a wide variety of experiences for which they sought solutions in new kinds of knowledge and skills. We concluded that student teachers in the initial stage of student teaching report perceptions of learning that reflect not only personal relationships and technical means of survival, but also a wider range of perceptions of learning of a practical, academic and critical nature that emerge spontaneously in practicum experiences. We present these results as support for increased time spent in the schools in teacher education programs.

In the third study, we wanted to answer the related question concerning how these reported perceptions of learning served as triggers for support and challenge to student teachers’ own perceptions. For this purpose, we further analyzed their perceptions of learning according to the assessment of the student teachers as congruent or incongruent with their own perceptions of learning. We based our category system on the concepts of Daloz (1986): perceptions of learning that were congruent with student teachers perceptions were categorized as support, whereas perceptions of learning that were incongruent with student teachers’ perceptions were
categorized as challenge. Concerning the question of how student teachers assess the learning that they report, we found that the majority of student teachers reported a relative balance between support and challenge in their perceptions of learning in all of the orientation categories. The concepts of support and challenge that emerged from the student teachers’ reports encompassed a wider range of cognitive, as well as emotional, content areas than the original theoretical concepts. The perceptions of learning that expressed support of the student teachers the most were found in the personal orientation category, reflecting emotionally supportive personal relationships with the cooperating teachers. However, in relationships in which personal support failed to develop, alternative sources of cognitive support (Elliot, 1995) were identified in the technical, practical and academic orientation categories. These cognitive sources of support compensated for the lack of emotional support and provided evidence for a greater diversity of mentoring opportunities conducive to learning. Furthermore, the prevalence of opportunities of adequate support in the mentoring relationship allowed for student teachers to cope with much challenge as reported by them in the critical orientation category. Student teachers reported an idealistic view of teaching (Shkedi & Laron, 2004) in their perceptions of learning and were highly challenged by critical situations that they encountered in the classroom in interaction with their cooperating teachers.

We concluded that student teachers in the initial stage of student teaching are not only concerned with support in personal relationships and in technical means of survival, but also with a wide range of challenges to their perceptions of learning to teach, many of which conflict with what they perceive their cooperating teachers to be doing. This tension between the need to succeed in class management and the need to narrow the gap between their own, often idealistic, perceptions and what they encounter in learning situations with the cooperating teachers characterizes the student teachers of this study.

Our fourth study attempted to better understand how matched and mismatched perceptions of student teachers and cooperating teachers provided student teachers with different kinds of learning opportunities. For this purpose, we combined the data from the previous studies to describe individual patterns of learning for each student teacher according to the degree of support and challenge reported in the different orientations. The results were in agreement with our initial assumptions, based on previous research (Daloz, 1986; Hale, 2000; Tang, 2003). We found that the learning
patterns with the highest degree of support were connected to matched perceptions between the student teachers and the cooperating teachers, whereas the learning patterns with the highest degree of challenge were connected to mismatched perceptions between the student teachers and the cooperating teachers. We viewed the matched pattern as providing opportunities that promote the status quo of student teachers’ perceptions with limited opportunity for new learning (Daloz, 1986; Tang, 2003). We viewed the mismatched pattern as conducive to mentoring relationships that contained the potential for undermining the confidence of the student teachers resulting in possible alienation and retreat from learning (Daloz, 1986; Tang, 2003).

A third pattern emerged from our data that did not fall into either of these groups. The remaining learning patterns, that contained a relatively balanced proportion of support and challenge, were connected to mixed perceptions among student teachers and cooperating teachers. Upon investigation of the descriptions of these patterns, we found that the mixed pattern provides beneficial opportunities for learning to teach within mentoring relationships of adequate support combined with opportunities for challenge in a wide range of orientation categories.

Based on the findings of the fourth study, we concluded that mentoring relationships must be monitored for a balance between support and challenge in a combination of teaching orientations that are partially shared by student teacher and cooperating teacher pairs in order to provide student teachers with beneficial learning opportunities.

6.2. Discussion

Our choice of Calderhead and Shorrock’s (1997) model of orientations to teaching and teacher education allowed us to identify a wide range of knowledge and skills, as well as different kinds of support and challenge, in the perceptions of learning reported by the student teachers. Although we had to adapt the model to our data in an iterative process of repeated comparison between the theoretical formulation and the quotations of the participants, we feel that this model provides a framework for teacher preparation that connects between the goals of the training program and the learning experiences of the participants of mentoring relationships. Another advantage of the model is that it served as an all-inclusive framework for identifying both perceptions of the mentor role, as well as perceptions of learning. In addition,
the theoretical framework directed our attention to categories that would have been overlooked had we analyzed the data solely according to categories that emerged from the data obtained from the participants. Limited awareness of a wide range of knowledge and skills necessary for learning to teach on the part of cooperating teachers is partly due to the difficulty of articulation by practitioners and partly to the practical nature of teaching in which different kinds of orientations to teaching are embedded in practical classroom situations. Further, the nonhierarchical nature of the framework allowed us to categorize the different kinds of learning outcomes as equally significant and to identify the various kinds of complementary knowledge and skills necessary for learning to teach. Through the use of this framework, a wide range of situations that presented student teachers with support and challenge were identified. This led to a reformulation of the concepts of support and challenge to encompass a wider range of emotional and cognitive triggers for learning in mentoring relationships.

