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dissertation entitled

COLLECTIVE BARGAINING AND HUMAN RESOURCES POLICIES: EFFECTS ON MENTORING AND COMMITMENT LEVEL OF NOVICE TEACHERS

presented by

Ben Michael Pogodzinski

has been accepted towards fulfillment
of the requirements for the

Ph.D. degree in Educational Policy

Peter A. Youngs
Major Professor's Signature

June 24th, 2009
Date

COLLECTIVE BARGAINING AND HUMAN RESOURCES POLICIES: EFFECTS ON MENTORING AND COMMITMENT LEVEL OF NOVICE TEACHERS

By

Ben Michael Pogodzinski

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Educational Policy

2009

ABSTRACT

COLLECTIVE BARGAINING AND HUMAN RESOURCES POLICIES: EFFECTS ON MENTORING AND COMMITMENT LEVEL OF NOVICE TEACHERS

By

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This study uses ideas from new institutionalism and social capital theory to examine the extent to which collective bargaining shapes district mentoring policy, the extent to which novice teachers interact with their mentors and other colleagues, and how novices' perceptions of their organizational context is related to their levels of commitment. Qualitative and quantitative data was collected from eleven districts in Michigan and Indiana, including data from interviews with district human resource directors and teacher association presidents, review of collective bargaining agreements, and surveys of novice teachers and their mentors and close colleagues. The data suggests that collective bargaining plays little role in defining the scope of mentoring, and that although there is little variation in formal mentoring policy across districts there can be wide variation in the quality of mentoring across and within buildings. Also, the early career teachers found the support of their colleagues more important than the support from their mentors. Novices' perceptions of their professional fit within their school was positively associated with their commitment levels, while poor perceptions of labor-management relations in their school was associated with lower levels of commitment. This study has implications for the design and implementation of mentoring programs, as well as the role of organizational climate in determining novice teachers' commitment levels.

ACKNOWLEDGEMENTS

This dissertation stems from a multi-year study known as the Michigan Indiana Early Career Teacher (MIECT) Study, directed by Dr. Peter Youngs and Dr. Ken Frank at Michigan State University. I would like to thank Dr. Youngs and Dr. Frank for their assistance throughout the dissertation process, and for making the data from the MIECT Study accessible. I would also like to thank my fellow research assistants who worked on the MIECT Study, Richard Holdgreve-Resendez, Nathan Jones, and Mark Low. I would like to thank the other two dissertation committee members, Dr. Saundra Schneider and Dr. Dale Belman, for their assistance over the course of my doctoral career. Finally, I would like to thank my family, particularly my wife Angela, for their support through this entire process.

The research reported in this dissertation was supported by grants from the Carnegie Corporation of New York and the Michigan State University Intramural Research Grants Program. The opinions expressed in the paper are those of the author and do not necessarily reflect the views of the funding agencies.

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District Policy and New Teachers

The experiences of teachers are directly and indirectly influenced by district- and school-level policies aimed at ensuring that the teaching workforce is both highly qualified and highly effective (Hess, Rotherham, & Walsh, 2004). Policies dictate the process of teacher hiring, assignment, induction, and evaluation, all of which influence the organizational context within which teachers perform their jobs. In many ways, these policies also shape the social context within which teachers operate. Both the organizational and social context has implications for certain teacher-level outcomes.

Since the 19th century, teacher associations have worked to shape educational policy at both the national, state, and local level, thus having a hand in shaping the organizational and social context of schooling. For example, collective bargaining agreements can either directly or indirectly influence district human resource decisions regarding teacher hiring, transfers, and layoffs, as well as policies related to teacher evaluation, induction, and professional development (Fuller & Izu, 1986; Fuller, Mitchell, & Hartman, 2000; Ballou, 2000; Koppich, 2005). Therefore, through collective bargaining and labor-management relations, teacher associations potentially have strong effects on teachers' experiences because contract provisions specifically "shape and reflect some of the important parameters of teachers' work lives in technical and normative terms" (Bascia, 1997, p. 444).

The effects that district- and school-level policies have on the experiences of novice teachers most likely differ from the effects on more senior tenured teachers. Most collective bargaining provisions and district policies favor tenured teachers with

regard to job protection (including order of layoffs and involuntary transfers) and economic benefits which may place novice teachers at a lower social, political, and economic status within the organization (Eberts & Stone, 1984; Babcock & Enberg, 1999). This lower status may impact the relationships that novices have with their colleagues and therefore impact their ability to access resources through those relationships. In other cases, though, the novice status granted to new teachers may increase their ability to access resources through such induction activities as common planning time with mentor teachers or more release time for planning and observing other teachers (Smith & Ingersoll, 2004).

What is clear though is that district policies are often designed to treat non-tenured teachers differently than their tenured colleagues, which may not only have direct effects on their work experiences, but also indirect effects by influencing the professional relationships novice teachers have with their more senior colleagues. For example, how do policies around mentoring and teacher collaboration influence the relationships that novice teachers build with their more senior colleagues, and how are these relationships associated with novice teacher outcomes such as beliefs and practices, as well as career decisions? In addition to the formal structures of schools and districts, new teachers are socialized into the profession through informal social networks that develop within a school or district. These informal networks can also mediate the effects of formal district policies.

This study uses both organizational theory based on the ideas of new institutionalism as a theory of action at the organizational level, and social capital theory as a theory of action at the individual level, to explore how district- and school-level

policies shape the mentoring and socialization of novice teachers. In particular, this study looks at how mentoring policies are potentially shaped by collective bargaining, how mentoring policies impact the organizational context within which novice teachers work, and also how labor-management relations help shape the social context within which teachers work. At the same time, individuals enact agency and through personal interactions with colleagues have access to expertise, resources, and support; while at the same time mentors and colleagues can enact expectations and norms onto novice teachers. Both the organizational context and the social context have the potential to influence important teacher outcomes, such as teacher commitment and retention. Therefore this study aims to address three important questions: a) To what extent do collective bargaining agreements (CBAs) influence the provision of mentoring? b) To what extent are early career teachers (ECTs) interacting with their mentors, as well as with other colleagues? and c) How do the organizational and social contexts within which novices work influence their commitment to teaching, expressed through their professed future career plans?

The ideas from new institutionalism provide a lens to examine both the formal and informal structures within an organization. Mentoring policies are often implemented in relation to a particular policy environment (e.g., legal requirements, new research, CBA provisions), but the formalized mentoring policy may be "very different from the effects generated by the networks of social behavior and relationships which compose and surround a given organization" (Meyer & Rowan, 1977, p. 341). In other words, there may be large gaps between the formal structure of a mentoring program, and

the actual relationship between a mentor and mentee, or between ECTs and their colleagues (Meyer & Rowan, 1977; DiMaggio & Powell, 1983).

It is also important to consider social capital theory in addition to organizational theory when studying mentoring policy and teacher socialization because an individual teacher's own social context mediates the effects of such policies and structures (Frank, 1998). The use of social capital theory provides opportunities to further explore the supports and pressures that are associated with these types of policies, by studying how novice teachers' formal (i.e., mentor-mentee) and informal relationships influence novices' access to resources and their perceptions of the organization. For example, a teacher's perceptions of professional fit within an organization may be partially determined by their relationships with their mentor and other colleagues, which then may be associated with their levels of commitment (Bryk & Schneider, 2002; Desimone et al., 2002; Kardos et al., 2001).

The labor-management relations climate within a school and district will also potentially affect the relationships novices have with their colleagues and administrators, thus affecting their access to resources. Collective bargaining provisions tend to standardize teaching work, which often encourages autonomous work and reduces collaboration amongst teachers (Bascia, 1997; Stone, 2000). Additionally, if relations are negative between teachers and administrators, it may reduce novice teachers' access to support and resources which may negatively impact their commitment. In particular, teachers may try to transfer out of schools in which there are poor labor-management relations. There is also reason to believe that professional relationships (amongst teachers and between teachers and administrators) can mediate the effects of mentoring,

other induction activities, and other district policies on their practices and commitment to teaching (Bryk & Schneider, 2002).

Literature Review

Through collective bargaining agreements (CBAs), teacher associations have traditionally focused on increasing teachers' salaries and benefits, achieving standardized working conditions and practices, lowering student-teacher ratios, and protecting against job loss (Stone, 2000). Most CBAs follow the industrial union model where a premium is placed on seniority in terms of salary, assignment, and job protection, leading some novice teachers to view teacher associations as less relevant to their work lives (Kerchner & Cooper, 2003). In order to help address the needs of novice teachers, some local associations have expanded their roles into negotiating over curricular and instructional reforms, peer assistance and review (PAR), alternative salary schedules, and induction support and professional development for teachers (Koppich, 2005). This continues to be the exception rather than the rule, and there has been limited research on the effects of collective bargaining on teacher outcomes, such as commitment.

Since teacher commitment has been found to be related to teacher effectiveness and teacher turnover, both teacher associations and districts should be concerned with increasing teacher commitment (Weiss, 1999; Ingersoll, 2001; Ebmeier, 2003). This is particularly important in hard-to-staff schools which serve large percentages of poor and minority students, where teacher turnover is significantly higher than in schools serving higher SES white students (Boyd et al., 2002; Hanushek, Kain, & Rivkin, 2004; Smith & Ingersoll, 2004). Teacher commitment has been found to be associated with workplace

conditions (Weiss, 1999), as well as with the collaborative social organization of a school (Rosenholtz, 1985). This has implications for not only addressing the organizational context of schools, but also their social context. Research, though, has not fully explored the effects of school social organization on teacher commitment (Weiss, 1999, p. 862).

New Teacher Induction. One way schools and districts work to improve teacher quality and retain effective teachers is through induction programs such as a) mentoring; b) opportunities to collaborate with colleagues; c) orientations, seminars and workshops; and d) additional classroom or instructional assistance (Smith & Ingersoll, 2004). In addition to formal structures to support novices which are put into place at the district or school level, novice teachers often receive informal support from colleagues within their school or district. Teachers who receive formal and informal initiation into the profession are more likely to develop norms encouraging professional growth and greater commitment to the profession (Rosenholtz, 1989).

There is some evidence that induction programs can reduce teacher attrition rates and provide teachers opportunities for growth (Smith & Ingersoll, 2004; Strong & Fletcher, 2004). Induction activities related to curriculum, assessment, and teacher evaluation can help shape the instructional expectations that are placed on new teachers and create opportunities for novices to engage in learning activities (Grossman & Thompson, 2004; Johnson & PNGT, 2004; Stein & D'Amico, 2002; Achinstein, Ogawa, & Speiglman, 2004; Youngs, 2007a). At the same time, although over 75 percent of novice teachers are participating in some form of induction activity, wide variation remains in the quality and effectiveness of support which is provided to novice teachers (Smith & Ingersoll, 2004). Important qualities of mentoring and other induction

activities include a) the characteristics and roles of the mentor and mentee; b) the characteristics and roles of colleagues and administrators; c) school organizational conditions; and d) the degree of alignment or fit between novices and their mentors and colleagues (Youngs, Qian, & Holdgreve-Resendez, in progress).

Research suggests that novices who are paired with a mentor who teaches the same grade level, subject matter, or certification area may receive more benefits from the relationship than novices who are paired with out-of-field mentors. Using data from the 1999-2000 Schools and Staffing Survey (SASS), Smith and Ingersoll (2004) found that having a mentor in one's field reduced the likelihood of leaving teaching at the end of the first year by 30 percent and that being able to collaborate with colleagues on instructional issues reduced the risk of leaving the profession by 43 percent and lowered the risk of migration by 25 percent. A mentor or colleague who has greater knowledge of the curricula may be able to provide more help in developing appropriate teaching strategies and assessments.

Several qualitative studies support the findings of Smith & Ingersoll (2004), suggesting that both mentor and mentee characteristics are important in predicting the quality and effectiveness of a mentoring relationship (e.g., Achinstein, Ogawa, & Speiglman, 2004; Grossman & Thompson, 2004; Youngs, 2007a). For example, Grossman and Thompson (2004) studied the experiences of three first-year secondary teachers – Frank, Nancy, and Allison – in two suburban Washington State school districts, Prospect Harbor and Waterside. The purpose of the study was to investigate how district and state policies concerning curriculum, induction, and professional development affected the teachers' opportunities to learn to teach language arts.

Differences in induction programs in each district highlighted the importance of matching novices with mentors who have knowledge of their curriculum as well as similar beliefs and practices. Frank's mentor was responsible for mentoring several new teachers which reduced the amount of time she had available to work with Frank, and she did not have curricular expertise in all the subjects he taught, therefore the benefits of the induction program for him were limited. According to Grossman and Thompson, "as a result, she was not able to give him the kind of curricular guidance he sought" (2004, p. 292). In contrast to Frank, Allison was assigned a mentor from her department who shared teaching strategies and materials with her because the mentor had knowledge of the curriculum. Having a mentor in the same content area enabled her to obtain much more assistance with curriculum and instruction than Frank.

In addition to formal mentoring assignments, the socialization of new teachers is partially determined by the characteristics and roles of their colleagues and administrators. Using large scale survey data of novice teachers in the Chicago Public Schools from 2004-05, Kapadia, Cora, and Easton (2007) found that novice elementary teachers who regularly collaborated with peers in their field and participated in a network of other new teachers were more likely to report having a good teaching experience and intention to remain in teaching. Kardos and her colleagues (2001) interviewed 50 1st- and 2nd-year teachers from a wide variety of schools in Massachusetts, focusing part of their inquiry on new teachers' experiences with their school-based colleagues and professional school cultures. They also analyzed new teachers' accounts of the organizational structures within which they interacted with colleagues. Using the data collected, the researchers claimed that new teachers sought signals from their colleagues

about how to interact with students and colleagues, which instructional approaches were acceptable, appropriate behavior in meetings, and appropriate use of time (Kardos et al., 2001).

Kardos and her colleagues defined professional culture as a blend of both formal and informal norms, values, and accepted modes of professional practice that existed among colleagues (2001). The researchers identified three types of professional school cultures: veteran-oriented, novice-oriented, and integrated. In schools with veteran-oriented cultures, the authors found that the school culture was defined by veteran teachers and new teachers were given no special status, which resulted in little orientation, induction, or support. In schools labeled as having novice-oriented cultures, the majority of the teachers were new to the profession. There were higher levels of initial commitment and enthusiasm in these schools, but few formal induction supports were offered, which may have impeded novice teacher instructional growth. The authors described schools with integrated cultures as being marked by high levels of collaboration between novice and experienced teachers. Mentors transmitted cultural norms to novices and there were frequent opportunities for new teachers to talk with veterans about curriculum, instruction, and assessment. The research by Kardos and colleagues (2001) suggests, as in the case of the veteran-oriented cultures, that a lack of collaboration or professional fit in a school can decrease the level of support that new teachers receive in handling the pressures of the profession. At the same time, where and how novice teachers access support and expertise (i.e., from other novices vs. veterans) can have great implications for how social capital influences novice teachers' instructional practice and commitment to teaching. Although novices may tend to

interact with each other because they may have more in common, the help that they can provide each other in terms of expertise may be limited compared to the potential assistance a more veteran teacher can provide.

Principals can also play a significant role in influencing the supportive culture of a school, through both direct interactions with novices as well as through establishing opportunities for novices to interact with their colleagues (Youngs, 2007b). In an ongoing study, Desimone & Smith (2008) are investigating how school leadership shapes new middle school math teachers' content knowledge and instructional practices, with focus on how the content knowledge of principals and other teachers seems related to novices' instructional practices. In work that stems from the study being conducted by Desimone and Smith (2008), McGraner and Henrick (2008) interviewed 18 middle school principals from southern urban districts, and found that those with weak math content knowledge viewed induction in ways that ignored certain attributes of teaching and learning in math. Additionally, these principals did not develop organizational supports in their schools to provide professional growth for novice teachers.

In a study of three urban Connecticut districts, Youngs (2007b) interviewed six elementary principals, along with first- and second-year teachers, mentors, and other colleagues in their schools to learn more about the support provided to novices. Principals with stronger knowledge of curricular content, assessment, and professional development were more likely to promote instructional growth in novice teachers and establish a collaborative organizational environment (Youngs, 2007b). Chester and Beaudin (1996) surveyed 173 new teachers who were hired in 1989-90 to teach in Connecticut's nine largest school districts to learn about school organizational conditions

and practices. Using OLS regression, they provided evidence that "suggests that a direct relationship exists between urban supervisors' attention to instruction and changes in their beginning teachers' self-efficacy beliefs" (1996, p. 246). Chester and Beaudin added that "(i)n addition to the timing and frequency of feedback, the focus of the feedback is an important aspect of the findings regarding supervisor observations" (1996, p. 252).

Related to the culture of support, which is partially determined by the teachers and administrators within a school organization, is the degree of relational trust between the adults within the school which is related to the ways that novice teachers discern the integrity and competence of mentors, colleagues, and administrators (Ford & Youngs, under review). Relational trust between novice teachers and their colleagues and with their administrators derives from the set of role-relations characterizing the social organization of schooling (Bryk & Schneider, 2002). "When relational trust is high among the various role-sets, the school as an organizational entity is likely to exhibit properties of its operation that are more conducive to such things as a) supporting the practices and growth of new teachers and b) school improvement, including more effective decision making and stronger social support for innovation and/or change" (Youngs, Qian, Holdgreve-Resendez, in progress).

Finally, the quality and effectiveness of mentoring and induction may rely on the level of professional fit or alignment between a novice teacher and their mentor, colleagues, and administrators (Youngs, Qian, Holdgreve-Resendez, in progress). The degree of professional fit may mediate the effects of induction policy, as well as other district and school policies. For example, Achinstein, Ogawa, and Speiglman (2004)

explored the effects of state policies and local conditions on teachers' beliefs and practices, paying particular attention to how school professional culture influenced new teacher socialization. Their study focused on two elementary teachers who participated in the Santa Cruz New Teacher Center induction program in two California districts.

In reporting their findings, the authors focused primarily on two teachers in two different districts: Liz and Sam. The differences in the two teachers' background characteristics and preparation routes not only influenced the teaching skills that they acquired but also helped guide their labor market decisions, which ultimately influenced their levels of professional fit within their schools. Liz grew up in the urban district in which she taught, attended a nearby large public university, and began teaching while she completed her certification. District A, in which Liz worked, recruited teachers from the local community to reflect the population of the students, even though they may have initially lacked full teaching credentials. Sam on the other hand was from an affluent northern California community and received a teaching certificate and master's degree from a research university. District B, in which Sam worked, recruited teachers from research universities and looked for teachers that shared a teaching philosophy consistent with that of the district.

The expectations placed on Liz by district policy and colleagues were to follow routines, curriculum, and assessments designed by the state and district. The induction program in her district also heavily revolved around implementing the literacy curriculum. Liz was guided towards a particular way of teaching, and district policies concerning curriculum and induction were potentially designed for someone with limited professional preparation. In contrast to Liz, "Sam enjoyed numerous professional

development activities that emphasized inquiry and co-construction of knowledge" (Achinstein, Ogawa, & Speiglman, 2004, p. 579). He benefited from coaching, team collaboration, reading academies, action research groups, membership in reform networks, and university affiliation. The expectations in this district were for teachers to grow as professionals with support from the district and colleagues. Sam developed social networks that enabled him to access resources and expertise in response to challenges and pressures that he faced. Policies in these two districts led to significant variations in the supports and pressures that Liz and Sam experienced, which influenced their instructional practices in very different ways.

In addition to curricular support from the district and colleagues, both Liz and Sam were assigned a mentor during their first two years of teaching. Liz and her mentor focused more on issues related to students, parents, and being rehired (she was laid off after her first year) than on instructional matters. Sam and his mentor met on a weekly basis to co-plan lessons, develop literature circles and writer's workshops, and discuss theories related to literacy instruction. The high frequency and level of their interactions suggest a more developed relationship and a more proper alignment of teaching philosophies. In addition, the induction program allowed Sam to observe teachers in other schools and districts so that he could obtain additional assistance. This study illustrates the role that professional fit within an organization has in determining the activation of support that is available to novice teachers. This highlights that professional fit may not only determine what support is provided to novice teachers, but also to what extent novice teachers engage with the support that is available.