We focus our discussion on suggestions for the implementation of the findings in supervision with participants of teacher education programs with the purpose of providing enhanced learning opportunities for student teachers in their transition from student to teacher roles.

We believe that in the initial stage of the mentoring relationship, similar perceptions concerning the role of the cooperating teacher between participants should be identified and brought to awareness. Our study shows that common concerns for practical and technical knowledge and skills necessary for teaching can be promoted as an initial goal for all participants on which to base mentoring relationships in the beginning stage of survival in student teaching.

We are encouraged by the finding that although similar perceptions were reported in the technical orientation, student teachers expressed less need for technical tips and strategies than cooperating teachers desired to give. This appears to signify that student teachers are not only concerned with immediate survival strategies for classroom management, but also want to cope with practical dilemmas for future learning (Zeichner, 1995). For cooperating teachers, it seems that the perception of their mentor role as transferring a body of technical skills to novices renders that role more manageable (Eraut, 1985; Hargreaves & Fullan, 2000).

We suggest that exposing student teachers and cooperating teachers to dissimilar perceptions between them, as well as to our research findings explaining the
underlying reasons for these perceptions, could aid participants in bridging the gap of disagreement concerning the mentor role in their work together. Student teachers can be made aware of the demands on cooperating teachers to cope with dual loyalties in their simultaneous responsibilities to the pupils in their classrooms and to the student teachers. Based on a common ground of shared perceptions of a practical and a technical nature, student teachers can more easily articulate the perceptions that are dissimilar from those of their cooperating teachers, specifically, their need for a more personally supportive relationship. Student teachers’ perceptions of learning in a more personally supportive relationship, cannot, by nature, be expected to emerge among all randomly paired sets of individuals. While we believe that cooperating teachers should be made aware of the need of student teachers for a more personally supportive relationship, we also want to encourage student teachers to limit their perceptions of a personal nature in order to benefit from a wider range of learning opportunities. Alternatively, we hope to encourage cooperating teachers to explore their own need for emotional support in the face of the multiple demands made upon them in today’s schools, as suggested by Hargreaves and Fullan (2000).

In comparison to the optimal model concerning the full range of orientations to teaching of Calderhead and Shorrock (1997), the initial perceptions of the mentor role of both student teachers and cooperating teachers were found to be limited and in need of exposure to a more diversified range of knowledge and skills. However, in our second study, perceptions of learning reported by the student teachers covered the full range of teaching orientations of Calderhead and Shorrock (1997). This was unanticipated and appeared to evolve within the developing mentor relationship in confrontation with classroom situations. It appears that practical student teaching situations in the classroom create the need to deal with a wider range of orientations to teaching than initially anticipated by either student teachers or cooperating teachers. We present this as evidence for the significant benefits student teachers gain from greater time spent in the schools in teacher education programs. Student teachers progress from initially limited perceptions of learning from their cooperating teachers to confrontation with a wide variety of practical situations that create new needs for learning. Based on mutual satisfaction with practical endeavors and a growing awareness for personal support, cooperating teachers may then be more open to additional role orientations, as they emerge as concerns of student teachers.
In relation to the academic orientation, for example, student teaching provides opportunities that narrow the gap between academic knowledge and theories learned in the training institution and pedagogical content knowledge necessary for the classroom (Ball, 2000; Shulman, 1987). Supervision of cooperating teachers should emphasize the role of the cooperating teacher in the teaching and implementation of academic subject knowledge in the classroom.

Concerning the critical orientation, we believe the reluctance of the participants to engage in critical roles is a consequence of their many concerns with the transition into new roles in teacher education: student teachers are engaged in transition from student to teacher roles, whereas mentors are engaged in transition from the role of teacher of pupils to the additional role of mentor of student teachers. However, the spontaneous emergence of perceptions of learning in this area is evidence of a more complex process in the transition from student to teacher roles. Our results show that crises in critical beliefs, values and goals are no less important than crises in class management in the student teaching experience. The survival stage of student teaching deals with the need of student teachers to retain some degree of their initial idealism in order to sustain commitment to teaching (Day, Elliot & Kingston, 2005; Shkedi & Laron, 2004). Although student teachers may not perceive the social relevance of these issues (Martin, 1996), they express many conflicts concerning values and goals of education that have implications surpassing the confines of the classroom. Student teachers should be encouraged to confront their underlying perceptions and beliefs about education even when they are in conflict with those of their cooperating teachers and with what they encounter in the classroom. For this purpose, a safe and nonjudgmental environment must be provided in the framework of supervision for dialogue between student teachers and cooperating teachers.