Although much of the previous research suggests that mentoring and collaboration with colleagues and administrators potentially produces positive teacher outcomes, such as improvements in instruction or increased retention rates, a recent large-scale quantitative study challenges some of the findings of other research on mentoring and induction. Glazerman and colleagues (2008) used an experimental design to study the effects of comprehensive induction programs developed by the Educational Testing Service (ETS) and the New Teacher Center (NTC), compared to a control group of districts which used their current induction strategies. Covering 17 districts in 13 states, there were 100 treatment schools and 103 control schools in 9 ETS districts, and 110 treatment schools and 105 control schools in 9 NTC districts (Glazerman et al., 2008). Based on the first year of data collection (2005-06), the researchers found no statistically significant effects between the treatment group (ETS and NTC combined) and control group of teachers with regard to lesson implementation, lesson content, classroom culture, teacher effectiveness, or on teacher retention (Glazerman et al., 2008, p. xvi). The researchers note that there may be longer term effects which may be uncovered through analysis from their second year of data collection. At the same time, their findings suggest that induction policies may not always produce their intended effects.

By focusing on characteristics of mentoring and other induction activities which include a) the characteristics and roles of the mentor and mentee; b) the characteristics and roles of colleagues and administrators; c) school organizational conditions; and d) the degree of alignment or fit between novices and their mentors and colleagues, researches can better account for the organizational and social contexts which influence the quality

and effectiveness of mentoring and induction (Youngs, Qian, & Holdgreve-Resendez, in progress). Although recent empirical research has shown no effects of induction on teacher outcomes (Glazerman et al., 2008), many other empirical studies have found some significant effects on novice outcomes associated with the organizational and social context of their school. For example, in their research from Chicago, Kapadia, Coca, and Easton (2007) found that collaboration with colleagues and support from principals was associated with higher levels of novice teacher commitment. It is important for researchers to continue to explore how the organizational and social contexts influence the work conditions of novice teachers in order to better craft mentoring and induction policy.

New teacher induction and teacher associations. It is important to consider what role that labor-management relations and collective bargaining have in the provision of new teacher induction as well as other supports to novice teachers. In addition to potentially influencing induction policy through collective bargaining, teacher associations also affect novice teachers' interactions with colleagues through the definition of teachers' work and expectations, which may either lead to more autonomous work or potentially lead to increased teacher collaboration (Bascia, 1997). Additionally, the climate of labor-management relations may influence the level of school-wide professional community, thus influencing the levels of collaboration between novices and their teacher colleagues or between novices and their administrators (Streshly & DeMitchell, 1994).

Many induction programs were originally initiated by teacher associations as a way to provide support to new members and help them grow as teachers (Poole, 2000).

Also, although many induction programs are run by district or school administrators, when districts face budget shortfalls teacher associations often step in to help deliver induction support and additional professional development (Bascia, 2003). Generally, there are three types of professional development associated with teacher associations: a) workshops, seminars, and conferences; b) formal mentoring, peer coaching, and other induction activities; and c) informal collaboration with colleagues (Bascia, 2003). In addition, teacher associations may encourage professional development by connecting some elements (such as continuing college credit) to increases in salary (Bredeson, 2001). Since teachers' work days provide little time for professional development, teacher associations often negotiate extra paid days/hours or extended contracts for summer work in order to meet the needs of teachers (Bredeson, 2001). Additionally, some induction programs promote collaborative planning time for academic department members or grade-level teams, which may be more beneficial in improving teacher effectiveness and commitment (Smith & Ingersoll, 2004).

At the same time, teacher association involvement in induction and professional development may draw their focus away from bread and butter issues. "It would be a mistake for anyone to assume that all teacher union locals (or all districts) have embraced education improvement and teacher quality as an essential part of their mission" (Koppich, 2005, p. 91). Many people believe that teacher association involvement in such non-economic areas reduces public control, limits the flexibility of school administrators, and may negatively influence district and school decisions about resource allocations (Bredeson, 2001). Therefore, the extent to which collective bargaining shapes new teacher induction can greatly vary depending on the dynamics of the district,

including the labor-management relations. Overall, teacher associations and collective bargaining agreements not only partially define the organizational environment in which induction policy is crafted, but may also influence the social context in which novice teachers' work. It is therefore important, when studying new teacher induction, to study how labor-management relations influence new teacher outcomes such as commitment (Kerchner & Cooper, 2003).

Chapter 2

Conceptual Framework

This research study is grounded in the theoretical ideas of new institutionalism and social capital theory, utilizing both an organizational-level theory of action and an individual-level theory of action. In particular, this study pays particular attention to the formal and informal organizational structures which arise in response to the policy environment regarding new teacher mentoring (Meyer & Rowan, 1977), and to the social influence novice teachers experience within their given organizational context through interactions with their mentors and colleagues (Meyer, Scott, & Deal, 1981; Coleman, 1988). Novice teachers make sense of their organizational context based on the formal structures, rules, and policies of their districts and schools (organizational theory of action), but also through their own and their colleagues' beliefs and practices which may vary from the formally defined institutional rules (individual theory of action) (Lounsbury, 2001; Powell & Colyvas, 2007; Frank, Krause, & Penuel, in progress).

New Institutionalism. New institutionalism stems from the ideas put forth under "old" institutionalism, which suggests that organizations are rationally ordered to attain goals, but the formal structures cannot eliminate non-rational dimensions of organizational behavior, such as individuals who participate in the organization beyond their formally defined roles within the system and includes the complex informal systems that link participants with one another (Selznick, 1948). New institutionalism pays particular attention to how organizations relate to their environment through the development of structural elements which often lead organizations who serve similar

functions to resemble each other in structure (i.e., institutionalized) (Meyer & Rowan, 1977; DiMaggio & Powell, 1983). At the same time Meyer and Rowan (1977) suggest that because organizations fear loss of legitimacy, structural elements are decoupled from day-to-day activities and from each other. DiMaggio and Powell (1983) argue that highly structured organizational fields often lead to homogeneity in structure, culture, and output. An organizational field refers to "those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and produce consumers, regulatory agencies, and other organizations that produce similar services and products" (DiMaggio & Powell, 1983, p. 143). Therefore, organizations put more effort into maintaining their institutionalized structures to maintain legitimacy rather than to focus on the efficiency and effectiveness of activities (Meyer, Scott, & Deal, 1981).

In relation to education, Meyer, Scott, and Deal (1981) proposed, "Educational organizations arose to bring the process of education under a socially standardized set of institutional categories, not necessarily to rationalize the 'production processes' involved in carrying out the work" (p. 46). They continued, "Organizational attention is directed toward maintaining conformity with the socially standardized categories of the educational system, while little effort is expended in the control and coordination of instructional activities" (p. 49). With regards to mentoring, under this theory it would be expected that districts and schools would respond to their environments in similar ways, instituting mentoring programs that are in line with state regulations and common practices. This also suggests though that districts and schools are more interested in maintaining the structure of an acceptable mentoring system rather than its effectiveness in producing outcomes, such as improved novice practice or teacher retention. Meyer

and Rowan (1977) even argue, "Institutionalized organizations seek to minimize inspection and evaluation by both internal managers and external constituents" (p. 359). Therefore districts and schools may view induction programs as a success based on how they look rather than the results they produce, and may expend little effort in monitoring their mentoring programs.

Although novice teachers, their mentors, and their colleagues operate within these formalized structures, they still maintain personal agency. Recent research has called for more attention to the micro-foundations of institutionalism, known as new structuralism, to account for how individuals make sense of the organizational context (Lounsbury & Vantresca, 2003; Powell & Colyvas, 2007). New structuralists largely focus on the social-psychological realm of individual sense making through which individuals negotiate rules and procedures and conflicting demands (Frank, Krause, & Peneul, in progress). This sense making not only takes place within the formalized structure of the institution, but also within the immediate social context in which individuals are located (Granoveter, 1985; Frank, Krause, & Peneul, in progress).

Social capital theory. The attention to social context is related not only to individuals' sense making, but also to their ability to access support and resources within an organization. Therefore, this research study is also grounded in the ideas of social capital theory. Bourdieu (1986) defines social capital as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (p. 248). Social capital theory, therefore, emphasizes the numerous ways that individuals are located in networks of social relations and seeks to explicate how the nature, quality, and intensity

of these relations affect several important outcomes. With regard to teachers, it highlights the resources that are available through social relations with colleagues and suggests that different types of relations will – to varying degrees – mediate the effects of district and school policies, as well as facilitate access to resources (Coleman, 1988).

Social capital is equated to investments in social relationships with expected returns, but those returns are not necessarily guaranteed (Lin, 1999). Therefore, social capital may not always be positive, having potentially negative consequences such as: a) exclusion of outsiders, b) excess claims on group members, c) restrictions on individual freedoms, and d) downward leveling norms (Portes, 1998). The returns that one sees to their investment in the relationship may depend on many different factors, including location within a network (Burt, 1997), bridges to other networks (Granovetter, 1973), closure of networks (Coleman, 1988), or structural variations within a network (Lin, 1999).

This sociological view of social capital is different from that put forth by some political scientists. For example, Putnam (1995) places social capital at the community level with the idea of "civicness", which facilitates action and cooperation for mutual benefit at a more aggregate level. Portes (1998) is cautious with regard to moving the concept of social capital to the community level or even higher. In his words, "As a property of communities and nations rather than individuals, social capital is simultaneously a cause and an effect" (Portes, 1998, p.19). Although there are different interpretations of social capital, in education research social capital is most often thought to exist at the individual level, and is often defined as the manifestation of *supports and pressures* through social relations (Dika & Singh, 2002; Frank, Zhao, & Borman, 2004).

Therefore, this study uses the ideas of social capital as the manifestation of supports and pressures (Bidwell, 2001; Frank, Zhao, & Borman, 2004) and variations in levels of social capital as proposed by Lin (1999). Lin (1999) describes two types of causation forces that are important in the analysis of inequality of social capital: 1) structural variation, and 2) positional variation. Structural variation can be seen in the distribution of available resources, such as teacher expertise or curricular materials, which may vary by district, school, or subgroup. Positional variation is related to a teacher's social, political, and economic status within a social network which impacts their ability to access resources and deal with pressures and expectations associated with their work conditions. Social networks consist of relationships of individuals within a social system, which vary in their strength and in their ability convey support or pressure. A novice's position within the school may greatly impact her ability to access resources through their relationships. Given a teacher's novice status, she may be at a lower social and political level than more senior teachers, which limits their ability to access resources. At the same time, if they are in a venue which supports new teachers, a teacher's novice status may actually help them receive extra support and resources. Additionally, these relationships may produce pressures and expectations that impact novice teacher commitment in negative ways. For example, novice teachers are often expected to perform at the same level as their veteran colleagues, and the expectations placed on them by the administration and their colleagues may add negative stress to their professional lives.

Figure 2.1 represents the framework which I used to guide the research and analysis. At the top, collective bargaining agreements and district policy respond to

environmental factors such as state regulations and mentoring research. Collective bargaining agreements may or may not directly influence formal district mentoring policy, represented by the dashed line between them. School policy is then at least partially defined by district policy, though school administrators often have discretion in shaping at least parts of mentoring policy, such as assigning mentors to novice teachers or providing release time. School policy in many ways will define the relationship between a mentor and mentee, based on the characteristics of the assigned mentor and based on the level of oversight that administrators have over the mentoring relationship. School policy may also impact the level of collaboration between novices and their colleagues, through such policies as the establishment of teacher teams or common planning time. Through relationships with mentors and colleagues, novice teachers have access to varying levels of resources, support, and teacher expertise. Additionally, these relationships may also place certain pressures on novice teachers. Ultimately these relationships may then influence novices' levels of commitment. The diagram therefore represents both organizational-level action through defining policy, but also individual-level action where through relationships novices' make sense of policy and are socialized into the profession.

Hypotheses. The ideas of new institutionalism and social capital theory help frame the experiences of novice teachers in their organizational and social contexts, as well as how these contexts mediate the effects of district and school policies associated mentoring. Districts and schools respond to the policy environment partially defined by state regulations, collective bargaining provisions, research, and accepted practices in setting their induction policies. At the same time, the social contexts in which novices

and their colleagues work in are complex and they are not limited to their formalized roles within the organization. Therefore mentoring policy may be set by a district or school (organizational level), but the way in which teachers make sense of the policy and the actual day-to-day activities regarding new teacher mentoring are often shaped by the micro-level social context in which teachers operate (individual level). This leads to a set of hypotheses to address my three main research questions:

Research Question 1: To what extent do collective bargaining agreements influence the provision of mentoring?

Hypothesis #1: Although there may be variation as to what extent collective bargaining agreements define the scope of bargaining, I expect there will be little variation in the provision of mentoring across the districts because of the effects of institutional formalization of policy structures.

Research Question 2: To what extent are early career teachers interacting with their mentors, as well as with their colleagues?

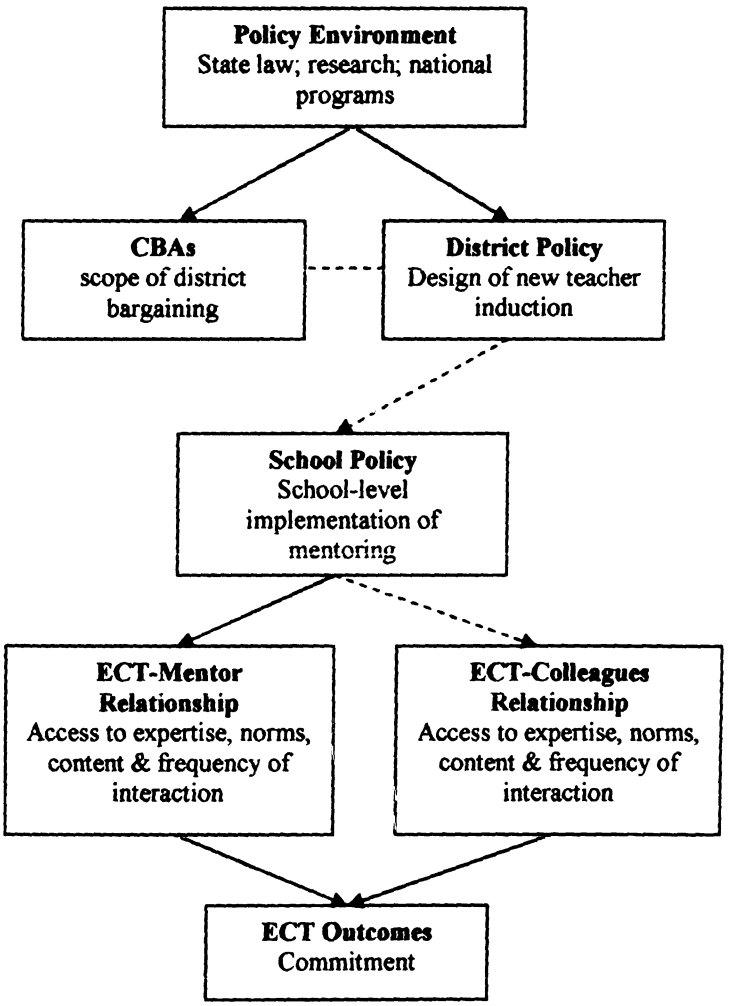
Hypothesis #2: I expect that early career teachers are likely to interact with their close colleagues more often than with their formally assigned mentors. This reflects novices' ability to self-select into sub-groups within an organization which may better reflect their beliefs and practices regarding education, compared to those of their formally assigned mentor.

Research Question 3: How are novices' professional relationships associated with their levels of commitment?

Hypothesis #3: I expect that when novice teachers feel that their professional goals are well aligned with the goals of their colleagues and mentors, they will have greater access

to resources and support which will help improve their commitment. Additionally, I expect that novice teachers who perceive better labor-management relations in their schools will have higher levels of commitment.

Figure 2.1: Conceptual framework



This study builds on existing research on teacher commitment by providing information on how collective bargaining provisions may influence mentoring policy, the extent to which novice teachers are interacting with their formally assigned mentors and other key colleagues, and to what degree novices' organizational and social context is associated with their levels of commitment. By using such information, teacher associations and districts can work to improve teacher commitment through re-examining how teachers interact within a school organization, particularly paying attention to what organizational conditions are likely to lead to more productive collaborative environments. Additionally, this study potentially has implications for the role that labor-management relations play in influencing the work conditions within which novices work. This study has further implications for state and district policy concerning new teacher induction, the physical and social organization of schools, and the extent of labor-management relations in creating both organizational and social support for novice teachers.

In the next chapter, I describe the research design and methodology used for analysis of the data that was collected. In chapter 4, I review district policy and collective bargaining provisions concerning new teacher mentoring and induction in the sample of districts. This is largely aimed at answering research question 1. In chapter 5, I explore the frequency and nature of early career teacher interactions with their mentors and close colleagues. This chapter aims to address research question 2. In chapter 6, I explore what organizational and social characteristics are associated with commitment levels. Using hierarchical linear regressions and social network analysis I am to address

research question 3. In chapter 7, I provide a summary of the findings and provide implications policy and practice and research.

Chapter 3

Methodology and Analysis

This dissertation research stems from a larger ongoing study of early career teachers directed by Peter Youngs and Ken Frank in eleven urban and suburban Michigan and Indiana districts, known as the Michigan Indiana Early Career Teacher (MIECT) Study. In particular, this study used a mixed methods strategy, including both survey data and structured interviews, to explore the relationship between collective bargaining, social capital, and novice teacher outcomes such as instructional practice and commitment. A sample of 184 novice teachers was surveyed in 2007-08 and a sub-sample of 14 were interviewed during the same year. Additionally, the mentors and key colleagues of the novice teachers in the study were also surveyed in 2007-08.

State context. This analysis includes data from six Michigan districts and five Indiana districts. It is important to consider the legal context within each of the states which may impact the scope of bargaining and legal requirements for providing new teacher mentoring. Based on data collected by the National Center on Teacher Quality, districts in Michigan and Indiana are both legally obligated to negotiate with their teacher associations, and negotiation over new teacher mentoring is allowed but not required (www.nctq.org/tr3/scope). Michigan is a union shop state, meaning teachers in public schools are not required to join the local teacher association when they are hired into a district, but they must pay "fair share" dues to the teacher association because they are covered by the collective bargaining agreement. In Indiana, teachers are not required to join the local teacher association nor are they required to pay any dues to the association

even though they are covered by the collective bargaining agreement. Of the 184 ECTs in the sample, approximately 80 percent indicated that they are a member of their local teacher association.

Michigan law states that all new teachers are to be assigned a master mentor teacher for their first three years in the profession, and to receive 15 days of professional development per year (PA 289 (1995) Section 1526). Indiana law requires that all new teachers to be assigned a mentor for their first year of teaching, and highly recommends that that they are assigned a mentor for their second year in the profession as well (Indiana Administrative Code). Mentors must complete state approved training, and their duties are outlined by recommendations from the state. The mentoring program in Indiana is part of the Indiana Mentoring and Assessment Program (IMAP), which requires new teachers to complete and turn in an assessment portfolio at the end of their second year in the profession as condition for continued certification.

District sample. The MIECT Study sought to recruit to the study medium to large districts that varied in serving minority and/or low-income students in order to examine whether certain induction policies and practices seemed to have different effects on new teachers' experiences across such districts. It was also a goal to recruit districts that had significant numbers of early career teachers. For example, because of declining enrollments and tight fiscal budgets in many Michigan districts in 2007-08, many districts in the state did not meet the criteria for inclusion in this study because they had not hired many new teachers in the previous couple of years. In sum, the criteria for selecting districts included a) variation among districts with regard to the race/ethnicity and socio-economic status of the students served; and b) each district had at least 10 first-

, second-, and third-year teachers in grades 1-8. Therefore the sample of districts were purposefully recruited and selected to meet the study's criteria.

The public school districts that were included in the study included the following: Daus, Greenberg, Kaline, Underwood, Wagner, and Whitaker in Michigan, and Engram, Luckman, Payton, Sayers, and Wilson in Indiana.[1] Each of the eleven districts participated in collective bargaining as required by state laws, and the CBAs in each district were collected for analysis. The eleven participating districts varied significantly by student enrollment, percent of students eligible for free or reduced lunch, and percent minority students.