In the third study, we saw the relative balance between support and challenge reported by most student teachers as providing an adequate relationship of support that allowed student teachers to cope with challenges (Tang, 2003). Moreover, when the concepts of support and challenge (Daloz, 1986) were reformulated to include a wider range of emotional and cognitive learning situations, we were able to identify additional sources of support for student teachers in mentoring relationships. We believe that a wider range of possible ways to give support can better fit the individual personalities and characteristics of cooperating teachers, some of whose strengths lie in other orientations to teaching and not, necessarily, in providing emotional support.
of a personal nature. Cooperating teachers can be encouraged in supervision to recognize their strengths in various areas of knowledge and skills.

In the fourth study, we identified patterns of mentor relationships conducive to different kinds of opportunities for learning to teach. We described a beneficial mentor relationship as providing a balance between support and challenge (Daloz, 1986) in a wide variety of matched and mismatched perceptions between mentoring pairs. We also identified relationships of limited learning opportunities in both highly matched and highly mismatched pairs that resulted in a narrow view of the role of the cooperating teacher. Satisfaction with mentoring relationships is not always a good indication that optimal learning is taking place. Mutual reinforcement of similar orientations between student teacher and cooperating teacher pairs may create situations of passive socialization (Zeichner & Gore, 1990) of a predominantly technical orientation into teaching for some student teachers. Student teachers should be encouraged to work with cooperating teachers who appear to hold dissimilar values and orientations to their own, provided that these relationships contain adequate support. It is precisely these sites of conflict that may present student teachers with a wider range of challenging opportunities for learning to teach (Graham, 1997). At the same time, mentoring relationships must be monitored for situations of extreme challenge to student teachers’ beliefs and values, in the absence of adequate support, which may result in retreat from learning and alienation from teaching.

Our recommendation concerning pairing of participants in mentoring relationships in teacher education is that random pairing, rather than personal choice based on similarity or liking, is preferable, provided that mentoring relationships are monitored for an adequate balance of support and challenge in those cases in which extremely matched or mismatched relationships develop over the course of student teaching.

6.3. Limitations of the study

The participants of our study comprised a random, representative sample of predominantly female cooperating teachers from the public elementary and junior high schools who worked with our institution over the last four years. This sample is believed to be representative of cooperating teachers in Israel who work with teachers colleges. Further, since the turnover of cooperating teachers is great due to a variety of difficulties, we also believe that the relative lack of experience in the role of
cooperating teacher of this sample is characteristic of cooperating teachers in Israel. We make no claims regarding the representative nature of this sample beyond the specific socio-cultural and political context in which it is embedded, namely, the Israeli context of mainstream teacher education.

The present study concentrated on the student teachers and on the main research questions concerning their perceptions of learning. Less attention was given to the cooperating teachers, than to the student teachers, as a focus of our research.

In the fourth study, we categorized the cooperating teachers according to dominant orientations to teaching. We are aware that this was done as an operational necessity and that, in reality, teachers’ orientations are made up of idiosyncratic combinations of the different orientation categories. However, we do believe that it is possible to identify the dominant orientation of cooperating teachers according to their perceptions of their role as mentor in combination with the reports of student teachers’ perceptions of their classroom behaviors, as was done in our study.

Finally, the frequency analyses of the group data for both cooperating teachers and student teachers necessarily blurred the idiosyncratic nature of the individual cases. We supported our group results with quotations of individual participants that were characteristic of the group in order to make a convincing case for the reliability of the data.

6.4. Suggestions for further research

The conclusions of our studies concerning teacher education programs in Israel are embedded in a specific socio-cultural and political context. Calderhead and Shorrock (1997) present an overview of various ideologies or orientations that guide programs of reform aimed at improving the quality of teacher preparation in different countries. The framework of our research would present interesting possibilities for comparative studies of the orientations of participants of mentoring relationships in different national and socio-cultural contexts.

In addition, the specific school context, grade level (elementary versus junior high) and pupil population (strong versus weak learners), are other interesting questions concerning the connections between cooperating teachers’ orientations and the context of the school setting, as has been studied by Ben-Peretz, Mendelson and Kron (2003), for example. Another research possibility is collecting data of personal and
socio-cultural background variables of cooperating teachers for investigating a more differentiated understanding of the connections between personal characteristics and teaching orientations.

Our research focused on the process of transition that student teachers undergo in learning to teach in the context of the mentoring relationship. For this reason, we focused exclusively on the perceptions of the student teachers. An equal focus on the perceptions of cooperating teachers is recommended for future research in order to shed light on the reciprocal side of the relationship. Ongoing reports of cooperating teachers’ perceptions of their mentor roles, as well as reports of intentional behaviors initiated by them to implement their perceptions of their role, would give a better picture of how learning takes place throughout, and at different points of, the relationship. Comparison of cooperating teachers’ goals and intentional behaviors with student teachers’ perceptions of what they learn from cooperating teachers could serve as feedback to cooperating teachers, as well as to educators and researchers.

One of the potential sources of teachers’ professional development and school innovation lies in the work of the cooperating teachers who, by necessity, undergo transition in their role as cooperating teacher in interaction with student teachers and personnel from teacher training institutions. What and how cooperating teachers learn from this exposure concerning their own professional development and implementation of innovative ideas and methods in the classroom is a beneficial area of investigation for teacher education research.

Our study focused on the match and mismatch in teaching orientations between student teachers and cooperating teachers in the initial stage of the mentoring relationship. The match and mismatch of teaching orientations at different points of time throughout the relationship could be studied in further research. Additional factors that influence the match and mismatch between mentoring pairs, such as learning and teaching styles (Armstrong et al., 2002), personality characteristics and workload (Waters, 2004), that are being investigated in management studies, should also become a focus for research in teacher education. Workload, specifically, may be a significant factor in role transition that strains the abilities of cooperating teachers to fulfill their potential in the mentor role. It would be beneficial to focus on this factor in order to suggest ways of alleviating the strain.

The methodology of our studies was based on an elaborate and detailed process for the creation of category systems. Additional studies, using the category systems
developed by us, would add support to the validity of the systems, as well as further refine them for use in future studies. Research on the implementation of these systems in supervision with student teachers and cooperating teachers could yield results showing the practical benefits for the monitoring of learning in mentoring relationships, as well as the theoretical implications for teacher education.

6.5. Recommendations for teacher preparation

Teacher education programs are often in need of a more negotiated teaching-learning contract between the institution and the participants (Montecinos et al., 2002). The formulation of Calderhead and Shorrock (1997) that was chosen as the framework of our research describes a beneficial model of the multiple roles we wish to promote for cooperating teachers, as well as a multi-factored model of knowledge and skills necessary for learning to teach for student teachers (Hawkey, 1997). While Calderhead and Shorrock (1997) suggest that their formulation of the teaching orientations complete and supplement each other theoretically, we have taken this a step further and have shown what this looks like in practice. We recommend implementing the teaching orientations as a professional language (Hawkey, 1997) in practicum programs. This clear and easily communicated framework defines the general goals of the training institution, as well as the specific kinds of knowledge and skills necessary to reach these goals for the participants. Educators and researchers can study group results of their teacher education programs in order to identify dominant orientations, as well as weaknesses in areas of learning that are in need of additional emphasis.

Supervision of mentoring relationships should follow a gradual progression beginning with the identification of initial perceptions of the participants themselves. Supervision should then seek to connect between the goals of the training institution and the progressively wider range of concerns of student teachers as they emerge spontaneously from practical classroom experiences. Cooperating teachers should be provided with supervision concerning ways of providing a balance of support and challenge to student teachers as they develop a wider range of orientations in the process of formulation of their roles as mentors.

We believe that supervision of mentoring pairs according to a clear formulation of teaching orientations as a professional language can empower participants to gain
control and ownership of their own learning processes in mentoring relationships. Participants can engage in the process of self-assessment: student teachers of their learning outcomes and cooperating teachers of the impact of their interventions. The eclectic and non-hierarchical nature of the teaching orientations can aid cooperating teachers and student teachers in identifying strengths and weaknesses in their own learning and teaching, as well as in those of their mentoring pair. Patterns of learning of student teachers can serve as feedback reflecting what has actually been perceived as learning by student teachers in comparison to intentional interventions of cooperating teachers (Garvey, 1994). Rather than a deficit model of learning (Oberski, Ford, Higgins & Fisher, 1999), the orientation categories can point to strengths in specific orientations, as well as additional knowledge and skills that are in need of mastery. Individual student teachers can identify and focus on their own learning needs, rather than on a homogeneous model which views student teachers as progressing through predetermined stages of development (Bullough & Baughman, 1994).

Teacher education programs undergo changes in perspective and ideology according to a myriad of social, political and economic factors (Ben-Peretz, 2001). The inclusive formulation of Calderhead and Shorrock (1997) of different orientations to teaching and teacher education seeks to place itself above the wave of change and transition that is currently creating uncertainty in the values and norms of education (Hargreaves & Fullan, 2000). We believe that teacher education programs that are based on openness to diverse learning and teaching orientations will more easily withstand the changes of time, as well as promote flexibility among future teachers to survive change and adapt to novel situations in the ongoing development of their teaching selves.
References


Appendix A: Category system of perceptions of the role of the cooperating teacher according to educational orientations

### ACADEMIC ORIENTATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Content areas</th>
<th>Examples</th>
</tr>
</thead>
</table>
| Perceptions of the role of the cooperating teacher that are related to learning and teaching of subject matter (EFL). | - Teaching of language skills  
- Use of textbooks and materials  
- Teaching in heterogeneous classes  
- Assessment of pupils | Student teachers:  
- Different ways of teaching tenses  
- Extra materials for different levels  
Cooperating teachers:  
- How to grade the pupils  
- To help them utilize the text-books and available material |