Table 3.1: District demographics

District	Total # of Schools in District	Total K-12 Student Population	Percent Minority	Percent Eligible for Free/Reduced Lunch
Daus (MI)	36	18386	0.12	0.51
Greenberg (MI)	80	21448	0.80	0.65
Kaline (MI)	18	9139	0.50	0.42
Underwood (MI)	43	29261	0.11	0.11
Wagner (MI)	12	7994	0.46	0.36
Whitaker (MI)	23	11645	0.19	0.29
Englam (IN)	20	13666	0.48	0.62
Luckman (IN)	18	16138	0.57	0.44
Payton (IN)	13	10662	0.84	0.50
Sayers (IN)	38	21769	0.60	0.62
Wilson (IN)	19	12483	0.59	0.58

The three medium-sized districts in Michigan – Wagner, Kaline, and Whitaker – served from 8,000 to 12,000 students in 2007-08 while the three larger Michigan districts – Daus, Greenberg, and Underwood – served from 19,000 to 30,000 students. The percentages of low-income students were comparable in Wagner, Kaline, and Whitaker

[1] Pseudonyms were used for each of the district names in order to help ensure confidentiality

(29% to 42%) while the percentage of racial minority students ranged from 19% in Whitaker to 46% and 50% in the other two medium-sized districts. While Underwood had the highest student enrollment (29,803 students), it also served the lowest percentages of minority and low-income students of the six participating Michigan districts. The other two large districts, Daus and Greenberg, served comparable percentages of low-income students (51% and 65%, respectively), but Greenberg served a much higher percentage of racial minority students.

The three medium-sized district in Indiana – Engram, Payton, and Wilson – served from 11,000 to 14,000 students in 2007-08 while the two larger Indiana districts – Luckman and Sayers – served from 16,000 to 22,000 students. The percentage of low-income students in Engram, Payton, and Wilson was comparable, ranging from (50% to 62%); the percentage of racial minority students in Engram and Wilson was around 48%, while in Payton the percentage was around 84% minority. Luckman served around 57% minority students, and 44% low income, while Sayers served around 60% minority students, and 62% low income.

Early career teacher sample. Teachers who taught the core-content areas (math, science, social studies, English/language arts, and general elementary) in grades 1-8, and were in their first three years of the teaching profession were invited to participate in the study in 2007-08. Participation included the completion of a fall and spring survey and a sample of those teachers were asked to participate in one interview. The surveys administered were in both electronic and paper form.

In an effort to increase participation rates, a five-contact approach was used for each survey administration (Dillman, 2007). A pre-notice letter was sent a week prior to

mailing the survey (which included a cover letter and consent form). A two-dollar bill was included in the next mailing (to help increase participation) which included a link to the online survey. Research has shown that including a token incentive (such as a two-dollar bill) improves response rates 19-31 percent over personalized mailing alone (Lesser et al., 1999). A reminder email with the link to the online survey was sent approximately a week later. A thank you/reminder post card was sent near the survey return deadline, and if a prospective study participant did not complete the survey online, they received a paper copy of the survey. Teachers were compensated with a $20 gift card for completing and returning a survey.

Overall, 184 early career teachers completed both the fall and spring surveys. There was a fall response rate of 63 percent and a spring retention rate of those teachers of 76 percent (See Appendix, Table I for breakdown of response rates by district). Of the 184 ECTs in the sample, 49 of them were first-year teachers, 82 of them were second-year teachers, and 53 were third-year teachers. The majority of them were teaching at the elementary level, 132 elementary teachers versus 52 middle school teachers. Eighty percent of the early career teacher sample was female, and 90 percent of the sample was white.

Both the fall and spring surveys asked about teachers' instructional practices; the frequency and substance of their interactions with their mentors and colleagues; their perceptions of relations within their schools; their work conditions; and their future career plans. In addition, the spring 2008 survey included measures of novice teachers' participation in teacher association activities, and their views on what teacher association priorities should be (e.g., more say in school management, teacher evaluation, etc.).

Items that asked about teacher background, such as degrees, certification, and college attended, were also asked in the spring. By collecting data on novice teachers in fall 2007 and spring 2008, I was able to measure how novice teachers' commitment to their grade level assignment, school, and district changed over the course of the year, as well as how their interactions with mentors and colleagues varied from the fall to the spring.

Mentor/Colleague sample. In order to collect egocentric social network data,[2] in the fall 2007 surveys the novice teachers were asked to list their assigned mentor and other classroom-based colleagues with whom they discussed professional issues such as instruction and classroom management. For each novice teacher in the sample, their mentor teacher and up to eight colleagues that they listed were invited to complete a mentor/colleague survey. The same five-contact approach was used to help improve participation rates from mentors and colleagues, though the mentors and colleagues received no compensation for completing surveys. These mentors and colleagues were then surveyed in the early winter of 2008. Data was collected from 66 teachers named as mentors (64% response rate) and 262 teachers named as colleagues (58% response rate). Mentors and colleagues who were named but were not regular classroom teachers or instructional support providers were considered ineligible for participation (e.g., district personnel) because the goal was to primarily examine the relationship between novices and their teacher colleagues. Many of the questions asked were the same as those directed to the novice teachers, concerning their instructional practices, their perceptions of relations within their schools, their work conditions, and their future career plans.

[2] In egocentric data, individuals name those who may be considered close colleagues, and those people are then surveyed. In socio-centric data, everyone within an organization would be surveyed rather than those who were named.

District and Teacher Association Interviews. In order to gather more extensive information on the provision of new teacher mentoring, the effects of collective bargaining in defining the scope of induction, and the labor-management relations context, Dr. Peter Youngs and I conducted structured interviews with the district teacher association presidents (n=10) and the human resources (HR) directors in each district (n=10). One district HR director and one teacher association president were not available to complete an interview despite several attempts through emails and phone calls to arrange an interview over the course of several months. Interview questions focused on human resources practices concerning mentoring activities; and the labor-management relations climate within each district and within schools in the districts. The interview data helped inform what type of status and attention novice teachers received from both the district and the teacher association in terms of the mentoring support they experienced, as well as to get a better sense of the organizational climate in which new teachers worked. Additionally, the interviews provided information on how mentors were selected and assigned to mentees, as well as some comments on the quality of the various mentoring programs.

Analysis

I performed qualitative and quantitative analysis in multiple stages to align with the research questions. To address the first research question regarding the provision of mentoring, I utilized both qualitative and quantitative data. For the qualitative data, text from collective bargaining agreements from each of the districts and notes associated with the review of the agreements were organized by using NVivo7 software. This

software allowed me to easily compare mentoring language in the collective bargaining agreements across districts. Additionally, the interviews with HR directors and teacher association presidents were audio recorded and then transcribed to learn more about formal district policy regarding mentoring (e.g., mentor selection, mentor assignment, requirements for meeting). The transcriptions were then coded using the same categories with which the CBAs were coded.

In the first stage of analysis, I used NVivo7 to look for systemic patterns of variation in formal district policy related to the provision of mentoring, and how these policies seemed related to collective bargaining agreements. For the second stage of analysis, I drew on interview data from the HR directors and teacher association presidents to discern the ways in which these policies were implemented across the districts, particularly paying attention to indications of gaps between the formal policy and the day-to-day mentoring activities.

In addition to using the qualitative data to learn about the provision of mentoring and the role that collective bargaining plays in setting induction policy, I used HLM software to run an ordinal logistic regression to examine which organizational factors may be associated with the probability that an early career teacher indicated that they had been assigned a mentor. In particular, I looked at how the presence of CBA language pertaining to mentoring was associated with the probability of being assigned a mentor.

To address the second research question regarding the extent to which early career teachers were interacting with their mentors and colleagues, I first used SAS software to produce overall frequencies of novice interaction with their mentors, as well as to look across interactions around specific topics, such as curriculum, teaching strategies, or

student behavior. I also compared the frequency of interactions between mentors and mentees by novices' years of experience and level at which they taught (elementary versus middle school). In addition, I compared the frequency and substance of ECTs' interactions with mentors to their interactions with their close colleagues, as well as the reported level of importance of support provided by the mentors and colleagues. I then produced correlations to examine how frequency of interactions with mentors and colleagues may be associated with early career teachers' perceptions of their organizational context. Finally, I used SAS software to run a multi-level linear regression to examine whether or not mentor-mentee match and importance of mentor support were associated with more frequent interactions with mentors.

To address the third research question, I first used SAS software to run a series of hierarchical linear regressions to examine the organizational and social factors that may be associated with novices' commitment to their grade level assignment, school, and district. In particular, attention was paid to early career teachers' perceptions of labor-management relations within their schools, their perceptions of professional fit, and the level of importance they placed on the support they received from their mentors and colleagues. I then used hierarchical linear regression to examine the organizational and social factors that may be associated with novices' change-in-commitment from fall to spring. Finally, I used social network analysis to analyze survey data gathered from novice teachers and their mentors and colleagues. In particular, I examined how novice teachers' perceptions of organizational context were influenced by the perceptions of their mentors and colleagues.

By utilizing both qualitative and quantitative data I aimed to thoroughly address the three key research questions. The use of qualitative data, particularly the interview data, provides greater context for understanding the formal structures of mentoring within the districts, but it also provides an opportunity to learn more about how the implementation actually takes place. This partially addresses the concerns put forth in new institutionalism regarding the gap between formal structures and informal activities within organizations. The survey data gathered from the early career teachers, their mentors, and their colleagues provides even further information on the informal structures within the schools. The data provides valuable information on the frequency and substance of ECTs' interactions with mentors and colleagues, as well as ECTs' perceptions of the organizational context. Finally, this analysis allows for better understanding of how the organizational and social context is associated with novice teachers' commitment levels.

Chapter 4

Mentoring Policy

This chapter addresses the first guiding research question; to what extent do collective bargaining agreements influence the provision of mentoring? Using the ideas from new institutionalism as the guiding framework, I aimed to explore both the formal and informal structures which guide mentoring policy within the sample of districts. New institutionalists are concerned with how organizations become institutionalized as they relate to their environments, leading similar organizations (e.g., school districts) to develop the same or similar formalized structures (Meyer & Rowan, 1977; DiMaggio & Powell, 1983). In the case of designing and implementing a mentoring program, school districts respond to state law, research and commercial induction programs, as well as historical factors within their districts (DiMaggio & Powell, 1983).

Under this framework, one would expect districts to work towards implementing mentoring programs that fit the mold of "acceptable" to maintain legitimacy, with less concern about the effectiveness or efficiency in providing support to novice teachers and improving teacher and student outcomes (Meyer, Scott, & Deal, 1981). This lead to my first hypothesis: *Although there may be variation as to what extent collective bargaining agreements define the scope of bargaining, I expect there will be little variation in the provision of mentoring because of the effects of institutional formalization of policy structures.* At the same time, although the formalized structure of mentoring may not significantly vary across the districts, especially within a given state, the informal

structures in which mentoring operates may lead to variations in effectiveness, given individuals and school contexts.

I first provide some information on the legal context and requirements for providing mentoring to new teachers in Michigan and Indiana. Next, using information from the coded collective bargaining agreements from each of the eleven districts, and drawing from interviews with the human resources directors and teacher association presidents, I outline the formal provision of mentoring in each of the districts. In particular, I am interested in the extent to which the collective bargaining agreements and district policy define the scope of mentoring. I am also interested in how the day-to-day implementation of mentoring may be different than what is formally defined, so I drew from the interviews to get a sense of any potential gaps between what policy dictates, and how mentoring is actually provided. I then present descriptive data on the provision of mentoring across the eleven districts. Finally, I present output from a multi-level logistic regression to see if there was a statistically significant effect on the probability of having a mentor assigned to a teacher based on the presence of collective bargaining provisions concerning new teacher mentoring.

State context. Both the states of Michigan and Indiana require that new teachers are assigned a mentor, though they do vary in the extent that state policy may guide local policy. Michigan law states that all new teachers are to be assigned a master mentor teacher for their first three years in the profession (PA 289 Section 1526; 1995). The Michigan State Board of Education (SBE) made a statement regarding the provision of mentoring:

> The SBE believes that the New Teacher Induction/Teacher Mentoring process is a cooperative arrangement between peers in

> which new members of the teaching profession are provided ongoing assistance and support by one or more skilled and experienced teachers. This relationship should be collegial in nature, and all experiences should be directed toward the development and refinement of the knowledge, skills and dispositions necessary for effective learning. This process is expected to be mutually beneficial for all parties involved and to result in improved instructional practice and professional performance (www.michigan.gov/mde).

In order to try to reach the goals laid out in the state mandated mentoring program, the state board also made recommendations for mentor qualifications, but deferred actual mentor selection criteria, qualifications, and training to local education agencies. There recommendations include:

> Criteria for selection of mentors: It is strongly recommended that teacher mentors be selected by a district/school committee using operational guidelines developed at the local level. It is also recommended that the teacher mentor volunteer willingly for their responsibility (www.michigan.gov/mde).
>
> Important characteristics of mentors: Demonstrated excellence in teaching, participation in professional development activities, same certification or specialty area as the new teacher and be located in same building (if possible), active and open listener (www.michigan.gov/mde).

The statements posted by the State Board of Education lay out the general goals of mentoring from the perspective of the state. Generally, the state policy aims to ensure that novices have district/school support in developing their subject matter and instructional knowledge and skills, and that the mentoring relationship is collegial in nature as opposed to evaluative. This is to help promote a relationship based on trust and assistance, rather than one in which the mentor may have power over a mentee. Additionally, the state acknowledges the potential importance of matching a novice with

a mentor who has content knowledge in the subject that the novice is teaching, and the importance of being in the same building to promote more frequent and meaningful interaction. At the same time, the law and policy gives a lot of discretion to the local level to design and implement the mentoring policy. This could potentially lead the greater variation in program design, as well as in program effectiveness.

Similar to Michigan, Indiana law requires that all new teachers to be assigned a mentor, but only for their first year of teaching. The state, though, highly recommends that new teachers are assigned a mentor for their second year in the profession as well. As part of a two-year continuing certification process (Indiana Mentoring and Assessment Program - IMAP), which includes the submission of a portfolio at the end of a teacher's second year, Indiana state law specifies the provision of mentoring to a greater extent than in Michigan. Although the provision of mentoring may be more regulated at the state level in Indiana, the message given by the two states are similar. The State of Indiana indicates:

> Student learning is directly related to teacher knowledge and abilities and that teachers, like students, should be continual learners. As a result, beginning teachers will receive guidance and support by trained mentors, as well as professional development activities provided by their schools. Such guidance and support within a collaborative environment should provide practical strategies to enhance the capabilities of beginning teachers to increase student learning (http://www.doe.in.gov/dps/IMAP_online.html).

In contrast to Michigan regulations, Indiana state regulations set criteria for who can serve as a mentor, particularly requiring them to complete state approved training:

> A certified mentor is an accomplished teacher who has been selected by the local school district and has completed state-approved mentor training. This individual is assigned to support a beginning teacher during their first year of participation in the

> IMAP. The individual mentor is trained to provide instructional support to the beginning teacher as well as identify additional resources needed to ensure the beginning teacher develops competency in his/her teaching. After successfully completing state-approved mentor training, the participant is qualified to serve as a mentor. The first priority for the assignment of mentor teachers must be given to individuals who complete a mentor training program if available.

The Indiana state policy also acknowledges the potential importance of creating a collegial relationship between mentors and mentees, and stresses the importance of such a relationship in developing novices' knowledge and skills in the classroom. In Indiana though, they require the mentors to complete state approved training, and because it is linked to the IMAP certification process for new teachers, the mentoring which is done at the local level is potentially more constrained to meet the requirements of the IMAP. At the same time, it is left to the districts to identify teachers to complete the mentoring program, and therefore considerable discretion remains at the district level.

In addition to the state requirements regarding the provision of mentoring, state regulations concerning collective bargaining are important to consider, particularly the legal guidelines for the scope of collective bargaining in both Indiana and Michigan. In Michigan and in Indiana, negotiation over the provision of new teacher induction is permissive but not mandatory (www.nctq.org/tr3/scope). Districts may seek to avoid putting language pertaining to induction within a collective bargaining agreement because it then becomes enforceable by a neutral third party. At the same time, teacher associations may seek to include provisions concerning induction in collective bargaining agreements to ensure that novice teachers are supported. Not all local teacher associations would be interested in negotiating over a permissive issue such as new

teacher induction, especially if they are having difficulty negotiating over mandatory issues such as salary and benefits (Bredenson, 2001; Koppich, 2005).

Other external environmental factors may influence the provision of mentoring, particularly economic factors. During the time of data collection, several districts across Michigan and Indiana faced tight fiscal budgets due to the poor economic climate in both states. For example, both the Daus and Whitaker teacher association presidents indicated that due to budget cuts in their districts cuts were made to their mentoring programs, which resulted in the elimination of full-time released mentors. Additionally, in three of the six Michigan districts in the sample there were layoffs during the year of data collection (though most were called back), and in several of the districts in the sample from Indiana they finally experienced stagnant growth in student population after years of steady increases. Standardized data on the fiscal situation within the districts was not collected though.

In summary, both states require mentoring for new teachers, in Michigan for the first three years and in Indiana for the first year. Both states stress the importance of collaboration between teachers as a key to professional growth and its relation to student outcomes. Additionally, both states indicate that selection of mentors should occur at the local level, but in Indiana teachers are required to complete state approved training before they can serve as a mentor. State law also allows for the negotiation between teacher associations and districts concerning the provision of mentoring, but it is not a requirement. These state regulations are a key part of the environment in which districts respond to in developing and implementing their mentoring policies. Since district mentoring policy is at least partially shaped by state regulations, the structure of district

mentoring policy may show several similarities between districts. At the same time, quite a bit of discretion is given to districts in designing mentoring programs, the selection of teachers who become mentors, and importantly the match between mentor and mentee. Other factors though should be considered when thinking about the provision of mentoring, such as the economic situation that districts face.

Collective bargaining provisions. Collective bargaining agreements can be thought of as responding to both external forces such as state regulations, and internal forces such as labor-management relations and the needs of teachers. Negotiation of mentoring policy is allowed but not required under state law in both Michigan and Indiana, but only four of the 11 collective bargaining agreements reviewed contained any language pertaining to the mentoring of new teachers. This may reflect the fact that many teacher associations and school districts simply focus on negotiating over mandatory issues such as salary, benefits, and work conditions rather than on efforts to improve instructional quality (Johnson & Kardos, 2000; Koppich, 2005). It is possible though that having language in a collective bargaining agreement pertaining to mentoring ensures that mentoring policy is fully implemented and enforced, and may signal to teachers that both the district and teacher association are promoting new teacher development. At the same time, goals and intentions expressed through collective bargaining may not ultimately lead to changes in action where institutions encounter loose coupling among bargaining units (Scott, 1998). In other words, changes in a collective bargaining agreement may not ultimately lead to changes in behavior on the ground level if structural elements within the district (e.g., schools, departments,

bargaining units, etc) are loosely coupled and in reality are less interrelated and closely coordinated as organizational charts would show.

It is possible that within the four districts which have collective bargaining agreements with language pertaining to new teacher mentoring, there is a better relationship between the administration and the teacher association. This could possibly allow them to not only successfully negotiate mandatory issues such as salary to a satisfactory degree for both parties, but also to negotiate over permissive issue areas such as new teacher mentoring. Or it could be that they are able to negotiate over a permissive issue area such as mentoring to the degree that it builds common goals and promotes a collaborative bargaining style in order to move towards negotiating over more difficult mandatory issues. The data collected in this study can not directly attest to this issue, but it does point out the need for further research.

The four districts which contained language pertaining to mentoring in the CBA include Greenberg, Kaline, Wagner, and Whitaker, all of which are in Michigan. The Kaline and Whitaker CBAs simply stated that the mentoring relationship was to be confidential and should not be included in evaluation of mentor teacher or mentee. This is aligned with the state specification that the relationship should be collegial in nature, in order to promote a better professional relationship not based on formal authority. The Greenberg CBA stated that when possible, mentors and mentees were to be matched by program and school. Additionally, it also indicated that the mentoring relationship was to be confidential and not to be used for evaluative purposes. In addition, it suggested that school administrators provide release time for mentors and mentees to work together. At the same time, this was a suggestion and discretion was left to the building

administrators. In order to possibly recruit teachers to become mentors, or at least provide extra incentive, the CBA said that at the principals' discretion, mentors could be compensated $400 for mentoring a 1st year teacher, $200 for mentoring a 2nd year teacher, and $100 for mentoring a 3rd year teacher. It is not clear that principals ensured that mentors were compensated, and it's not clear how much financial incentive was necessary to attract and retain an adequate number of high quality mentors.