### TECHNICAL ORIENTATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Content areas</th>
<th>Examples</th>
</tr>
</thead>
</table>
| Perceptions of the role of the cooperating teacher that are related to general principles and specific instructions for efficient classroom management regardless of diverse situations and contexts. This approach assumes that there is one correct way of doing things that entails a transfer of information from an “expert” to a novice. | - Classroom arrangement, aesthetics and cleanliness  
- Use of the board  
- Lesson planning  
- Giving directions  
- Punishment and strategies of control | Student teachers:  
- To imitate the strong points and refrain from the weak points  
- Answer questions  
Cooperating teachers:  
- Role model  
- Show them what is right and what is wrong |

### PRACTICAL ORIENTATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Content areas</th>
<th>Examples</th>
</tr>
</thead>
</table>
| Perceptions of the role of the cooperating teacher that are related to collaboration between the student teacher and the cooperating teacher in the joint endeavor of coping with problems concerning action in the classroom in relations with pupils in a changing, unpredictable context. | - Giving feedback on student teaching  
- Classroom dilemmas of management  
- Discipline problems  
- Individual pupils’ difficulties and needs | Student teachers:  
- To help us come up with new ideas  
- To share information about the pupils  
Cooperating teachers:  
- Guide, help, share  
- Listen and discuss |

### PERSONAL ORIENTATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Content areas</th>
<th>Examples</th>
</tr>
</thead>
</table>
| Perceptions of the role of the cooperating teacher that are related to the affective domain of feelings and personality characteristics necessary for confidence in developing a personal and professional teaching identity. | - Teachers’ personal characteristics  
- Teachers’ support and advocacy of students  
- Teacher-student relationships  
- Transition from student to teacher roles | Student teachers:  
- To remember that she was once a student  
- To be human  
Cooperating teachers:  
- To support  
- To be there for them |

### CRITICAL ORIENTATION

<table>
<thead>
<tr>
<th>Description</th>
<th>Content areas</th>
<th>Examples</th>
</tr>
</thead>
</table>
| Perceptions of the role of the cooperating teacher that go beyond the immediate classroom that are related to the school as a social institution and to the values of teaching. | - Becoming acquainted with other staff members  
- Becoming acquainted with the school as an institution  
- The role of the teacher as a professional  
- The “vision” of teaching | Student teachers:  
- To know her role as cooperating teacher  
- To be responsible for her job  
Cooperating teachers:  
- To convey the message that a teacher is a lifelong learner  
- To help students become better people in their life |
Appendix B: Category system of perceptions of learning according to educational orientations

<table>
<thead>
<tr>
<th><strong>Academic Orientation (Cognitive)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> Concern with subject matter focus (EFL) that is used to decide what to teach, why and how. The goal is mastery of subject matter for transmission to pupils, learning how to teach subject matter and assessment of pupils’ achievements. The academic is often embedded in technical and practical classroom issues of more immediate concern to student teachers and is here given preference over the other domains and coded as academic when a segment contains mention of subject-matter teaching.</td>
</tr>
<tr>
<td><strong>Representative themes:</strong> Language skills, Curriculum planning, Assessment of pupils’ achievements, Use of textbooks and materials</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Technical Orientation (Mechanical)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> Refers to general principles and specific instructions for predetermined rules and regulations of classroom procedure necessary for the achievement of clearly defined goals of control and organization of learning situations (efficient classroom management) regardless of diverse situations and contexts.</td>
</tr>
<tr>
<td><strong>Representative themes:</strong> Classroom arrangement, aesthetics and cleanliness, Use of the board, Lesson planning, Giving directions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Practical Orientation (Experiential)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> Designates coping strategies, suggestions and ideas for decision-making in unclear situations embedded in specific classroom incidents and contexts for the purpose of coping with classroom problems, dilemmas and unknown situations when creating a learning environment conducive to the guidance of pupils.</td>
</tr>
<tr>
<td><strong>Representative themes:</strong> Classroom dilemmas of management, Discipline problems, Individual pupils’ difficulties and needs, Classroom climate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Personal Orientation (Affective)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> Refers to the affective domain of feelings and personality characteristics necessary for confidence in developing a personal and professional teaching identity. This domain is indicative of student teachers as they pass through a transition phase of identifying with pupils to identifying with the role of the teacher in a supportive environment that encourages exploration of personal strengths through relationships with others.</td>
</tr>
<tr>
<td><strong>Representative themes:</strong> Teachers’ characteristics, Teachers’ support and advocacy of students, Teacher-student relationships, Transition from student to teacher roles</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Critical Orientation (Social)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> Makes connections to issues beyond the immediate classroom of social relevance or that questions the goals and hidden agenda of education aimed at the betterment of society, developing the potential of individuals through education, making learning more relevant to pupils’ lives or that relates to moral or ethical issues.</td>
</tr>
<tr>
<td><strong>Representative themes:</strong> Social norms and values, Equal opportunity in the “hidden” agenda of education, Pupil autonomy in learning, Respect for cultural diversity</td>
</tr>
</tbody>
</table>
Appendix C: Category system of perceptions of learning according to support and challenge

<table>
<thead>
<tr>
<th>Support</th>
<th>Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td>What the student teacher reports that he/she has learned from the cooperating teacher</td>
<td>What the student teacher reports that he/she has failed to learn from the cooperating teacher</td>
</tr>
<tr>
<td><strong>Example from academic orientation category:</strong> During this lesson I feel that I learned to teach something I had no clue how to explain to the pupils. I learned to teach the Past Perfect tense. (B6. Academic - support)</td>
<td><strong>Example from academic orientation category:</strong> I don’t feel that there was enough emphasis on grammar in the class and I haven’t learned enough grammar from my cooperating teacher. (B3. Academic - challenge)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>“Tips” and procedures that student teachers would implement in their teaching</th>
<th>“Tips” and procedures that student teachers would not implement in their teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example from technical orientation category:</strong> The teacher never started a lesson before the classroom was clean and arranged. She always waits at the door to the classroom for the pupils to pay attention that she is there and waiting for them to be quiet. (L7. &amp; L8. Technical – support)</td>
<td><strong>Example from technical orientation category:</strong> I couldn’t believe this teacher expected the pupils to stand up when she walked in. This wasn’t very useful to me, since I don’t really agree with these actions. I don’t think I will use this in the future. (B15. Technical – challenge)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positive assessment of the cooperating teacher’s classroom behavior</th>
<th>Negative assessment of the cooperating teacher’s classroom behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example from practical orientation category:</strong> While I was observing the class, I noticed the class became pretty noisy. The teacher wasn’t able to control them. There was one pupil who was really bothered by the noise. He told the teacher that he really wants to learn. The teacher told him that if he really wants to learn, then he should help her control them and get them settled down. That is exactly what the pupil did. And, even more surprising, the pupil actually accomplished getting them settled down. I learnt that it could be very useful to sometimes get help from pupils. (B17. Practical - support)</td>
<td><strong>Example from practical orientation category:</strong> I did not like the way she treated the pupils and embarrassed them in front of the class. (L4. Practical - challenge)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resonance between student teacher’s perceptions and teacher’s behavior</th>
<th>Dissonance between student teacher’s perceptions and teacher’s behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example from personal orientation category:</strong> I noticed the attitude of the teacher towards the pupils; she was very friendly and in touch with their world, but at the same time, she was very authoritative and serious. (S2. Personal - support)</td>
<td><strong>Example from personal orientation category:</strong> Even though the teacher was physically close to the pupils, I never saw her smiling at them or talking with them about personal issues. (H2. Personal - challenge)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Agreement with cooperating teacher’s behavior</th>
<th>Disagreement with cooperating teacher’s behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example from critical orientation category:</strong> The moral is that in order to maintain discipline, drastic measures are needed and they serve as a tool in teaching others a lesson. These are rules and norms, which we, as a society, need to follow. (A8. Critical - support)</td>
<td><strong>Example from critical orientation category:</strong> Still, as teachers, we are not dictators in our classes and here we need to take into consideration the long-term consequences of our acts. (A9. Critical - challenge)</td>
</tr>
</tbody>
</table>
Summary

Research in different times and places identifies the mentoring relationship in the fieldwork experience as the most significant factor in learning to teach. In light of the increased time spent in student teaching in the schools today, the studies presented in this research project attempted to describe the processes that student teachers undergo in mentoring relationships in the formation of the teaching self. The studies focused on answering four main questions from the perspective of the participants:

a. What are the perceptions of student teachers and cooperating teachers concerning the role of the cooperating teacher?

b. What kinds of knowledge and skills do student teachers perceive to learn from their cooperating teachers?

c. What kinds of knowledge and skills are perceived by student teachers as triggers of support and challenge to their perceptions of learning to teach?

d. How are matched and mismatched perceptions of student teachers and cooperating teachers related to differences in perceived learning opportunities by student teachers?

We chose the theoretical framework of different approaches to teaching and teacher education of Calderhead and Shorrock (1997) to answer these questions. The framework consists of multi-factored orientations that complete and supplement each other in a non-hierarchical fashion. The orientations to teaching and teacher education include the academic, the technical, the practical, the personal and the critical. We viewed this framework as a beneficial model of the various roles of the cooperating teacher, as well as of the different kinds of knowledge and skills necessary for learning to teach for student teachers. In order to connect the theoretical formulation to the data from the field, it was necessary to develop category systems in an iterative process of multiple comparisons between the theoretical and the practical. This resulted in two category systems that were used to analyze the data reported by our participants in the four studies.

In addition to the orientations, we attempted to describe the processes through which learning takes place. For this purpose, we developed a third category system in a similar fashion, based on the concepts of support and challenge of Daloz (1987). We analyzed the perceptions of student teachers according to the degree of support and
challenge that the reported learning situations presented to their perceptions of learning to teach.