In Wagner, the CBA indicated that when possible, mentors and mentees were to be matched by certification and school. Additionally, the mentoring relationship was to be confidential and not to be used for evaluative purposes. Similar to Greenberg, the CBA said that school administrators were to provide release time for mentors and mentees to work together, and suggested that the mentor and mentee be assigned common preparation time. Again, this seemed to be more of a suggestion, and discretion was given to the building administrator to manage their building given the needs of their teachers and students. The CBA also guaranteed that mentors were compensated 2 percent of BA base salary (about $750) for mentoring a 1st year teacher, and 1 percent of BA base for mentoring a 2nd or 3rd year teacher.

Echoing the language that stems from the state regulations, language in the Greenberg and Wagner CBAs stressed the importance of mentor-mentee match in promoting a valuable mentoring experience. Additionally, both suggest the provision of structural elements, such as release time, to promote more frequent and substantive interactions. At the same time, the matches are made at the school level by the building administrators, and it is up to the building administrators to schedule release time or common planning time. It is not clear as to what extent the district monitored the

provision of mentoring in individual school buildings. Having language in the CBAs though may provide recourse to new teachers and mentors who feel that the formal mentoring policy is not being implemented properly at the school level. Additionally, building level principals may be more inclined to follow policy defined by a CBA rather than policy not defined by a CBA to avoid any formalized teacher grievance. Yet, the language within the collective bargaining agreements was relatively soft, in the sense that they use words such as "suggest" and "when possible" or "at the principal's discretion". This may reflect the fact that because negotiating over new teacher mentoring is not mandatory, when it is contained within the collective bargaining agreements it is an area that pays lip service to promoting new teacher induction rather than acting as an enforceable code of policy.

Overall, the majority of collective bargaining agreements reviewed contained no language pertaining to mentoring, and two of the four that did was quite limited in defining the scope of the mentoring program. The two collective bargaining agreements that contained more language (Greenberg and Wagner) may provide greater opportunities for mentors and mentees to interact because it calls for release time, and also may make it more likely that a mentor and mentee are matched by certification or grade level. Yet, formal district policy across all the districts may not vary greatly regardless of provisions in the collective bargaining agreements because the collective bargaining provisions did not really set further guidelines than what the states did. Additionally, quite a bit of discretion was given to building level administrators, therefore although policy might look uniform across districts and within districts, the quality and substance of mentoring may vary greatly on the ground level.

Formal district policy. In conjunction with or in the absence of collective bargaining provisions which guide mentoring policy, all eleven districts had some form of formal mentoring policy. In accordance with state regulations, all six Michigan districts in the sample had an induction policy which assigned a mentor to a teacher for their first three years in the profession. Additionally, in all six districts mentor assignments were made at the building level, the mentors had to have tenure, and in five of the six Michigan districts mentors received some form of compensation.

In Underwood, mentors were required to attend an orientation, and to keep a log of their interactions with their mentees. In Kaline, mentors and mentees received training on how their relationship should develop. In both districts, the HR directors indicated that it was policy to try to match mentor and mentee by grade level or subject matter when possible. In Wagner, mentors were offered training but it was voluntary, and they also were required to keep track of their interactions with their mentees through documentation. In Daus, mentors and mentees were supposed to attend occasional after-school meetings which were directed by two master teachers, and they were also required to write in mentoring journals about their interactions. In the words of the Daus HR director, "It's one thing to have a casual relationship with your mentor, it's another one to actually develop a formal mentoring journal."

Because Indiana's mentoring requirements were a little more centralized at the state level, there were some differences compared to the districts in Michigan, particularly due to the required state approved training for mentors. For example, in Engram the human resources director had a direct role in assigning mentors in collaboration with building principals, because she had a centralized list of which

teachers in her district had completed the required training to become a mentor. Similarly, the Payton HR director said that mentors were assigned by the district, but most of the time they were in the same building as the new teacher to whom they were assigned. The Wilson HR director said that their mentoring program was part of a two-year professional development program in addition to what building level principals were doing to meet their school specified goals. When asked about the mentoring program in his district, the Luckman HR director said, "That is more state-directed than it is the district. I think we do more than the state minimum." As with Luckman, the Sayers HR director indicated that the mentoring program was more guided by state policy rather than anything specific at the district level.

Differences in the state policy environment did produce some differences in the provision of mentoring across districts in Michigan and Indiana. In Michigan, more discretion was given to districts in assigning and training mentors, who in turn gave more discretion to building principals to make the assignment decisions. In Indiana, because the state regulations were more prescriptive in what training a teacher needed to be a mentor, and its connection to the two-year portfolio assessment for new teachers, the mentoring programs seemed to be more centralized at the district level. It could be expected that the differences in these formalized structures may lead to differences in the actual provision of mentoring, but ultimately the effectiveness of the mentoring programs relied on the quality of the relationships that were developed between the mentor and mentee at the school-level.

Day-to-day practice. In line with the framework, it is important to consider the potential gaps between actual practice and the formalized structures which make up and

give legitimacy to mentoring programs. The framework suggests that organizations are more concerned with institutionalized legitimacy rather than ensuring that programs are necessarily effective, often decoupling practice from evaluation and supervision (Meyer & Rowan, 1977). Interviews with both the HR directors and teacher association presidents shed some light on this matter.

The interviews with the human resources directors and the teacher association presidents indicated their view of the importance of a good mentor-mentee match. For example, the Underwood HR director stated, "The principals try to match those pairings based on subject area, based on proximity, you know location in the building, grade level. And they try to have a good fit in terms of who the mentor is." This is inline with the individual level theory of action derived from social capital theory, which stresses the importance of accessing resources and support through relationships. If a novice teacher is paired with a teacher who has extensive knowledge of the curriculum for which they are using because they teach the same grade or subject matter, it may be more likely that the mentor will therefore be able to provide higher levels of assistance in using the curriculum, developing teaching strategies, or assessing students.

When asked about how important the mentors are to the new teachers she responded:

> "I think they find it beneficial. Especially where we have good matches. The new teachers' response I get is that they definitely appreciate what they get from their mentor. If it isn't a good fit, what I find is that the mentees seek someone else as a mentor. Whether it's their formal mentor or an informal mentor, new teachers definitely benefit from having a mentor in the building they're working in."

Her comment regarding the "informal mentor" indicates that support for new teachers may not only come through the formal structures put in place by district policy. If the ECTs do not find the support from the formal mentor beneficial, many seek out other colleagues to provide expertise, resources, and other supports. This was echoed by the Payton HR director, "We talk to them about their assigned teacher mentor, and we also suggest that they find a senior teacher that they have some comfort level with along with their mentor to augment mentors influence in their early years." These statements indicate that they acknowledge that mentoring alone may not provide the necessary support new teachers need, especially if the mentor-mentee match fails to provide novices access to the necessary resources and support they need.

The Kaline HR director also suggested that the mentor-mentee match is important in increasing the likelihood that the mentoring relationship will be beneficial. Additionally, he felt that principals were best suited to assign mentors.

> "I try to have the principals pick them because they obviously have the most experience with those new staff and they know their own staff. They have to be tenured teachers, the mentors are, so that means they've been with the district four years. They've all been trained, so you can't be a mentor without being trained. And they try to pick them personality wise and subject matter wise. So we leave it to the building principals to pick the appropriate mentor."

He clearly laid out the goals through the eyes of the district administration, but beyond setting minimum criteria (mentors have to be tenured and receive some sort of training), the mentoring relationship was largely made at the building level. Again, therefore regardless of formal district mentoring policy, principal discretion plays a large role in promoting effective mentoring.

In contrast to the Kaline HR director, the Engram HR director discussed the difficulty in making appropriate matches, particularly because mentors in Indiana needed to complete state required training. She stated:

> "It's been a disaster for the last three years. The reason for that is that Indiana requires us to use trained mentors, mentors that have been through the 40 hours of a mentor training program. It has taken us three years to get up to speed to have anywhere near enough mentors."

This speaks to the difficulty in recruiting highly effective mentors. Districts and principals often are limited in which mentors they have because they are volunteers, and they have limited resources to compensate them. They are often forced to match mentors and mentees based on who is available given their personnel constraints, rather than who they believe (and profess through policy) to be a desirable match.

Not only does the match by grade level or subject matter seem to matter, but also matches by personality. That is why many of those interviewed indicated that it was best for principals to assign the mentors because they were in a better position to know the personalities of their staff. But the Engram HR director pointed out the difficulty in this as well, "We have discussed with the mentors that it's impossible to match them personality-wise." She felt it was too difficult to predict who would click in terms of personalities when the district or school assigns a mentor. These concerns indicate that when considering matches between mentors and mentees, the intangibles (such as personality) may be as important if not more important than subject matter/grade level match in determining the quality of the relationship. The social aspect of mentoring, although acknowledged within policy, is often difficult to formulize in practice when an administrator has to make a one-to-one professional match.

In addition to difficulties in making favorable matches, some of the HR directors and teacher association presidents questioned the effectiveness of their programs. Although the Daus CBA contains no language regarding mentoring, the teacher association president stated, "We do follow the minimum state guidelines of assigning a mentor and we do track professional development." He continued, "We're following the basic requirements of the law, but we're not doing anybody a service." He indicated that in previous years they had full-time mentors who were released from teaching, and that they were better able to provide directed assistance to new teachers. Because of budget constraints they changed policies. The lack of resources and trained mentors, in his view, left a shell of a mentoring program which was legitimated because it met the requirements of the law but was not effective. Although data was not collected pertaining the level of resources that each district spent on new teacher mentoring, the Daus HR director's sentiments about declining resources was echoed by several of the other HR directors and teacher association presidents in both Michigan and Indiana.

The Kaline teacher association president also suggested that district mentoring policy was not very effective, even though there was language in the CBA pertaining to mentoring:

> "There needs to be a mentorship process teacher-to-teacher to help walk them through that whole thing during the course of the year so that if you run into a bump, or you see something that you don't understand you have someone you can go to who can talk you through. That is something we have contractually. I wish that the association and district were better able to carry it through, because it would avoid a lot of issues that do come up."

He was concerned about the gap between policy and contractual requirements and what actually takes place in the schools. So, in his district, although there is formal mentoring

policy, partially defined by collective bargaining, there were few formal mechanisms to evaluate and supervise the implementation of mentoring policy.

The Payton teacher association president indicated that the quality of mentoring could vary by building depending on who the principal was:

> "In the great buildings with the best administrators there is a process that the administrator interviews the teacher and then chooses within their mind the best one for the start. If there is a problem that administrator is very comfortable with changing. In some of our lesser strong, our least strong buildings, we have a couple of principals who chose who your mentor is and that's who they are for the entire time. If you don't like it, you can leave."

This highlights the discretion given to building administrators, and also the ways in which formal policy may look similar across districts but the way that it is implemented on the ground varies significantly. This can have a great impact on the quality and effectiveness of a mentoring program, but since the mentoring program appears to be legitimate by state and professional standards the quality of the program is not fully assessed.

The Wagner HR director went even further in describing the lack of effectiveness of their mentoring program:

> "That you know I'm afraid in our district is not terribly proud of this, but I think that is an area that is not systematic enough. In other words, what we have a problem with is, and I do provide mentor training to our mentors, but it's voluntary. So I get about 1/3 of the mentors to show up, and then what we end up with is the quality of the mentoring that takes place is all over the map. It's not very systematic. And we also try to hold them accountable in terms of making them turn in reports three times a year, how many hours they spent together. But nobody really knows that they really spent that amount of time, and we don't know what they are talking about really. So, the mentoring program I think, though it's provided to new teachers, is probably an area of the greatest need for us to try to build in some quality assurance. Because some of

> our mentees come out of that and say 'that is the greatest thing that happened during my early career; I had the greatest mentor, and it made this difference in my career'. And then I have some mentees who didn't want to tell on their mentor at the time. They'll say, 'You know that was the biggest waste of your money you ever used.' And we haven't figured out how to get after that yet."

These two quotes illustrate that regardless of state-level or district-level policy, mentoring can look very different depending on the specific individuals involved and depending on which building the novice teachers are placed. This illustrates the loose coupling between regulators, districts, schools, and individuals which often leads to differences between policy and practice. Additionally, since there is a role for the principal in assigning mentors in most of the districts, the quality of principal leadership may have important consequences in leading productive mentoring. Also, the supervision of mentoring may need to take place at the school-level rather than just completing logs to meet district or state requirements. This quote also speaks to the investment that mentors need to make in the professional relationship. Are they entering into the mentoring relationship because their principal asked them to (or told them to), or because they feel that it is important for the development of their novice colleagues?

The interviews with the HR directors and teacher association presidents show that the actual day-to-day practice, at least in some cases, varied from the formalized structure of mentoring mandated by the districts and states. Because of staffing restraints, it often proved difficult to ensure that new teachers were paired with someone who taught the same grade level or subject matter as they did, and as pointed out, at times it was very difficult to accurately match teachers based on their personalities. Also, besides mentor-mentee logs there seemed to be very few mechanisms to evaluate the quality and

effectiveness of the mentoring that was taking place. For example, the Greenberg HR director indicated that many of the mentors and mentees were only meeting once a month, and that was not enough in her opinion to develop a productive relationship which would allow novices to receive guidance in instruction.

In addition to reviewing the collective bargaining agreements and interviewing the district HR directors and teacher association presidents, I wanted to use the survey data to see if there was an association between having collective bargaining language pertaining to mentoring and the likelihood that a novice teacher indicated that they have a mentor. As previously stated, having language regarding the assignment of a mentor in a CBA may be a mechanism for ensuring that policy is fully implemented. Table 4.1 shows the percentage of ECTs who indicated that they had been assigned a mentor for the 2007-08 school year. Sixty-six percent of the ECTs in this sample indicated that they had a mentor, and a higher percentage of first year teachers and elementary teachers indicated that they had a mentor than either more experienced novices or middle school teachers. Overall, 86 percent of those required by law to be assigned a mentor indicated that they did have a mentor. This indicates that a substantial number of teachers were not receiving the formal support which the law stipulates is an essential part of teacher development. For example, an ECT who was in her third year of teaching in Michigan, indicated in an interview that she had been assigned a mentor during her first year of teaching but had not interacted with her during the current school year. This further highlights the decoupling of formalized policy from day-to-day practice.

Table 4.1: Percent of ECTs in sample with mentors

	Mean	Std. Dev.
ECT indicated had mentor	0.66	0.47
1st yr ECT indicated had mentor	0.94	0.24
2nd yr ECT indicated had mentor	0.68	0.47
3rd yr ECT indicated had mentor	0.38	0.49
Elementary school ECT indicated had mentor	0.71	0.45
Middle school ECT indicated had mentor	0.54	0.50

In order to explore the relationship between formalized policy and the likelihood of being assigned a mentor, I ran a multi-level logistic regression with "having a mentor" (0 = no; 1 = yes) as the outcome variable. Assuming a Bernoulli distribution, I ran the following model to particularly explore whether or not having language in a collective bargaining agreement was associated with the probability of an ECT indicating that they had a mentor (Table 4.1 describes the selected variables used in the analysis):

$$\eta_{ijk} = \gamma_{000} + \gamma_{001}\,(\text{CBA mentor provision})_k + \gamma_{002}\,(\text{MI district})_k + \gamma_{003}\,(\text{district size})_k + \gamma_{010}\,(\text{percent white})_{jk} + \gamma_{020}\,(\text{percent free/reduced lunch})_{jk} + \gamma_{100}\,(\text{mid sch teacher})_{ijk} + \gamma_{200}(\text{white teacher})_{ijk} + \gamma_{300}\,(\text{2nd yr teacher})_{ijk} + \gamma_{400}\,(\text{3rd yr teacher})_{ijk} + \gamma_{500}\,(\text{female})_{ijk} + r_{0jk} + \mu_{00k}$$

Using a logit link function, this model explores the log-odds η_{ijk} that teacher 'i' nested within school 'j' nested within district 'k' indicated that they had a mentor based on the presence of collective bargaining language pertaining to mentoring, district size, percent of students within a school who are eligible for free or reduced priced lunch, percent of

students within a school who are white, level of school taught, race, years of experience, gender, and what state a district was located in. Person level controls for race and gender were included to help control for personal factors even though the vast majority of the sample was white and female.

Table 4.2: Variables included in analysis

Variable Name	Description	Mean
Teacher-level		
have a mentor	Outcome variable; a dummy variable (1 = had a mentor; 0 = did not have a mentor)	0.67
mid sch teacher	A dummy variable (1 = ECT teaches middle school; 0 = ECT teaches elementary school)	0.26
white teacher	A dummy variable (1 = ECT is white; 0 = ECT is non-white)	0.92
2nd yr teacher	A dummy variable (1 = ECT was in 2nd year of teaching; 0 = ECT was not in 2nd year of teaching)	0.46
3rd yr teacher	A dummy variable (1 = ECT was in 3rd year of teaching; 0 = ECT was not in 3rd year of teaching)	0.29
female	A dummy variable (1 = ECT was female; 0 = ECT was male)	0.83
School-level		
percent white	Percent of students in school who were white	0.52 (sd = 0.30)
percent free/reduced lunch	Percent of students in school who were eligible for free or reduced priced lunch	0.53 (sd = 0.24)
District-level		
CBA mentor provision	A dummy variable (1 = CBA contained language pertaining to mentoring; 0 = CBA contained NO language pertaining to mentoring)	0.36
MI district	A dummy variable (1 = district is in Michigan; 0 = district is in Indiana)	0.34
district size	Total pre-kindergarten through twelfth grade student population in the district divided by 1,000	15.72 (sd = 6.56)

The distribution is assumed to be a Bernoulli distribution, with level-1 sampling $Y_{ijk}|\varphi_{ijk} \sim B(m_{ijk}, \varphi_{ijk})$, where Y_{ijk} is the binomial distribution with m_{ijk} "trials" and probability of mentor assignment per trial φ_{ijk}. The level-2 and level-3 variance distribution is $r_{0jk} \sim N(0, T_\pi)$ and $\mu_{00k} \sim N(0, T_\beta)$ respectively. Table 4.3 shows the fixed effects results from running the conditional model, and Table 4.4 shows the random effects.

Table 4.3: Likelihood of mentor assignment – Fixed effects

Fixed Effect (n = 171)	Coefficient |t-stat|
Intercept, γ_{000}	3.00* (1.94)
District-level	
CBA mentor provision, γ_{001}	-0.17 (0.16)
MI district, γ_{002}	1.68 (1.76)
district size, γ_{003}	0.002 (0.31)
School-level	
percent white, γ_{010}	-0.57 (0.50)
percent free/reduced lunch, γ_{020}	0.21 (0.17)
Teacher-level	
mid school teacher, γ_{100}	-0.77* (1.70)
white, γ_{200}	0.18 (0.26)
2nd yr teacher, γ_{300}	-2.25*** (2.84)
3rd yr teacher, γ_{400}	-3.60*** (4.45)
female, γ_{500}	-0.27 (0.48)

statistically significant: *** 0.01; ** 0.05; * 0.10

The coefficients for both 2nd year teacher and 3rd year teacher were both statistically significantly and negative. This corresponded to the probability of having an assigned mentor of 0.10 and 0.03 respectively relative to a first-year teacher, *ceteris paribus*. This is also not surprising considering that second and third year teachers in Indiana were not required by law to be assigned a mentor. I did include a state dummy variable for whether or not the district was in Michigan, and although the coefficient was positive it was not statistically significant. Therefore I was not able to reject the null hypothesis that teachers in Michigan were more or less likely to be assigned a mentor compared to teachers in Indiana. Additionally, middle school teachers were less likely to have indicated that they had a mentor, holding all other variables constant.

Table 4.4: Likelihood of mentor assignment – Random effects

Random effect	Standard deviation	Variance component	df	Chi-square	p-value
lev-1 & lev-2					
Int1, R0	0.38	0.15	82	184.46	0.000
lev-3					
Int1/Int2, U00	0.14	0.02	7	3.63	>.500

This chapter aimed to address the following question: To what extent do CBAs influence the provision of mentoring? I hypothesized that they would have minimal effects, because district policy would vary little in response to state regulations. Additionally, because negotiating over the provision of mentoring is permissible but not mandatory in both Michigan and Indiana, it suggests that districts would seek to avoid having binding language concerning mentoring within a CBA. This chapter shows that the institutionalized nature of mentoring policy is likely a result of districts responding to

their external environment (state law), and in line with the framework of new institutionalism the realities of the internal environment created gaps between policy and practice. Further, having language in the collective bargaining agreement did not seem to be related to the actual day-to-day provision of mentoring. Although four of the CBAs contained language pertaining to the provision of mentoring, those CBAs did not require anything beyond what was being implemented by many of the other districts in the sample. It is not clear though whether the teacher association influenced mentoring policy through informal channels not represented in the collective bargaining agreements. Additionally, formalized policy across the districts did not vary greatly regardless of CBA language, in part because district-level policy was responding to the requirements of state regulations and did not necessarily go beyond that.

Additionally, there was variation in the potential quality of mentoring at the school and individual level. A substantial amount of discretion was given to building level administrators in overseeing mentoring programs, such as in making mentor-mentee assignments and ensuring compliance. The interviews suggested though that the quality of mentoring in their buildings varied in part based on the quality of building level administrators. This is in line with previous research which found that principals' conception of mentoring and subject matter knowledge was associated with the quality of mentoring in the building (Youngs, 2007b; McGraner & Henrick 2008). The HR directors and teacher association presidents also felt that mentor-mentee match by grade level, subject matter, and personality was an important factor in making it a worthwhile relationship. This is supported by research that suggests proper alignment between mentor and mentee is associated with lower rates of teacher attrition and greater

opportunities for learning (Smith & Ingersoll, 2004; Grossman & Thompson, 2004). This match may be related to the frequency of interaction between mentor and mentee, as well as what subjects they talk about. But, as summed up by the Wagner HR director, "Because some of our mentees come out of that and say 'that is the greatest thing that happened during my early career; I had the greatest mentor, and it made this difference in my career'. And then I have some mentees who didn't want to tell on their mentor at the time. They'll say, 'You know that was the biggest waste of your money you ever used.'" Therefore, although districts may try to legitimate their mentoring programs by creating institutionalized structures, the quality of the mentoring often depends on individual action.

Chapter 5

Early Career Interactions with their Mentors and Colleagues

This chapter addresses the second guiding research question: to what extent are early career teachers (ECTs) interacting with their mentors, as well as with their colleagues? Continuing to use the ideas from new institutionalism as the guiding framework, I aimed to explore the extent to which novices were interacting with their formal mentors, and the extent that they were interacting with other teacher colleagues. Early career teachers make sense of their organizational context through formal mechanisms such as policy, but also through interactions with their colleagues, which may lead to different outcomes (Lounsbury, 2001; Powell & Colyvas, 2007; Frank, Krause, & Penuel, in progress). Here, ideas from social capital theory are also important to consider, particularly how professional relationships mediate the effects of district and school policies, as well as facilitate access to resources (Coleman, 1988).

Under this framework, one would expect that novice teachers will invest in relationships that help them more clearly understand their organizational context, as well as provide them access to resources and support. Findings from recent research suggest that novice teachers access support and resources through both formal and informal channels, and that the degree to which they access these supports is partially based on policy and partially based on personal needs (e.g., Achinstein, Ogawa, & Speiglman, 2004; Grossman & Thompson, 2004; Kardos et al., 2001; Coburn & Russell, 2008). As suggested by the conceptual framework, novices operate both within the formal institutionalized structure of the organization (e.g., in a mentoring program), but they also

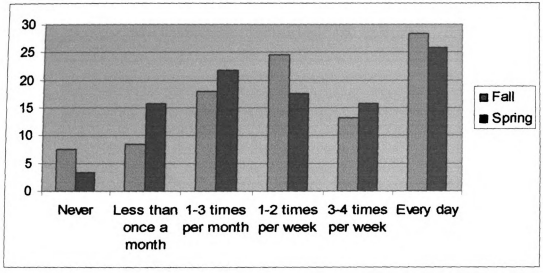
function within the informal structure (e.g., interacting with colleagues). The extent to which the formal and informal mechanisms of socialization differ can have important consequences for how new teachers make sense of their organizational context. This lead to my second hypothesis: *I expect that early career teachers are likely to interact with their close colleagues more often than with their formally assigned mentors. This reflects novices' ability to self-select into sub-groups within an organization which may better reflect their beliefs and practices regarding education, compared to those of their formally assigned mentors.* Continuing from findings from the first chapter, it could be expected that because mentoring policy is often institutionalized in order to be legitimated, it is less concerned with being effective in assisting teachers. Therefore novice teachers may seek out other individuals to obtain resources and supports, rather than go to their formally assigned mentor with whom they may have few shared interests or practices, which may ultimately affect commitment levels.

In this chapter, I first present frequency charts indicating the frequency and substance of ECT interaction with their mentors and colleagues. In particular, I was interested in exploring the differences in the levels and substance of interaction. Next, I present data on the ECTs' indication of the level of importance of support received from the mentor and colleagues. I then present some correlations between frequency of interaction with mentors and various organizational factors. Finally, I present findings from running a multi-level linear regression which aims to examine the relationship between mentor-mentee frequency of interaction and organizational and social factors, particularly mentor-mentee match and ECTs' reported importance of support from their mentors.

Frequency of interaction. The early career teachers who indicated that they had a mentor were asked to indicate their overall frequency of interaction with their mentor in both the fall and spring surveys, ranging from "never", "less than once a month", "1-3 times per month", "1-2 times per week", "3-4 times per week", and "every day". Chart 5.1 represents the ECTs' responses, comparing their responses in the fall to their responses in the spring (see Appendix Table II for percent responses). Sixty-six percent of the ECTs indicated that they were interacting with their mentors at least once a week in the fall, but only 59 percent reported that they were interacting with their mentors at least once a week in the spring. Additionally, a small percentage of ECTs indicated that they had never or had rarely (i.e., less than once a month) interacted with their mentors; 16 percent in the fall and 19 percent in the spring.

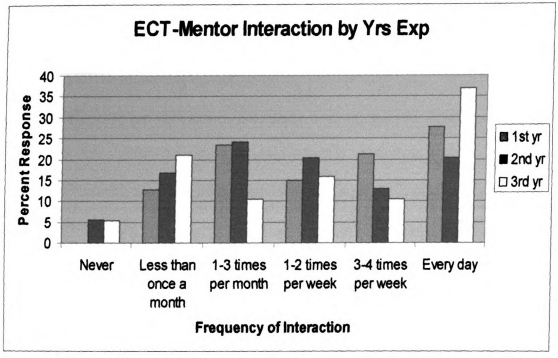
Overall, the data indicates that the ECTs were interacting with their mentors slightly less frequently in the spring than they were in the fall, though the difference was not statistically significant. It is possible that some ECTs interact with their mentors less frequently in the spring than in the fall because they have less need for support; such as the mentor served as a bridge to other support in the beginning months but needed to play a smaller role in the spring once the ECTs were more established. At the same time, it is possible that for some ECTs, the support they received from their mentors in the fall was not highly valued and therefore they sought less assistance from their mentors as the year progressed. The large percentage of novices who indicated low frequency of interactions (less than once a month/never) could be cause for concern. It at least could be an indication that they do not find the mentoring relationship valuable, or they do not find sufficient time to actually meet with their mentor.

Figure 5.1: ECT interaction with their mentor



In addition to looking at the overall level of interaction between the ECTs and their mentors, I explored differences by years of experience and level of teaching. Chart 5.2 shows the responses by ECT years of experience for their frequency of interactions with their mentors in the spring (see Appendix Table III for percent responses). Interestingly, no first-year ECTs reported that they never interacted with their mentor and a lower percentage of them indicated that they interacted with their mentor less than once a month as compared to second- and third-year teachers. This may suggest that first-year teachers were interacting more frequently with their mentors because they were in need of more assistance than their slightly more experienced novice colleagues. There could have also been more pressure placed on mentors of first-year teachers by building or district administrators to actively initiate interactions with the brand new teachers. A larger sample size for each of the cells (i.e., years of experience) may provide more information on the distribution of frequency of interaction.

Figure 5.2: ECT-mentor interaction by ECT years of experience



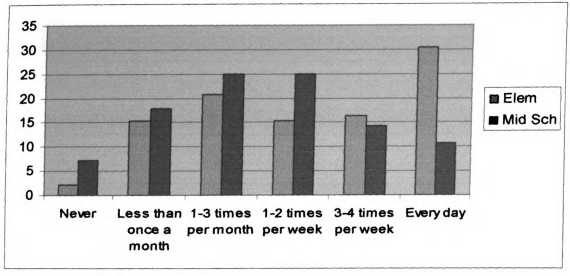
The relatively high percentage of third-year teachers who reported interacting with their mentors every day was not expected, but this may in part be due to the small sample size when comparing teachers by years of experience (i.e., only 20 third-year teachers indicated that they had a mentor). Because of the small sample size and due to the categorical nature of the ECT-mentor interaction variable, I ran a Wilcoxon rank-sum test (equivalent to the Mann-Whitney U-test) to compare first-year teacher responses to the second- and third-year teacher responses (Cody & Smith, 1997). Although the first-year teachers reported slightly more frequent interactions with their mentors, the difference was not statistically significant (Two-Sided Pr >= |S - Mean| 0.14). If a second- or third-year teacher had developed a good working relationship with their mentor teacher, it might be expected that they would continue to meet on a regular basis

with them throughout their early career. Additionally, for the second-year teachers in Indiana, they may have required more assistance with their certification portfolio assessment throughout their second year.

In addition to looking across the ECTs' years of experience, I also compared their frequency of interaction with their mentors based on whether they taught elementary school or middle school. The organizational structure of elementary schools and middle schools are quite distinct, with middle school teachers often teaching five or six sections, and over 100 students, while elementary teachers are primarily responsible for a much smaller core group of students. Additionally, middle schools are often organized by departments which may impact the interactions of teachers differently. Chart 5.3 shows the responses of the ECTs based on whether they taught at the elementary or middle school level (see Appendix Table IV for percent responses).

The rank-sum test indicates that for this sample of teachers, middle school ECTs were interacting with their mentors less frequently than their elementary counterparts (Two-Sided Pr >= |S - Mean| 0.07). This may reflect the organizational differences between elementary and middle schools. Elementary schools tend to be in smaller buildings, which may make the proximity of an ECT and mentor within a building closer, and the structure of classes and classroom activities may make mentors more accessible. Additionally, there may be a more likely chance that the mentor at the elementary school will have knowledge of the curriculum that the elementary ECT is using; they are also most likely to both hold a general elementary teacher certification. At the middle school level, there may be a greater chance that an ECT will be matched with an out-of-field mentor, not in their department, and in a different location within the building.

Figure 5.3: ECT-mentor interaction by organization level

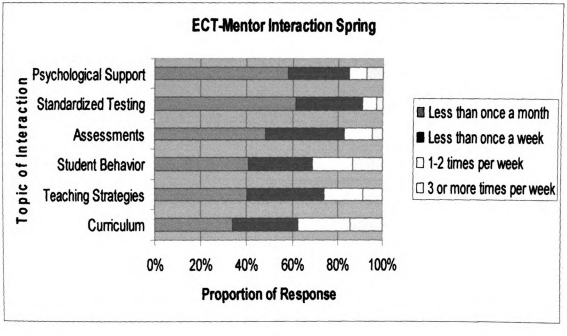


In addition to being asked about their overall frequency of interaction with their mentors, the ECTs were asked about the frequency of their interactions with their mentors regarding particular topics. Their responses were collapsed into four categories from the six; "less than once a month", "less than once a week" (at least once a month), "1-2 times per week", "3 or more times per week". Chart 5.4 shows the ECTs' responses for their frequency of interaction with their mentors in the spring regarding curriculum, teaching strategies, student behavior, classroom assessments, standardized testing, and psychological support.

As indicated by the chart, a greater proportion of ECTs indicated that they were interacting with their mentors at least weekly with regards to curriculum, teaching strategies, and student behavior. The ECTs reported much less interaction with their mentors regarding standardized testing. There were also relatively high proportions of ECTs who reported that they were interacting with their mentors less than once a month across all topics, especially around standardized testing and psychological support. To

the extent that is important for novices to receive assistance in regards to these topics, a significant proportion of the ECTs were rarely interacting with their mentors. Again, it could be a sign that a) the novices do not feel that the relationship provides support in these areas, b) many of the mentors may not have expertise in these areas, or c) there may be structural barriers to frequent interaction (e.g., no release time, overburdened schedules).

Figure 5.4: ECT-mentor interaction by topic



Taking the difference between the ECT spring responses and fall responses, I ran a series of Wilcoxon signed rank tests to examine whether or not there was a statistically significant change in frequency of interaction over the course of the year. Table 5.1 indicates that for nearly all of the categories the ECTs were interacting with their mentors less frequently in the spring than in the fall, and the mean differences (except for

psychological support and overall interaction) were statistically significant at least at the 0.10 level. This could be because a) the ECTs needed less support as the year progressed, b) novices and their mentors became more busy over the course of the year, or possibly because c) they did not find the assistance from their mentors as valuable as other possible supports.

Table 5.1: ECT-mentor frequency of interaction (change from fall to spring)

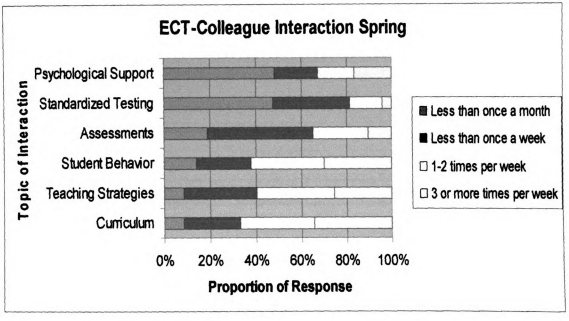
ECT-Mentor Interaction (spring-fall)	Mean	Std. Dev.	Pr >= |S|
Overall Interaction	-0.09	1.30	0.3961
Psychological Support	0.00	1.25	0.9818
Standardized Testing	-0.21**	1.10	0.0288
Assessment	-0.19**	0.94	0.0192
Student Behavior	-0.26*	1.21	0.0576
Teaching Strategies	-0.23**	1.15	0.0406
Curriculum	-0.19*	1.17	0.0688

Statistically significant: *** 0.01; ** 0.05; * 0.10

In addition to getting support from formal mentors, novice teachers interact with their colleagues. In the fall ECT survey, they were asked to list up to eight school-based colleagues who were responsible for instruction and with whom they engaged in professional interactions (e.g., interactions about curriculum, instruction, students, school policies, parents, etc.). They were then asked to report on their frequency of interaction around the same topics with those colleagues, again the responses were collapsed to the following: "less than once a month", "less than once a week" (at least once a month), "1-2 times per week", "3 or more times per week". Chart 5.5 shows the ECTs' responses for their frequency of interaction with their colleagues in the spring regarding curriculum,

teaching strategies, student behavior, assessments, standardized testing, and psychological support.

Figure 5.5: ECT-colleague interaction by topic



Similar to their reported interactions with their mentors, ECTs were interacting with their colleagues more frequently around curriculum, teaching strategies, and student behavior. This may indicate that these areas are the topics which were of greatest concern for the novice teachers. I also ran Wilcoxon signed rank tests on the difference between fall and spring interaction with colleagues, and none of the differences were statistically significant; this indicates that overall ECTs were maintaining their support system of colleagues over the course of the year, while they tended to interact less frequently with their mentors as the year progressed.

Comparing Chart 5.5 to Chart 5.4, ECTs reported more frequent interaction with their colleagues than with their mentors across all categories, but especially around curriculum, teaching strategies, and student behavior. To test this relationship, I took the difference between the ECTs' reported interactions with their colleagues and with their mentors, and then ran a series of Wilcoxon signed rank tests. Table 5.2 indicates that the differences in reported interaction with colleagues compared to mentors were relatively large, and all were statistically significant at the 0.01 level.

Table 5.2: Difference between ECT interactions with mentors and colleagues

Mentor vs. Colleague Interaction	Mean	Std. Dev.	Pr >= |S|
Curriculum	1.03***	1.68	<0.0001
Teaching Strategies	1.17***	1.46	<0.0001
Student Behavior	0.93***	1.69	<0.0001
Assessment	0.86***	1.29	<0.0001
Standardized Testing	0.67***	1.11	<0.0001
Psychological Support	0.76***	1.42	<0.0001

Statistically significant: *** 0.01; ** 0.05; * 0.10

Importance of support. Again, the differences in frequency of interaction may be in part because of issues of access, and/or in part due to the value ECTs found in their relationships with their mentors and colleagues. Additionally, since the ECTs were allowed to self-select into different sub-groups of peers, they may have been more aligned by personality or beliefs about teaching and learning. In both the fall and spring surveys, the ECTs were asked, "How important is the professional support that you receive from your mentor and school-based colleagues?" They were asked to indicate either "not at all important", "somewhat important", "very important", or "extremely

important". Chart 5.6 shows a comparison of the ECTs' spring responses for the importance of the professional support from their mentors and colleagues (see Appendix Table V for frequencies).

Figure 5.6: Importance of professional support from mentors and colleagues

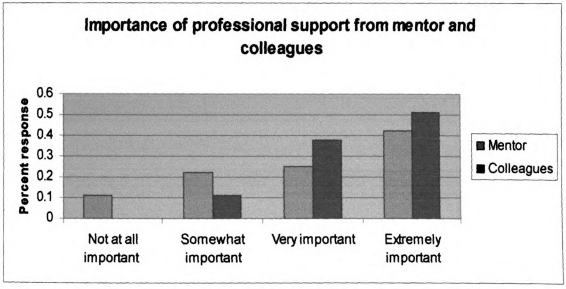


Chart 5.6 indicates that generally ECTs found the support from their colleagues more important than the support that they received from their formally assigned mentor (mean difference 0.15, standard deviation 0.86, $P > |S|$ 0.07). Additionally, none of the ECTs indicated that the support that they received from their colleagues was not important at all, while slightly over 10 percent of ECTs indicated that the support they received from their mentor was not important at all. This led me to consider what organizational and policy factors may be associated with the frequency of interaction with both mentors and colleagues, particularly mentors.

I calculated correlations between the ECTs' frequency of interaction with their mentors and measures of their perceptions of the organization. I also calculated correlations between the ECTs' frequency of interaction with their colleagues and measures of their perceptions of the organization. I used the Spearman correlation coefficient because of the categorical nature of the frequency of interaction with mentors and because of the nature of the other key variables of interest (Cody & Smith, 1997). The measures of the perceptions of the organization include perceptions of professional fit, relational trust amongst teachers, labor-management relations in the school, degree of collective responsibility of the teachers. I also calculated the correlations with the reported level of importance of support they received from their mentors and colleagues.

For perceptions of professional fit, the ECTs were asked to indicate their level of agreement (1 = "strongly disagree", 2 = "disagree", 3 = "agree", 4 = "strongly agree") with the following survey items: a) my approach to teaching fits in throughout this school; b) my professional interests are the same as those of other teachers throughout this school; c) I identify with other teachers throughout this school; d) my professional goals are the same as those of other teachers throughout this school; e) I matter to other teachers throughout this school; and f) other teachers throughout this school matter to me (Bryk & Schneider, 2002). I computed the correlation alpha between the items (α = 0.90), and then created a composite variable by taking the average response across all the items (mean = 3.31; standard deviation = 0.51).

For perceptions of relational trust among teachers in their school, the ECTs were asked to indicate their level of agreement with the following statements: a) it's OK in this school to discuss feelings; b) teachers in this school trust each other; c) teachers in this

school respect other teachers who take the lead in school; and d) teachers in this school respect those colleagues who are experts in their craft (Bryk & Schneider, 2002). I computed the correlation alpha between the items ($\alpha = 0.89$), and then created a composite variable by taking the average response across all the items (mean = 3.12; standard deviation = 0.64).