Our first study, presented in the second chapter, sought to uncover and compare implicit perceptions of student teachers and cooperating teachers concerning the mentor role in the initial stage of the mentoring relationship. We analyzed the perceptions of the participants according to the theoretical framework of Calderhead and Shorrock (1997) in order to determine to what extent the perceptions of our participants measured up to our proposed model of optimal mentoring roles. In relation to the optimal formulation of the role of the cooperating teacher, both student teacher and cooperating teacher groups failed to report perceptions in the academic and the critical orientation categories. In addition, we compared and contrasted the perceptions of the student teachers with those of the cooperating teachers. Similar expectations between student teachers and cooperating teachers were found in the practical orientation category, giving support to previous research that has found that teaching is perceived as a practical endeavor. In addition, there was agreement among the student teachers and the cooperating teachers concerning perceptions in the technical orientation, although the student teachers reported lesser perceptions in this orientation than the cooperating teachers. The greatest discrepancy in perceptions was found in the personal orientation category: student teachers expressed perceptions of more personal relationships with their cooperating teachers, as well as more personal support to explore their own teaching selves in the classroom.

Our second study, presented in the third chapter, sought to answer the question of what student teachers perceive to learn from their cooperating teachers. We analyzed the content of reported perceptions of learning from the pedagogical journals of the student teachers according to the five orientation categories of Calderhead and Shorrock (1997). Regarding what the student teachers reported that they learned, we found that the perceptions of learning covered the full range of the orientation categories. The emergence of the perceptions in the academic and critical orientation categories was partly due to our analysis (of the perceptions in the academic orientation category), but may, above all, be explained as products of practical teaching experiences in the classroom that exposed student teachers to concerns that neither they, nor the cooperating teachers, anticipated in their initial perceptions. We present this as evidence for the benefits gained from greater time spent in student teaching in the schools.
The third study, reported in the fourth chapter, was carried out in order to answer the question of how the reported perceptions in the previous study trigger student teacher learning. We analyzed these perceptions according to the student teachers’ report of whether a learning situation with which they were confronted presented support or challenge (Daloz, 1986) to their perceptions of learning to teach. This resulted in a reformulation of the concepts of support and challenge in each one of the five orientation categories of Calderhead and Shorrock (1997). We found that student teachers reported both support and challenge to their initial perceptions of learning to teach in the full range of the teaching orientation categories. In addition, we found that student teachers perceived support not only of a personal nature, but of a cognitive nature as well, in their reports of academic, technical and practical learning situations. In contrast, high degrees of challenge were perceived by student teachers in the critical orientation category. Student teachers reported concern with a variety of critical issues that they were confronted with in the classroom that were incongruent with what they observed in the behavior of their cooperating teachers. We concluded that the retention of idealism, in confrontation with the reality of the classroom, is part of the initial process of the transition from student to teacher roles.

Our fourth study, in the fifth chapter, described different opportunities for learning to teach of matched and mismatched mentoring pairs according to their perceptions of the mentor role. Data sets from the previous studies were combined to describe individual patterns of perceptions of learning of the student teachers according to the degree of support and challenge in each one of the teaching orientation categories. The dominant orientation of each student teacher was then compared to the dominant orientation of the student teacher’s cooperating teacher. We found that the student teachers that reported high degrees of support were matched in orientation to their cooperating teachers, whereas the student teachers that reported high degrees of challenge were mismatched in orientation to their cooperating teachers. A third pattern emerged that did not fit the matched or mismatched pattern: student teachers whose learning profiles showed balanced degrees of support and challenge also showed a mixed, rather than a dominant, teaching orientation in a wide range of orientations to teaching that was similar to that of their cooperating teachers. Investigation of the content of the patterns of perceptions of learning showed that both matched and mismatched pairs provided perceptions of learning in limited orientations to teaching. The matched pattern reinforced the status quo of passive
socialization into teaching, whereas the mismatched pattern resulted in confrontation and conflict that focused on a narrow view of teaching. The optimal opportunity for learning to teach was found in the mixed pattern in which student teachers were both supported and challenged in their perceptions of learning in a number of different orientation categories. In light of these results, we emphasized the importance of monitoring mentoring relationships for a balance between support and challenge in a wide range of teaching orientations. In addition, we recommended that forced random pairing of student teachers with cooperating teachers is preferable than allowing student teachers to choose their own cooperating teachers on the basis of liking and similarity. However, we are aware of the limitations of random pairing and view supervision and close monitoring of mentoring pairs as the solution for mentoring relationships that provide limited learning opportunities.

In the sixth chapter, we summarized the conclusions of the four studies. Despite the limited perceptions of the mentor role of the participants in comparison to the proposed framework in the first study, we found that student teachers reported perceptions of learning in the full range of orientations to teaching in the second study. In the third study, perceptions of triggers for learning were reported as support and challenge in all of the orientation categories by student teachers. By reformulating the concepts of support and challenge, we were able to identify and describe triggers for learning of both an emotional and a cognitive nature in the reports of the student teachers. The fourth study found that mixed types of mentoring relationships, in which student teachers and cooperating teachers were neither matched in orientation nor mismatched in orientation, but rather contained perceptions of learning in a wide range of orientations to teaching, offered student teachers the most beneficial opportunity for learning to teach. The student teachers of this group displayed mixed patterns of learning from a wide range of knowledge and skills that both supported and challenged their perceptions of learning to teach.