For perceptions of the degree of collective responsibility shared by the teachers in the school, the ECTs were asked to indicate the proportion of teachers (1 = "none"; 2 = "less than half"; 3 = "about half"; 4 = "most"; and 5 = "all") who do the following: a) help maintain discipline in the entire school, not just their classrooms; b) take responsibility for helping one another do well; c) take responsibility for improving the overall quality of teaching in the school; d) feel responsible for helping students develop self-control; e) set high expectations for academic work; and f) feel responsible for ensuring that all students learn (Bryk & Schneider, 2002). I computed the correlation alpha between the items ($\alpha = 0.91$), and then created a composite variable by taking the average response across all of the items (mean = 3.60; standard deviation = 0.73). For perceptions of labor-management relations in their school, they were asked to rate relations between teachers and administrators in their school: 1 = poor; 2 = fair; 3 = good; and 4 = excellent (mean = 2.78; standard deviation 0.95). I was also interested in how their indication of importance of support from their mentors and colleagues was correlated with their frequencies of interaction.

Table 5.3 shows the Spearman correlation coefficients for the organizational items and the overall frequency of interactions with the ECTs' mentors, and with the average overall frequency of interaction with the colleagues whom they listed in the fall

survey. The largest correlation coefficient was for the reported importance of support provided by the mentor or colleagues, both statistically significant at the 0.01 level. This makes intuitive sense considering that if novices find value in the relationship they would spend more time investing in that relationship. This seemed to be particularly important when looking at the frequency of interaction with the mentors. At the same time, it may be that through more frequent interaction more valuable support is provided. Regardless, to the extent that frequency of interaction and the value of support are correlated, district and school administrators could work towards providing opportunities for more frequent, substantive interaction between mentors and mentees through such things as common planning time or extra release time. This though may often be difficult considering the resource constraints that plague many districts and schools.

Table 5.3: Correlations between organizational items and frequency of interaction

Variable	Mentor	Colleagues
Professional fit	0.05	0.24***
	(0.56)	(0.002)
Relational trust	0.04	0.18**
	(0.64)	(0.02)
Collective responsibility	0.25***	0.19***
	(0.0005)	(0.01)
Labor-management relations	0.13	0.20***
	(0.14)	(0.008)
Importance of support	0.59***	0.42***
	(<0.0001)	(<0.0001)

statistically significant: *** 0.01; ** 0.05; * 0.10

Overall though, with the exception of the reported importance of support received, the correlation coefficients are relatively small, though all in the expected direction. All of the correlation coefficients between the key variables and average

frequency of interaction with colleagues were statistically significant, at least at the 0.05 level. So although there may not be large correlations, they are distinguishable from zero. In addition, the ECTs' perception of profession fit with their colleagues has the largest correlation coefficient (with the exception of importance of support) with regards to interactions with colleagues. Again, this makes intuitive sense, if an ECT has shared professional goals and beliefs with her colleagues she may tend to interact with them more often.

Generally speaking, the correlation coefficients were larger and overall more likely to be statistically significant with regards to interactions with colleagues, with the exception of perceptions of collective responsibility. This may reflect the fact that when ECTs perceived higher levels of collective responsibility shared by the teachers in the school, it was an indication that the mentor actually was more willing to provide regular support to their mentee. For example, the Whitaker teacher association president indicated that often times the new teachers did not want to initiate contact with their mentors because they did not want to appear to be incompetent, and therefore it was very important for mentors to initiate interactions.

Regression analysis. To the extent that more frequent interactions with formal mentors lead to opportunities for novice teacher learning and growth, I explored whether mentor-mentee match or the degree to which ECTs value the support from their mentor was associated with their frequency of interaction. I first ran a regression with various control variables (see Table 5.5 for description of variables used in the analysis) to review the distribution of the error term of the outcome variable "frequency of interaction with mentor". Through running PROC UNIVARIATE in SAS, the statistical tests for

normality indicated that I can reject the null hypothesis that the error terms are not normally distributed (i.e., Shapiro-Wilk statistic of 0.99, p-value pr < W 0.511). Therefore, it is assumed the variance at level-1 is normally distributed, $e_{ijk} \sim N(0, \theta^2)$, and it is also assumed that the level-2 and level-3 error variance is normally distributed, $r_{0jk} \sim N(0, T_\pi)$ and $\mu_{00k} \sim N(0, T_\beta)$. Table 5.4 shows the distribution of the variance components from running an unconditional model, $Y_{ijk} = \gamma_{0jk} + r_{0jk} + \mu_{00k} + e_{ijk}$ where Y_{ijk} is the frequency of interaction of individual 'i' and their mentor in school 'j' within district 'k', and γ_{0jk} is the average frequency of interaction.

Table 5.4: Variance components – unconditional model

Covariance parameter	Unit	Estimate (standard error)
Intercept	School-level	0.40* (0.31)
Intercept	District-level	0.27 (0.23)
Residual	Teacher-level	1.71*** (0.34)

statistically significant: *** 0.01; ** 0.05; * 0.10

Table 5.4 indicates that the majority of the variation lies between individuals (approximately 72 percent), though roughly 16 percent of the variance is between schools. To help explain some of the variance I ran the following conditional model, particularly to explore the association between mentor-mentee match and the importance of mentor support with frequency of interaction:

$Y_{ijk} = \gamma_{000} + \gamma_{001}$ (CBA mentor provision)$_k$ + γ_{002} (district size)$_k$ + γ_{010} (percent white)$_{jk}$ + γ_{020} (percent free/reduced lunch)$_{jk}$ + γ_{100} (mid sch teacher)$_{ijk}$ + γ_{200}(white teacher)$_{ijk}$ + γ_{300} (1st yr teacher)$_{ijk}$ + γ_{400} (female)$_{ijk}$ + γ_{500} (match)$_{ijk}$ + γ_{600} (support)$_{ijk}$ + r_{0jk} + μ_{00k} + e_{ijk}

Table 5.5 describes the variables used in the analysis. I performed a test of variance inflation, and only the variables for percent white students and percent students eligible for free/reduced lunch had variance inflation factors over 2 (2.33 and 2.07 respectively).

Table 5.5: Variables included in analysis

Variable Name	Description	Mean
Teacher-level		
mid sch teacher	A dummy variable (1 = ECT teaches middle school; 0 = ECT teaches elementary school)	0.23
white teacher	A dummy variable (1 = ECT is white; 0 = ECT is non-white)	0.91
1st yr teacher	A dummy variable (1 = ECT was in 1st year of teaching; 0 = ECT was not in1st year of teaching)	0.38
female	A dummy variable (1 = ECT was female; 0 = ECT was male)	0.82
match	A dummy variable (1 = ECT and mentor teach same grade-level in elementary school or subject matter in middle school; 0 = ECT and mentor DO NOT teach same grade-level in elementary school or subject matter in middle school)	0.51
support	A dummy variable (1 = ECT rated importance of mentor support as "very important" or "extremely important"; 0 = ECT rated importance of mentor support as "somewhat important" or "not important at all")	0.67
School-level		
percent white	Percent of students in school who were white	0.48 (sd = 0.29)
percent free/reduced lunch	Percent of students in school who were eligible for free or reduced priced lunch	0.55 (sd = 0.22)

Table 5.5 (cont'd)

Variable Name	Description	Mean
District-level		
CBA mentor provision	A dummy variable (1 = CBA contained language pertaining to mentoring; 0 = CBA contained NO language pertaining to mentoring)	0.25
district size	Total pre-kindergarten through twelfth grade student population in the district divided by 1,000	15.71 (sd = 6.01)

Table 5.6 shows the results from running the multi-level conditional linear regression with the variables from Table 5.5. The coefficient for CBA mentoring language was not statistically significant, therefore I cannot reject the null hypothesis that having CBA language requiring mentoring is not associated with more frequent interaction between mentor and mentee. It should be noted that there are only eleven districts in the sample, and only four of those districts had CBAs which contained language pertaining to mentoring; therefore, the lack of variation and the small sample of districts make it difficult to model any district level effects. This is reinforced by findings from the previous chapter which suggested that collective bargaining agreement provisions concerning mentoring had no statistically significant association with the assignment of mentors, and the qualitative data also suggests that the quality of mentoring often had more to do with person-level relationships rather than structural forces.

The variable "mentor-mentee" match is also not statistically significant, indicating that I can not reject the null hypothesis that the association between match and frequency of interaction is zero. I had expected that the mentor-mentee match coefficient would be statistically significant and positive, because based on the theory of action at the

individual-level one could expect that when properly matched, mentors would have greater expertise in the content and teaching strategies in the ECTs' given areas, and therefore the ECTs may interact with their well aligned mentors more frequently. At the same time, the measure of match for this sample is somewhat crude; no information on matches by certification area was available for this larger sample, mentors may teach similar grade-levels or subject matters to the ECTs which also gave them expertise; and match by personality may be more important. The qualitative data received from interviewing the district HR directors and teacher association presidents does indicate that the personalities of the mentors and mentees play a significant role in determining the quality of the relationship.

Table 5.6: Frequency of interaction conditional model – fixed effects

Fixed Effect (n = 97)	Coefficient |t-stat|
Intercept, γ_{000}	3.28** (2.67)
District-level	
CBA mentoring provision, γ_{001}	0.20 (0.35)
district size, γ_{002}	0.09* (2.01)
School-level	
percent white, γ_{010}	-0.47 (0.49)
percent free/reduced lunch, γ_{020}	-0.30 (0.28)
Teacher-level	
mid school teacher, γ_{100}	-0.04 (0.12)
white, γ_{200}	-1.22*** (2.65)

Table 5.6 (cont'd)

Fixed Effect (n = 97)	Coefficient |t-stat|
1st yr teacher, γ_{300}	0.47* (1.77)
female, γ_{400}	-0.49 (1.42)
mentor-mentee match, γ_{500}	0.26 (0.98)
support, γ_{600}	1.59*** (5.86)

statistically significant: *** 0.01; ** 0.05; * 0.10

The coefficient for importance of mentor support is positive and statistically significant at the 0.01 level. This suggests that when an ECT values the support received from their mentor they are likely to interact with them more frequently, *ceteris paribus*. This makes intuitive sense; it is expected that an individual would seek out the assistance of a mentor more frequently when they can provide them with support, resources, and teaching strategies. At the same time, highly effective mentors may seek out their mentees to provide them with resources and not wait for the ECT to come to them. Although this represents individual action, it also has implications for policy, particularly concerning the placement of ECTs within a building which can grant them more access to their mentors, as well as providing additional release time for ECTs and mentors in order to promote more frequent substantive interactions.

By examining the frequencies regarding the topics the ECTs and mentors generally interact around, it would be expected that interactions around curriculum, teaching strategies, and student behavior were viewed as being important. Table 5.7

shows the Spearman correlations between reported importance of mentor support and frequency of interaction around certain topics.

Table 5.7: Spearman correlations between importance of support and frequency of interaction

Importance of mentor support	Correlation coefficient
Curriculum	0.48***
	(<0.0001)
Teaching Strategies	0.56***
	(<0.0001)
Student Behavior	0.45***
	(<0.0001)
Assessment	0.45***
	(<0.0001)
Standardized Testing	0.35***
	(<0.0001)
Psychological Support	0.46***
	(<0.0001)

Statistically significant: *** 0.01; ** 0.05; * 0.10

Although the correlations are moderate they are not that different from each other, and more information would need to be gathered concerning exactly what type of support is provided. For example, do novice teachers find support more valuable when their mentors provide them with curricular resources, help them develop assessments, practice teaching strategies, or help them develop strategies for dealing with disruptive students? The data available from the surveys did not allow for the exploration of this question, but it does suggest that more research needs to be conducted.

This chapter addressed the research question, "To what extent are early career teachers (ECTs) interacting with their mentors, as well as with their colleagues?" As I had hypothesized, the ECTs interacted more often with their colleagues than with their mentors, although they tended to interact with both their mentors and colleagues more

often around issues related to curriculum, teaching strategies, and student behavior as opposed to standardized testing or psychological support. The data shows that although nearly 60 percent of ECTs were interacting with their mentors at least once a week in the spring, a significant percentage were meeting less than once a month. In addition to meeting less frequently with their mentors, generally the ECTs indicated that the support that they received from their mentors was less important than the support that they received from their colleagues.

Novices on average were interacting with their formal mentors less frequently, and found the support less important compared to the support from colleagues, possibly because they often did not have a choice in who was assigned to them, thus they may not have shared professional goals and beliefs or have complimentary personalities. They may have been interacting with their colleagues more often because they were more accessible (such as within their department or in classrooms close to their own), and/or because they had the knowledge and resources that the ECTs needed access to. This may be particularly true if the formal mentors lacked knowledge and expertise in the grade-level or subject matter in which the ECTs were teaching. Additionally, only 51 percent were matched with their mentor by either grade level or subject matter, which may indicate that several of the mentors lacked the expertise in the curriculum that the novice teachers were using. If the mentor and mentee were not teaching the same grade level or subject matter, the novice may just had preferred to consult with colleagues who were teaching the same subject matter and grade level. Additionally, the ECTs may have been interacting with their colleagues more frequently because they had a better professional

fit or alignment with them regarding their beliefs and practices. Future research and analysis can provide more information on this subject.

As the framework of new institutionalism suggests, there may be variations in the quality of mentoring even though the formalized structures of mentoring may not significantly vary across the districts. Each district had instituted a mentoring program as required by law, but as the data shows the frequency of interaction with mentors and the value that novices attribute to their mentoring relationships greatly varied. The social and organizational structure of individual schools potentially plays a big role in determining the quality of mentoring which takes place, regardless of formalized policy at the state or district level. Additionally, in line with social capital theory, it is then important to consider to the extent to which to which individual action through mentoring relationships and relationships with colleagues are associated with various novice teacher outcomes. If novice teachers are receiving support from an array of colleagues, the importance of formalized one-to-one mentoring may not be as important in producing more effective, committed teachers. Yet overall, the relationships with both mentors and colleagues may be related to larger social and organizational factors.

Chapter 6

Organizational Context and Commitment

This chapter aims to address the third guiding research questions: "How do the organizational and social contexts within which novices work influence their commitment to teaching, expressed through their professed future career plans?" In particular, I am interested in exploring the association between their perceptions of the labor-management relations within their school, professional fit, and the support they received from their mentors and colleagues. As the previous two chapters suggest, there were gaps between formalized mentoring policy and the actual day-to-day practice of mentoring within many of the schools in the sample. Beyond the formalized policy, I contend that organizational factors influence the quality of the mentoring novices receive, as well as the quality of support that they receive from their colleagues. This is where the concept of social capital theory may continue to help address how novices' professional relationships (both formal and informal) may be associated with their commitment levels.

As expressed earlier, previous research has found that teachers' perceptions of the organization (e.g., fit within the school, leadership, practice), partially determined by their relationships with their mentor and other colleagues, are associated with their levels of commitment (Bryk & Schneider, 2002; Desimone et al., 2002; Kardos et al., 2001). Additionally, it is through relationships that novice teachers can access resources and support, while at the same time it is through these relationships that novices' are socialized into the organization (Coleman, 1988; Kardos et al, 2001). Therefore, for the third research question, I hypothesized: *I expect that when novice teachers feel that their*

professional goals are well aligned with the goals of their colleagues and mentors, they will have greater access to resources and support which will help improve their commitment. Additionally, I expect that novice teachers who perceive better labor-management relations in their schools will have higher levels of commitment.

For this study, commitment is being measured as the novices' indication of their future career plans, such as their desire to continue to work in a particular school the following year or for the next five years. Career choice is certainly not the only possible measure of commitment, but research has found that commitment is related to teachers' career choices (Weiss, 1999). Additionally, due to the study's design, data collection in 2008-09 will allow me to track whether or not the novices were in a different teaching assignment compared to 2007-08. If they transferred to a different building but remained in the district, a section in the fall 2008 survey asked them the reasons for the move. If they left the district they were sent a follow up survey asking them about the reasons they left the district. Therefore there will be retention data and I will be able to relate it to their previous commitment measures.

In this chapter, I first provide findings from running a series of multi-level linear regressions, examining the relationship between spring commitment measures and the ECTs' perceptions of the organization. I then provide findings from running multi-level linear regressions, but with "change-in-commitment" from fall to spring as the outcome variable. This allows me to further control for the effects of the ECTs' prior career plans. Finally, I provide findings from performing social network analysis, particularly examining the influence mentors' and colleagues' beliefs and perceptions have on ECTs' perceptions of professional fit within their school.

Spring commitment measure. I hypothesized that novices who perceive better relationships amongst teachers and between teachers and administrators will have higher levels of commitment. To test this hypothesis I ran a series of hierarchical linear regressions, with commitment measures from the spring 2008 survey as the outcome variables, and perceptions of the organization as the key independent variables of interest. The outcome variables include the novices' indication of commitment to their grade level assignment, school, and district.

For commitment to their grade level assignment, school, and district, novices were asked to indicate their level of agreement (1 = "strongly disagree", 2 = "disagree", 3 = "agree", 4 = "strongly agree") as to whether they preferred to teach in the same grade-level / school / district the next year, and whether they could see themselves teaching in the same grade-level / school / district in five years (Smith & Ingersoll, 2004). On average, the novice teachers indicated high levels of commitment across all of the categories. Chart 6.1 shows the frequency of responses to the commitment questions for their preferences for the next year, and Chart 6.2 shows the responses to whether they could see themselves in the same assignment in five years. As the charts show, overall the ECTs were quite committed as the distribution of responses is heavily skewed towards "agree/strongly agree". They were slightly more committed to remaining in their assignment the following year as compared to five years down the road, but even those responses were heavily skewed towards "agree/strongly agree". The ECTs were also slightly more committed to teaching in their current school and district as compared to their grade-level assignment.

Figure 6.1: ECT commitment to teaching the following year

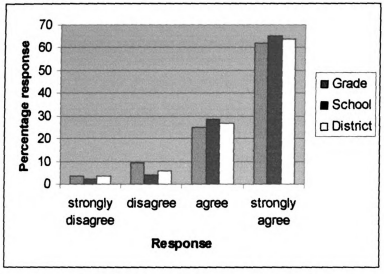
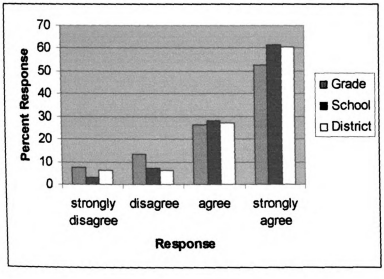


Figure 6.2: ECT commitment to teaching in five years



Because the responses to the commitment measures for the next year and within five years were on average very close, I took the average response for each category to make a single measure of commitment to grade level, school, and district. In addition, I

made a composite variable by taking the average response to each of the six items (α = 0.87). I checked the distribution of the error terms for each of the outcome variables, and although the statistical tests for normality did not allow for the rejection of the null hypothesis that they are not normally distributed, a review of the histograms indicated that they approached a normal distribution. Under the central limit theorem, with a larger sample it would be expected that the distribution of the error terms would approach normality. Therefore, for the series of three-level models the assumption is that the error terms are normally distributed for all three levels: $e_{ijk} \sim N(0, \theta^2)$, $r_{0jk} \sim N(0, T_\pi)$, and $\mu_{00k} \sim N(0, T_\beta)$.

I first ran a series of unconditional models to examine the distribution of variance between all three levels (see Table 6.1), $Y_{ijk} = \gamma_{0jk} + r_{0jk} + \mu_{00k} + e_{ijk}$, where Y_{ijk} is the measure commitment and γ_{0jk} is the intercept. The majority of variation in commitment levels lies among individual teachers, though for each of the categories there is a statistically significant amount of variation among schools. For example, for commitment to school, approximately 76 percent of the variance in commitment is among teachers, and 14 percent is among schools.

I then ran a series of multi-level models to explore the relationship between novice teachers' perceptions of their organization and their levels of commitment. The model controls for district size, student SES in each school, student race in each school, level taught, and ECT years of experience. Key variables of interest included the level of importance of support received from mentors and colleagues. I also included

independent variables that represent the novices' perceptions of their school organization as well as their work conditions.

Table 6.1: Variance components – unconditional model

	Grade (estimate / std. error)	School (estimate / std. error)	District (estimate / std. error)	Overall (estimate / std. error)
Teacher level variance	0.49***	0.56***	0.44***	0.27***
	(0.07)	(0.08)	(0.06)	(0.04)
School level variance	0.07*	0.18***	0.17***	0.12***
	(0.05)	(0.07)	(0.06)	(0.04)
District level variance	0	0	0.05	0.01
	(0)	(0)	(0.05)	(0.02)

Statistically significant: *** 0.01; ** 0.05; * 0.10

For perceptions of labor-management relations in their school, they were asked to rate relations between teachers and administrators in their school: 1 = poor; 2 = fair; 3 = good; and 4 = excellent. I collapsed the variable into three dummy variables, (poor perceptions of labor management relations; fair/good perceptions of labor-management relations; and excellent perception of labor-management relations); the fair/good perception variable was left out of the model as the reference category.

Other key independent variables of interest included the novices' perceptions of professional fit within the organization, as well as their level of stress and burnout. The measures of perceptions of professional fit and stress/burnout were based on composite variables created from taking the average of responses across a series of items in which the novices were asked to indicate their level of agreement with each response: 1 = "strongly disagree", 2 = "disagree", 3 = "agree", 4 = "strongly agree". Please see Appendix Table VI and Table VII for the listing of all items used to create the composite

variables of perceptions of professional fit and stress/burnout. Table 6.2 provides the description of all of the variables used in the analysis. I also tested for multicollinearity by checking for variance inflation. Only the variables for "percent of students who are white", "mentor", and "mentor support" had variance inflation statistics that were just over 2. For "mentor" and "mentor support" this makes sense since the "mentor" variable serves as a flag in the models in order to increase the sample size by including those in the analysis who indicated that they did not have a mentor.

Table 6.2: Variables used in analysis

Variable Name	Description	Mean
Teacher-level		
fall commitment to grade	Avg commitment to grade level in the fall	3.51 (sd 0.70)
spring commitment to grade	Avg commitment to grade level in spring	3.40 (sd 0.75)
fall commitment to school	Avg commitment to school in fall	3.31 (sd 0.88)
spring commitment to school	Avg commitment to school in spring	3.26 (sd 0.87)
fall commitment to district	Avg commitment to district in fall	3.46 (sd 0.80)
spring commitment to district	Avg commitment to district in spring	3.39 (sd 0.81)
fall overall commitment	Avg overall commitment in fall	3.48 (sd 0.66)
spring overall commitment	Avg overall commitment in spring	3.39 (sd 0.64)
mid sch teacher	A dummy variable (1 = ECT teaches middle school; 0 = ECT teaches elementary school)	0.28
white teacher	A dummy variable (1 = ECT is white; 0 = ECT is non-white)	0.90
1st yr teacher	A dummy variable (1 = ECT was in 1st year of teaching; 0 = ECT was not in 1st year of teaching)	0.27
female	A dummy variable (1 = ECT was female; 0 = ECT was male)	0.83
mentor	A dummy variable (1 = ECT indicated they currently had a mentor; 0 = ECT indicated they currently DID NOT have a mentor)	0.66

Table 6.2 (cont'd)

Variable Name	Description	Mean
mentor support	A dummy variable (1 = ECT rated importance of mentor support as "very important" or "extremely important"; 0 = ECT rated importance of mentor support as "somewhat important" or "not important at all")	0.43
colleague support	A dummy variable (1 = ECT rated importance of colleague support as "very important" or "extremely important"; 0 = ECT rated importance of colleague support as "somewhat important" or "not important at all")	0.89
poor labor relations	A dummy variable (1 = ECT indicated that there were poor labor-management relations within their school; 0 = ECT indicated labor-management relations as fair/good/excellent	0.13
excellent labor relations	A dummy variable (1 = ECT indicated that there were excellent labor-management relations within their school; 0 = ECT indicated labor-management relations as poor/fair/good	0.23
professional fit	Composite measure of ECTs' perceptions of their professional fit with their colleagues ($\alpha = 0.90$)	3.31 (sd 0.51)
stress/burnout	Composite measure of ECTs' levels of stress/burnout ($\alpha = 0.93$)	2.26 (sd 0.61)
School-level		
percent white	Percent of students in school who were white	0.49 (sd = 0.28)
percent free/reduced lunch	Percent of students in school who were eligible for free or reduced priced lunch	0.55 (sd = 0.22)
District-level		
district size	Total pre-kindergarten through twelfth grade student population in the district divided by 1,000	15.62 (sd = 5.69)

I first ran the hierarchical linear models with all of the variables from Table 6.2 included (see Appendix Table VIII for the output), and then reduced the models to only contain variables of interest that were at least statistically significant at the 0.10 level, as well as keeping district, school, and teacher characteristic variables as controls. Table 6.3 reports the results from running the regressions. In addition to reporting the un-standardized estimates, the standardized estimates are also shown to make comparison

between binary variables and numeric variables more interpretable. The binary variables were standardized to have a mean of 0, and the numeric variables were standardized by subtracting the mean and then dividing by two standard deviations (Gelman, 2007).

Being a middle school teacher was also associated with lower levels of commitment to grade-level, district, and overall. This may be related to the differences in the organization of middle schools and elementary schools, where teachers at the middle school level may teach a wider range of grade levels in a given school year, as well as different levels of content (such as honors or remedial).

Key independent variables of interest are the ECTs' reported level of importance of support from their mentors and colleagues, their perceptions of labor-management relations, and perceptions of professional fit within their schools. The coefficients for importance of mentor support was only statistically significant in the model for commitment to school, yet the coefficient for "have a mentor" was also statistically significant but negative. This would suggest that when an ECT indicated that the support from their mentor was important that they had higher levels of commitment to their school, but they had lower levels of commitment when they indicated that they had a mentor. Because these two variables have a relatively large correlation, the estimates may be mis-specified. The coefficients for reported level of importance of support from colleagues were not statistically significant in any of the models. Therefore I cannot reject the null hypothesis that the association between commitment and importance of colleague support is zero.

Table 6.3: Spring ECT commitment – fixed effects

stat sig: *** 0.01; ** 0.05; * 0.10	Grade Level Estimate / |t-value|	Standardized Estimate	School Estimate / |t-value|	Standardized Estimate	District Estimate / |t-value|	Standardized Estimate	Overall Estimate / |t-value|	Standardized Estimate
Intercept	1.75***		1.09**		2.56***		1.14**	
	(3.09)		(2.10)		(4.34)		(2.25)	
District level								
District size	-0.005	-0.04	-0.007	-0.05	0.002	0.01	0.002	0.02
	(0.51)		(0.85)		(0.16)		(0.32)	
School level								
Percent white	0.01	0.004	0.13	0 04	0.30	0.10	0.19	0.08
	(0.04)		(0.57)		(0.89)		(0.94)	
Percent free/reduced lunch	0.02	0.005	0.31	0 08	-0.08	-0.02	0.05	0.02
	(0.06)		(1.17)		(0.20)		(0.20)	
Teacher level								
Fall commitment	0.46***	0.43	0.62***	0 63	0.49***	0.48	0.55***	0.57
	(6.82)		(10.12)		(6.08)		(8.24)	
Middle school teacher	-0.20*	-0.13	-0.17	-0.10	-0.22*	-0.14	-0.23**	-0.18
	(1.82)		(1.55)		(1.78)		(2.29)	
1st yr teacher	-0.13	-0.09	-0.06	-0.03	0.04	0.02	0.02	0.01
	(1.30)		(0.56)		(0.32)		(0.19)	
White	0.08	0.06	-0.01	-0.008	-0.12	-0.07	-0.17	-0.13
	(0.55)		(0.09)		(0.66)		(1.10)	
Female	0.13	0.08	-0.10	-0.06	-0.03	-0.02	-0.06	-0.04
	(1.05)		(0.93)		(0.23)		(0.57)	
Have a mentor			-0.25**	-0.15				
			(2.13)					
Importance of mentor support			0.20*	0 11				
			(1.75)					
Poor labor-mngt relations			-0.41***	-0.24				
			(2.97)					
Professional fit	0.25***	0.17	0.26***	0 15			0.32***	0.25
	(2.73)		(2.83)				(3.89)	
Stress/burnout	-0.37***	-0.30	-0.26***	-0.18	-0.35***	-0.27	-0.28***	-0.27
	(4.59)		(3.28)		(3.68)		(3.80)	
n	153		154		154		117	

Another key variable of interest was the novice teachers' perceptions of professional fit. This variable tries to capture an ECTs' overall perception of their fit within the organization, in such areas as shared beliefs and goals with teachers within the school. For the models for commitment to grade-level, school, and overall commitment the coefficients for perceptions of professional fit were positive and statistically significant at the 0.01 level. Although the standardized estimates are not as large as those for stress/burnout, or in the case of commitment to school as large as the estimate for poor perceptions of labor-management relations, it suggests that when novice teachers have higher perceptions of professional fit within the organization they are more likely to have higher levels of commitment, holding all other variables constant.

The coefficient for poor perceptions of relations between teachers and administrators in the school was negative and statistically significant at the 0.01 level in the model for commitment to school. For commitment to school, the standardized estimate for poor perceptions of labor-management relations was the largest with the exception of prior commitment. The labor-management relations climate may not only directly affect an individual ECT, but also the whole school as an organization which may impact the relations among teachers themselves.

The findings on poor perceptions of labor-management relations make intuitive sense. Principals play a significant role in shaping the organizational environment in which novices work, and can also play a direct role in providing instructional support. Principals are responsible for making school-level job assignments, evaluating teachers, handling student and parent problems, as well as providing direct support to teachers and indirect support through creating collaborative work environments (Youngs, 2007b;

Desimone & Smith, 2008; Chester & Beaudin, 1996). Therefore if relations between administrators and teachers is poor it may not only effect the one-to-one relationship between a teacher and an administrator, but it may also impact the overall professional climate within a school which may effect teacher commitment.

Overall, these hierarchical linear models suggest that there are some key variables that may be associated with novice teachers' future career plans, and need to be explored further. In particular, the variables for "poor perceptions of labor-management relations", "perceptions of professional fit", and "stress/burnout" were at least in some of the models statistically significant at the 0.01 level. Colleagues and administrators can be excellent sources of guidance and support, and can impact organizational climate of the school/district within which the teachers are working. Additionally, levels of stress/burnout may not only be related to personal characteristics, such as personal skills to perform the teaching tasks, but also the level of support that novices are receiving within their organization. Also, the coefficients for "professional fit" in the commitment suggest that when teachers feel that they are part of their professional community they are more likely to want to remain in that assignment.

Table 6.4 shows the variance components from the restricted model. The variance components at the teacher level were all statistically significant at the 0.01 level. Although these models explained a substantial amount of the variation at the teacher and school level, there is more to be accounted for. For example, the conditional model for commitment to school accounted for approximately 63 percent of the variation among teachers. The model for commitment to district though only accounted for approximately 27 percent of the variation among teachers. There are likely several factors, including

personal factors such as family influences, which are not accounted for within these models, even though a prior level of commitment is included.

Table 6.4: Variance components – conditional model

	Grade (estimate / std. error)	School (estimate / std. error)	District (estimate / std. error)	Overall (estimate / std. error)
Teacher level variance	0.27*** (0.05)	0.21*** (0.04)	0.32*** (0.05)	0.12*** (0.02)
School level variance	0.01 (0.03)	0.03 (0.03)	0.03 (0.04)	0.04** (0.02)
District level variance	0.004 (0.009)	0	0.009 (0.03)	0

Statistically significant: *** 0.01; ** 0.05; * 0.10

Change- in- commitment. The regression analysis used spring commitment measures as the outcome variables and controlled for prior fall commitment, but it is also important to consider modeling change-in-commitment over time. To further explore organizational factors' influence on novice teacher commitment, I created composite measures of change-in-commitment, and used hierarchical linear models to see what relationship the key variables of interest have with changes in commitment from fall to spring.

For both fall and spring measures of commitment, I first combined the measures by category (grade-level, school, and district) and took the average of the responses to commitment to the following year and to five years. I also calculated an overall measure of commitment; first I calculated the correlation alpha between the six items ($\alpha = 0.87$), and then created a composite variable from the average response across all six items. Finally, I subtracted the fall composite measures from the spring composite measures to

form the change-in-commitment measures. Table 6.5 shows the mean responses for fall, spring, and change. It should be noted that the ECTs reported very little change-in-commitment from the fall to the spring, and only the difference for commitment to grade-level was statistically significant based on a paired t-test. Yet, it should be stressed that the mean change was negative, suggesting that the sample of teachers were less committed in the spring compared to the fall.

Table 6.5: Change-in-commitment from fall to spring

Variable	Fall Mean	Std. dev.	Spring Mean	Std. dev.	Change Mean	Std. dev
Grade-level	3.51	0.70	3.40	0.74	-0.11**	0.67
School	3.31	0.88	3.26	0.87	-0.05	0.58
District	3.45	0.80	3.39	0.81	-0.06	0.69
Overall	3.48	0.66	3.39	0.64	-0.07	0.49

Statistically significant: *** 0.01; ** 0.05; * 0.10

I checked the distribution of the error terms for each of the change-in-commitment outcome variables, a review of the histograms of the distributions indicated that they approached a normal distribution. Under the central limit theorem, with a larger sample it would be expected that the distribution of the error terms would approach normality. Therefore, for the series of three-level models the assumption is that the error terms are normally distributed for all three levels: $e_{ijk} \sim N(0, \theta^2)$, $r_{0jk} \sim N(0, T_\pi)$, and $\mu_{00k} \sim N(0, T_\beta)$.

To explore how the variance in the novices' change-in-commitment levels was distributed among individual teachers, among schools, and among districts the following unconditional three-level model was run for each of the commitment measures: $Y_{ijk} =$

$\gamma_{0jk} + r_{0jk} + \mu_{00k} + e_{ijk}$, where Y_{ijk} is the measure change-in-commitment, γ_{0jk} is the intercept, r_{0ik} is the error term at the district level, μ_{00k} is the error term at the school level, and e_{ijk} is the error term at the individual level. As Table 6.6 shows, the distribution of variance in change-in-commitment overwhelmingly was among individuals, as opposed to among schools or districts. Part of the reason is that there was relatively little change in commitment from fall to spring, and several person level characteristics and circumstances influence an individual's perceptions of their future career plans, such as plans to raise a family or the career choices of a spouse.

Table 6.6: Variance in ECT change-in-commitment – Unconditional model

	Grade Level	School	District	Overall
Teacher level variance	0.43*** (0.06)	0.27*** (0.06)	0.45*** (0.09)	0.19*** (0.05)
School level variance	0	0.03 (0.05)	0.009 (0.06)	0.03 (0.05)
District level variance	0.008 (0.02)	0.02 (0.02)	0.04 (0.05)	0

After running the baseline unconditional models, I then ran conditional models with all of the spring independent variables which were used in the previous hierarchical linear regression models (see Appendix Table IX for the output). Using data from the output, I refit each of the models to only include independent variables which had coefficients which were statistically significant at least at the 0.10 level (keeping controls for district and school demographics, as well as teacher level characteristics), and then re-ran the conditional models (see Table 6.7). In addition to the parameter estimates, the table also shows standardized estimates. I standardized the variables and re-ran the

models in order to more easily make comparisons across the different variables, particularly because many of the variables of interest are binary variables. For the binary variables, they were standardized to a mean of zero. For the numeric variables, I subtracted the mean and divided by two times the standard deviation in order to make the coefficients directly comparable to the binary variables (Gelman, 2007).

For change-in-commitment to grade-level assignment, ECTs who reported higher levels of stress had more change in commitment from the fall to the spring. A standard deviation increase in stress/burnout levels was associated with 0.22 standard unit negative change-in-commitment, *ceteris paribus*. This makes intuitive sense as well, if an ECT is stressed throughout the year, especially in the spring, it is likely to have an effect on her commitment. For change-in-commitment to school and change-in-commitment to the district, there were no statistically significant variables that remained in the final conditional models. This may be in part because there was little change in commitment from the fall to spring, and the change was not statistically significant. Therefore it is hard to predict what would cause that change, especially given the data that was available.

The coefficient for "importance of support from colleagues" was statistically significant and negative in the model for overall change-in-commitment. The data indicates that when a novice teacher found the support from their colleagues important, on average they had 0.41 standard unit change-in-commitment, holding all other variables constant. This was not expected considering I would expect that if novice teachers value the support they are receiving from their close colleagues they would be more willing to invest time and energy in those relationships, thus making them more

committed. One possible explanation is that this variable is not a good measure, since 89 percent of the teachers in the sample indicated that the support they received from their colleagues was "very important" or "extremely important".

To further explore the relationship between "importance of colleague support" and change in commitment, I ran an analysis of covariance (ANCOVA) model with spring overall commitment as the outcome variable. The key independent variables of interest were the fall overall commitment measure, the spring "importance of colleague support" measure, and an interaction variable ("fall overall commitment" x "importance of colleague support"). The model controlled for the same district, school, and teacher-level characteristics as the previous models.

The coefficient for "importance of colleague support" was negative and statistically significant at the 0.01 level (standardized coefficient of -1.58; s.e. 0.49), but the coefficient for the interaction term was positive and statistically significant at the 0.01 level (standardized coefficient of 1.10; s.e. 0.36). This indicates that the effect of "importance of colleague support" does depend on the previous commitment level of the ECTs. The negative association between level of importance of colleague support and spring overall commitment was on average lower when ECTs had higher levels of overall commitment in the fall. It is possible that those with higher levels of commitment in the fall had established a more beneficial support network early on and therefore had smaller changes in commitment from fall to spring.

Table 6.7: Change-in-commitment – Fixed effects

	Grade Level Parameter Estimate / |t-value|	Standardized Estimate	School Parameter Estimate / |t-value|	Standardized Estimate	District Parameter Estimate / |t-value|	Standardized Estimate	Overall Parameter Estimate / |t-value|	Standardized Estimate
Intercept	0.38 (0.95)		-0.05 (0.12)		0.06 (0.12)		0 44 (1.07)	
District level								
District size	-0.01 (1.15)	-0.11	-0.007 (0.60)	-0.07	0.003 (0.22)	0.03	-0.001 (0.16)	-0.02
School level								
Percent white	0.14 (0.49)	0.06	-0.04 (0.14)	-0.02	0.36 (0.92)	0.14	0 11 (0.44)	0.06
Percent free/reduced lunch	0.15 (0.42)	0.05	0.41 (1.05)	0.15	0.05 (0.10)	0.02	0 04 (0.13)	0.02
Teacher level								
Middle school teacher	-0.09 (0.68)	-0.06	-0.05 (0.40)	-0.04	-0.19 (1.31)	-0.14	-0.10 (0.86)	-0.11
1st yr teacher	-0.18 (1.46)	-0.13	-0.09 (0.80)	-0.08	-0.01 (0.07)	-0.007	-0.05 (0.43)	-0.05
White	0.06 (0.35)	0.05	-0.001 (0.01)	-0.0008	-0.14 (0.65)	-0.10	-0.17 (0.91)	-0.18
Female	0.08 (0.61)	0.06	0.03 (0.21)	0.02	0.08 (0.48)	0.06	0 002 (0.01)	0.002
Have a mentor			0.15 (1.44)	-0.13				
Importance of colleague support					-0.32 (1.55)	-0.23	-0.40* (1.88)	-0.41
Stress/burnout	-0.24*** (2.68)	-0.22						
n	153		161		142		105	

Statistically Significant: *** 0.01; ** 0.05; * 0.10

I also wanted to see to what extent these models accounted for the variation which was established by the unconditional model. Table 6.8 shows the variance components from the four multi-level conditional models shown in Table 6.5. From these I calculated the percentage of variance explained by the models. For change-in-commitment to grade-level and change-in-commitment to school, the conditional model only accounted for approximately 7 percent of the variance among teachers.

The conditional model for change-in-commitment to school did not account for any of the variation among individual teachers. For change in overall commitment, there was actually more variation at the teacher level in the conditional model, though less variation among schools. Overall, these models explained very little of the variance among teachers, but because the mean change from fall to spring was so small this was not surprising.