The discussion of methodology in the sixth chapter described the advantages of the category systems developed for this project. The theoretical formulation of orientations to teaching and teacher education of Calderhead and Shorrock (1997) presented a wide range of complementary orientations connecting a theoretical model of the mentor role to the knowledge and skills necessary for learning to teach for student teachers. Similarly, we identified a wide range of emotional and cognitive kinds of support and challenge perceived by student teachers in accordance with the
full range of teaching orientations. The category systems guided our identification of
learning content and processes that we may have overlooked had we focused
exclusively on the data as reported by the participants.

The discussion in chapter six focused on implementation of our results for
supervision in teacher education. We suggested that supervision be based on a
gradual development of the mentoring relationship, as well as on the expanding needs
of student teachers’ growing concerns as these needs emerge from their learning and
teaching experiences in the classroom. In the initial stage of the mentoring
relationship, shared perceptions concerning practical and technical issues can form a
common ground for collaboration that may serve to ease the transition into new roles
for both student teachers and cooperating teachers. Based on satisfaction with shared
contcerns in the initial stage, awareness of the need for a more personal relationship
between mentoring pairs can take place. Finally, in an advanced stage of supervision,
we recommend exposing cooperating teachers to the growing concerns of student
teachers for academic and critical issues that emerge as student teachers broaden their
range of learning as a result of classroom experience. Thus, supervision of mentoring
pairs would culminate in a beneficial model for learning to teach, as identified in the
fourth study: a balance between support and challenge in a wide range of different
kinds of knowledge and skills.

The limitations of this study are also described in chapter six. We concentrated on
the student teachers, as a group and as individuals, in order to answer the main
research questions concerning the student teachers’ perceptions of learning. Less
attention was given to the cooperating teachers, than to the student teachers, as a focus
of our research. Another limitation was the awareness that our sample was believed
to be representative of the Israeli context of teacher training only.

Suggestions for further research in the sixth chapter focused on rectifying this
imbalance by calling for similar in-depth studies on the teaching orientations of
cooperating teachers and the connections between personal and contextual
characteristics of cooperating teachers and teaching orientations. In addition, we
suggested further research on the intentional interventions of cooperating teachers in
comparison to what student teachers perceive to learn from these interventions.
Similar research in other places could yield comparative results of different
orientations of teacher education programs in various national and socio-cultural
contexts. Use of our category systems in additional studies would also add support to
the validity of the systems, as well as serve to refine them even further.

Based on our findings from the four studies, we concluded, in the sixth chapter,
with recommendations for teacher education programs. Teacher preparation
programs should present a clear and inclusive framework for communicating the
goals and values of the training institution to those who receive the training, the
student teachers, and to those who implement the training, the cooperating teachers.
We propose the theoretical framework of Calderhead and Shorrock (1997) in
conjunction with the reformulated concepts of support and challenge as one such
formulation of a professional language that can be implemented in supervision of
student teachers and cooperating teachers. Student teachers should be encouraged to
report on their perceptions of learning with an emphasis on the proposed concepts in
their pedagogical journals. Such reports would increase awareness among student
teachers of their ongoing learning processes, as well as serve as feedback to
cooperating teachers of the influence of their mentoring behaviors. Reports could
serve as sources for the promotion of dialogue and negotiation of disagreements
among mentoring pairs. Close reading of pedagogical journals can also aid teacher
trainers in monitoring mentoring relationships and in identification of those
relationships that are in need of intervention; namely, relationships that offer student
teachers less than beneficial opportunities for learning to teach. We believe that
supervision of mentoring pairs according to the proposed professional language can
serve to empower participants to gain control and ownership of their own learning
processes in the context of mentoring relationships. Teacher education programs that
support openness to diverse learning and teaching orientations will more easily
promote the ability of future teachers to cope with the challenges of changing times
and ideologies in the ongoing development of their teaching self.
Curriculum Vitae

Maureen Rajuan was born and raised in the USA and immigrated to Israel in 1969. She received her BA and MA Degrees in Education and English Literature from the Hebrew University in Jerusalem, Israel, in 1975. She wrote her MA thesis on the subject of *The relationship between empathy and foreign language anxiety*, School of Education, Hebrew University, in 1997.

Maureen was an educational counselor and English teacher in the public school system for many years. Since 1997, she has worked as a teacher trainer for the English Department of Achva Academic College, as well as a lecturer on Academic Literacy in English. She also teaches EFL at the Hebrew University of Jerusalem.

Maureen was program director of the organizing committee of the Junior Researchers (JURE) Conference of EARLI in Amsterdam in 2002. She has presented at conferences in many countries in Europe, including a paper on multicultural understanding between Jewish and Arab children at the Asiatefl Conference in Beijing in 2005. In addition, she translates and edits academic manuscripts from Hebrew to English.
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