Table 6.8: Variance in ECT change-in-commitment – Conditional model

	Grade Level	School	District	Overall
Teacher level variance	0.40*** (0.05)	0.25*** (0.05)	0.46*** (0.08)	0.22*** (0.03)
School level variance	0	0.08* (0.06)	0.001 (0.05)	0
District level variance	0.006 (0.05)	0.02 (0.03)	0.02 (0.04)	0

Labor-management relations. In this study I was particularly interested in the role of labor-management relations played in influencing the organizational context of schooling for teachers. Findings from the hierarchical linear models with spring commitment measures indicate that ECTs' perceptions of labor-management relations

within their school, particularly poor perceptions of labor-management relations, were associated with their commitment levels. The spring survey asked the ECTs to indicate the extent of the role that they believed their teacher association should play in a improving the work lives of teachers. Specifically, they were asked on a series of items, "How much effort do you think your local union should put into each of the following areas?" They were asked to specify: 1 = No effort, 2 = A little effort, 3 = Don't know, 4 = Some effort, and 5 = A lot of effort. I calculated Spearman correlations between these measures and the measure of their perception of labor-management relations within their school, this time coded 1 = excellent, 2 = good, 3 = fair, and 4 = poor (see Table 6.9).

Table 6.9: Spearman correlations – Perceptions of labor-management relations and union effort

Variable	Correlation
Getting better fringe benefits	0.05 (0.55)
Improving job security	0.11 (0.14)
Getting teachers more say in how they do their jobs	0.15** (0.04)
Negotiating over standards for teacher evaluation and how the evaluations are used	0.14* (0.06)
Helping to make teaching more interesting	0.06 (0.40)
Negotiating how No Child Left Behind affects teachers	0.13* (0.10)
Giving members a say in how the union is run	0.08 (0.29)
Getting teachers a say in how the administration and school board run the school system	0.26*** (0.001)
Getting teachers more say in their teaching assignments or transfers	0.14* (0.07)
Telling members what the union is doing	0.07 (0.34)
Handling member grievances	0.21*** (0.008)

Statistically Significant: *** 0.01; ** 0.05; * 0.10

Overall, the coefficients were relatively small, but were all positive indicating that the lower the perceptions of labor-management relations within the school, the more effort they wanted the teacher association to put into a given area. Correlations that were statistically significant primarily relate to the management of teaching. For example, the largest correlation in the table is for "getting teachers a say in how the administration and school board run the school system", and is statistically significant at the 0.01 level. This suggests that in schools with lower perceptions of labor-management relations, the lower the satisfaction the novice teachers had with the management of the school and their teaching, which ultimately may impact their commitment to their school. If teacher associations are able to work to promote more teacher voice in the management of individual schools or the district as a whole, it may work to increase teacher commitment. It should also be noted that there was no statistically significant difference in perceptions of labor-management relations when comparing those who said they were a member of a teacher association and those who indicated that they were not part of a teacher association.

Social network analysis. In addition to exploring what possible variables may be associated with outcomes of commitment, I was interested in exploring how novices' perceptions of the school as an organization were possibly shaped by the perceptions of their formally assigned mentors and key colleagues. Novices' perceptions are not formed within a vacuum, and may in part be influenced by those with whom they interact with in the school. To explore this possibility, information about the perceptions of the ECTs' mentors and key colleagues who they listed in the fall survey was gathered through surveying the mentors and colleagues.

The following model represents the statistical technique used to measure the influence of the mentors'/colleagues' perceptions and beliefs on the perceptions and beliefs of the ECTs in the sample: $Perceptions_{ij} = \beta 0_j + \rho_j [X_{ii'j}\ Y_{i'j}] + Perceptions_{ijt-1} + flag_{ij} + e_{ij}$, where $Perceptions_{ij}$ represents the perceptions of ECT "i" in school "j" in the spring, $\beta 0_j$ represents the intercept, ρ_j represents the influence parameter and $[X_{ii'j}\ Y_{i'j}]$ represents the ECTs' exposure to influence (mean exposure) based on the relationship X between ECT "i" and mentor/colleagues "i'" in school "j" and the perceptions of those mentors/colleagues ($Y_{i'j-1}$) at the time 1, $Perceptions_{ijt-1}$ represents the perceptions of ECT "i" in school "j" in the fall, $flag_{ij}$ is a flag (0/1) indicating whether or not there was data from a mentor or colleagues for a given ECT, and e_{ij} represents the error term. I used this social network influence model to explore what influence mentors and colleagues have on ECTs' perceptions of their professional fit within the school. I ran a model for the mentors separately from the model for colleagues (see Table 6.10). The error term is assumed to be normally distributed with mean 0 and variance θ^2. A check for normality was completed, and the Shapiro-Wilk ($Pr < W$ 0.3460) and a review of the distribution of the residuals allowed me to reject the null hypothesis that the distribution is not normally distributed. The parameter estimates and standardized estimates are both reported. For these models, the variables were standardized to a mean of zero and standard deviation of 1.

The colleague influence coefficient for "professional fit" is statistically significant, even after controlling for prior levels. A standard deviation in total influence

for professional fit was associated with 0.28 standard unit higher ECT perceptions of professional fit. Even when controlling for ECTs' prior perceptions and beliefs, the colleagues' beliefs and perceptions appear to have at least a small influence on the ECT's perceptions and beliefs concerning their fit. It could be that an ECTs' perception of professional fit was developed through interacting with colleagues, and therefore they were shaped through exposure to their colleagues beliefs and practices. Alternatively, an ECTs' perceptions of professional fit may be a function of the difference between their beliefs and practices with that of their colleagues.

Table 6.10: Mentor and colleague influence on ECT perceptions of professional fit

	Mentor Parameter Estimate / |t-value|	Standardized Estimate	Colleagues Parameter Estimate / |t-value|	Standardized Estimate
Intercept	1.25***		1.12***	
	(4.99)		(5.06)	
total influence	-0.01	-0.14	0.02***	0.28
	(1.05)		(2.68)	
fall measure	0.66***	0.60	0.59***	0.54
	(9.65)		(8.63)	
flag	-0.07	-0.07	0.24*	0.19
	(0.51)		(1.85)	
n	180		180	
R-square	0.35		0.37	

Statistically significant: *** 0.01; ** 0.05; * 0.10

The coefficient for the influence term for mentors is not statistically significant, so I can not reject the null hypothesis that the perceptions of mentors has no significant relationship with the perceptions of the ECTs. Even though the coefficient is not statistically significant, I expected the coefficient to be positive, which it is not. This may reflect the fact that often times the ECTs had little say in which teacher was assigned to

them as their mentor, and therefore may have different beliefs and practices regarding teaching. For example, previous data reported suggests that a substantial number of ECTs are rarely interacting with their mentors, and approximately 11 percent find the support from their mentors not at all important.

This chapter set out to address the following research question, "How do the organizational and social contexts within which novices work influence their commitment to teaching expressed through their professed future career plans?" In particular, I was interested in exploring the association between the support they received from their mentors and colleagues, the perceptions of labor-management relations in their school, and their perceptions of professional fit. Following the ideas from social capital theory, I hypothesized that support received from mentors and colleagues would be associated with their levels of commitment, and that novices' perceptions of their organizational context would also be associated with their levels of commitment.

In line with previous research, this research found that ECTs' perceptions of professional fit was positively associated with their spring measures of commitment to grade-level, school, and the overall measure of commitment. When novice teachers share similar beliefs and practices as their colleagues, they are more likely to believe that they are a member of the professional community and are more likely to have access to resources and support (Bryk & Schneider, 2002; Desimone et al., 2002; Kardos et al., 2001). They may be more likely to invest their time into the profession and in particular into their organization and professional relationships. At the same time, measures of perceptions of professional fit were not statistically significant when the outcome variable was "change-in-commitment".

The ECTs' perception of labor-management relations in their schools was associated with their spring commitment to school and change-in-commitment to school. In particular, when an ECT had poor perceptions of relations between teachers and the school administration, the ECTs' commitment was significantly lower. This indicates the importance that administrators play in shaping the school climate within which teachers operate. Principals' content knowledge has been found to be associated with teachers' instructional practice (Desimone & Smith, 2008), and they also provide opportunities for teachers to interact and receive support (Youngs, 2007b). Principals are also directly responsible for the evaluation of teachers, teacher assignment, and often the implementation of district and state policy within the school. Therefore school administrators partially define the work conditions as well as the organizational context within which teachers work.

When the work conditions are poor and the organizational climate is poor, it is expected that novice teachers (and all teachers for that matter) would have lower levels of commitment and would be more likely to try to transfer out of that particular school. In interviews with several district HR directors and teacher association presidents, they indicated that the quality of principal leadership can vary greatly within a given district, especially in their ability to provide support to teachers. The Greenberg teacher association president even indicated that there were a few buildings in his district which had very poor quality principals, which he believed led to high rates of teacher transfer from those buildings, as those who were able to leave, did so.

I also explored the possible influence mentors and colleagues had on the perceptions and beliefs of the ECTs. The social network analysis indicated that

colleagues', more so than mentors', perceptions and beliefs potentially influence the perceptions and beliefs of the ECTs with whom they interact. This may also reflect the fact that the ECTs in this sample, on average, were interacting much more frequently with their key colleagues compared to their formally assigned mentors, and also rated the support that they received from their colleagues higher. It should be noted though that influence can at times have negative effects, such as exacting undue pressure on novices to conform (Kardos et al, 2001; Portes, 1998). Therefore it is important that novices have the opportunities to interact with colleagues who are well aligned with them (e.g., share professional goals and beliefs) and also have high levels of expertise and access to resources.

Overall, this chapter confirms the hypothesis that novice teachers' professional relationships with colleagues and administrators matter in regards to their commitment. It is these relationships that often define the conditions within which they work, including determining what resources and support the ECTs have access to. As the conceptual framework suggests, novice teachers make sense of their organization not only through responding to institutional rules and policies, but also through the informal mechanisms of teacher socialization. In addition, there are often gaps between the institutional frames and the informal organizational make-up of an organization, which differentially shape a novice teachers' experience. Therefore the professional relationships novice teachers have within the institutional frame can have important consequences for their beliefs and practices.

Chapter 7

Implications for Policy and Practice

Teacher mentoring can be part of a comprehensive induction program that provides novice teachers opportunities to improve their effectiveness in teaching and to become socialized into the profession through a collaborative support system. Research has shown that mentoring can provide novice teachers opportunities to learn and improve their effectiveness, as well as reduce the chances that they migrate out of a particular school or district, or leave the profession all together (Smith & Ingersoll, 2004; Grossman & Thompson, 2004; Johnson & PNGT, 2004; Stein & D'Amico, 2002; Achinstein, Ogawa, & Speiglman, 2004; Youngs, 2007a). Recent research by Glazerman and colleagues (2008) questions these claims, but more so than disproving previous claims their research raises questions about the formation and implementation of mentoring and induction policies.

Using ideas from new institutionalism and social capital theory I aimed to look at how both formal and informal organizational structures impact the mentoring of new teachers. First, I was interested in exploring the role that teacher associations play in shaping mentoring policy through the collective bargaining process. Teacher associations are often thought to constrain the practices of districts (see Hoxby, 1996; Ballou, 2000; Moe, 2005), though in some cases teacher associations work with districts to support the professional development of their members (Bascia, 2003). Teacher associations therefore may play an important part in shaping the formalized structures within which teachers work and mentoring programs operate.

Secondly, I was concerned about the gap between formalized policy and actual day-to-day practice. The framework suggests that institutionalized structures will look similar across schools and districts as they respond to the same or similar environmental cues (Meyer & Rowan, 1977; DiMaggio & Powell, 1983). Additionally, the effectiveness of a mentoring program is often measured by its formalized structure which meets the standards of state regulation or accepted practice, rather than the results that it produces. Yet, the effectiveness of mentoring is largely based on the individuals within an organization who are involved with the process, because it is largely social in nature. Also, the role that informal professional networks play in the socialization of teachers is often not considered in relation to formal one-on-one mentoring, and policymakers may miss opportunities to identify how novice teachers are actually being socialized into the profession.

Finally, I was concerned with what organizational elements were associated with novice teacher commitment. Novice teachers seek cues from their colleagues as to acceptable behavior and practice within the formalized structure of the organization, and it is through these cues that novices shape their perceptions of the organization (Lounsbury & Vantresca, 2003; Kardos et al, 2001; Powell & Colyvas, 2007). The novices' perceptions of the organization, such as the labor-management relations climate or their own professional fit with their colleagues, have the potential to influence their decision to remain in the organization. Additionally, through their professional relationships, novice teachers access resources and support, which in turn may relate to their ability to improve their instruction and their levels of commitment (Coleman, 1988).

In this chapter, I first briefly summarize the findings which were drawn from addressing the three guiding research questions: a) To what extent do collective bargaining agreements influence the provision of mentoring? b) To what extent are novice teachers interacting with their mentors, as well as their colleagues? and c) How are novices' professional relationships associated with their levels of commitment? I then use the findings to draw some implications for both policy and practice. Finally, I offer some thoughts on the limitations of this study and some implications for future research on new teacher mentoring and induction.

Summary of findings. In chapter 4, I addressed Research Question 1: "To what extent do collective bargaining agreements influence the provision of mentoring?" In particular, I was interested in exploring how collective bargaining may influence formal district policy concerning new teacher mentoring, and also how actual day-to-day practice may vary from what is formally specified. Following the framework, I proposed that all of the districts in the sample, both in Indiana and Michigan, responded to their state policy contexts regarding the requirements for mentoring new teachers. New teachers in Michigan were required to be assigned a mentor by the district for their first three years in the profession, but beyond that the design and implementation of mentoring policy was left to the local level. In Indiana, new teachers were required to be assigned a mentor for their first year in the profession as part of a two-year portfolio certification process. Additionally, mentors in Indiana were required to complete state approved training.

To address this question I first reviewed collective bargaining agreements (CBAs) from all 11 districts in the sample, looking for language pertaining to new teacher

mentoring, induction, and professional development. Only four of the 11 CBAs actually contained language pertaining to mentoring, and although two of the CBAs were more specific in outlining the mentoring policy, they did not go beyond what was already common district policy. For example, the Greenberg CBA indicated that principals should match mentors and mentees by program area, but this was standard policy in the other districts as well. At the same time, having language in the CBA may give teachers cause for filing a grievance if they feel that the mentoring practice within their building is not following the specifications of the agreement. This though, was unlikely because in the Greenberg CBA it was more of a suggestion rather than a requirement. Koppich (2005) indicated that it would be a mistake to assume that it is the goal of all teacher associations to work to improve teachers' instructional quality. They may feel that mentoring is an area for management to be concerned with, and they may put their focus more on issues of job protection and money matters.

Although this was a small sample of districts, and only four of the CBAs addressed mentoring, I argue that overall collective bargaining played a minimal role in defining the provision of mentoring. Even if a local teacher association wanted to work towards influencing teacher mentoring they might face resistance from the administration because it may be seen as trying to add restrictions into the management of schools and human resources (Bredenson, 2001). Mentoring is a permissive topic of bargaining in Michigan and Indiana, not a mandatory topic of bargaining. Therefore, overall district policy in this sample was largely formed in the absence of influence from collective bargaining. It is not clear though whether teacher associations guide mentoring policies in other ways.

Through interviews with the district human resources (HR) directors and teacher association presidents in the 11 districts, I was able to learn more about the formal district mentoring policy, as well as potential gaps between policy and practice. The interviews indicated that across most of the districts, policy suggested that when possible, mentors and mentees should be matched by grade-level, subject matter, or certification area. Previous research has indicated that having a good match by grade-level/area is a key part of encouraging substantive and frequent mentor-mentee interaction (Grossman & Thompson, 2004; Achinstein, Ogawa, & Speiglman, 2004). Additionally, building level administrators were given quite a bit of discretion in making mentor-mentee matches. An exception was in a couple of Indiana districts where the district administration had some hand in assigning mentors. In Engram for example, the human resources director had a direct role in assigning mentors in collaboration with building principals, because she had a centralized list of which teachers in her district had completed the required training to become a mentor. In addition to assigning mentors, across the districts there was some formal or specified way of keeping track of mentor-mentee meetings, such as in Daus, the mentees were required to keep a mentoring journal. Additionally, in Indiana the process was a little more formalized around the two-year portfolio requirement.

Yet, although the HR directors and teacher association presidents laid out the formalized policy, they also spoke about gaps in the implementation of the policy, and issues concerning the effectiveness of mentoring in their districts. For example, the Daus teacher association president indicated that his district was following the letter of the law, but in reality was not doing anyone a service. The Engram HR director reported that although they try to make good matches between mentors and mentees, it was very

difficult to find enough teachers who had received training as well as to ensure that their personalities would align which ultimately impacts the effectiveness of the relationship.

This highlights the fact that in each of these districts mentors were volunteers, so the administration was limited by their available human resources. For example, although it was district policy to match mentors and mentees by program area, only 51 percent of the early career teachers in this study had a mentor in their grade level or subject matter. Further, the Greenberg HR director indicated that many of the mentors and mentees were rarely meeting (once a month or less) which was ineffective for providing support and resources to novice teachers.

The evidence in this chapter suggests that, although CBAs have the potential to shape mentoring policy, in this sample of districts they did not appear to do so. Additionally, as the framework suggests, formal mentoring policy did not vary that much from district to district reflecting institutionalized frames, especially within a given state, and also there were gaps between policy and practice (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). Several of the people interviewed indicated that the quality of mentoring not only varied by individual mentoring pairs, but also by building based on the quality of building leadership in assigning mentors and overseeing the mentoring relationship. Previous research has indicated that the principal plays a key direct and indirect role in providing support, and their conception of mentoring can impact the quality of support novices receive (Youngs, 2007b; Desimone & Smith, 2008). Additionally, as indicated by the Wagner HR director, often times both the district and building level administration had no way of knowing how a mentoring relationship was progressing, such as how often they met or what they were even talking about.

Therefore, there was great variation in the actual implementation of mentoring as well as its quality and effectiveness.

In Chapter 5, I addressed Research Question 2: "To what extent are novice teachers interacting with their mentors, as well as their colleagues?" To address this question I utilized data from the early career teacher (ECT) fall and spring surveys regarding the frequency and substance of the novice teachers' interactions with their mentors and colleagues. I was interested in comparing the interactions between ECTs and their mentors and the interactions between ECTs and their other colleagues who they named as people they interacted with professionally. The framework suggests that both formal and informal mechanisms can shape the experience of an ECT, but possibly in different ways. Additionally, it is through these professional relationships that the novice teachers can access resources and support, but are also socialized into the profession, learning the norms and expectations within the organization (Coleman, 1988; Portes, 1998).

The data indicated that ECTs in this sample were interacting with their mentors and colleagues most frequently around curriculum, teaching strategies, and student behavior, compared to such topic areas as assessments, standardized testing, or psychological support. Overall though, the ECTs indicated that they were interacting with their colleagues more frequently than with their formally assigned mentors. A significant percentage of ECTs were rarely interacting with their mentors at all; in the spring approximately 16 percent indicated that they were meeting with their mentor less than once a month and 3 percent indicated that they never interacted with their mentor. Additionally, from the fall to the spring, the ECTs tended to interact with their mentors

less frequently, while their interactions with their colleagues continued at the same frequency, suggesting that the relationships with the colleagues were more beneficial, if not professionally at least socially.

The ECTs were asked about the level of importance of the support they received from mentors and colleagues. On average, the ECTs found the support from their colleagues more important than the support they received from their mentors. Additionally, approximately 11 percent of the ECTs indicated that the support they received from their mentor was not important at all. So not only were the ECTs typically interacting with their colleagues more frequently, they valued the support they received from them more than the support from their mentors.

To the extent that frequent interaction with mentors is important for the socialization of teachers, I was interested in seeing what possible policy elements might be associated with frequency of interaction. In particular, policy across the districts stressed the importance of mentor-mentee match. With the data available, I was able to determine if the ECT and their assigned mentor were at least matched by grade level (elementary school) or subject matter (middle school). I ran a multi-level linear regression with frequency of interaction as the outcome variable, and "match" as one of the key independent variable of interest and ECt reported level of importance of mentor support as the other (controlling for district and school demographics, as well as ECT years of experience and level taught). The coefficient for "match" was not statistically significant, which was unexpected. At the same time, because the measure of match was somewhat crude it could be a weak measure. For example, mentors who had previously taught the grade level or teach a similar subject matter may have as much expertise as

someone who is matched exactly by grade-level or subject matter. Additionally, the personalities of the mentors and mentees may be more associated with frequency of interaction. Therefore, although alignment between mentor and mentee seems to be an important element of mentoring policy, it may not always indicate that it will lead to more frequent interaction.

When the ECTs reported that the support from their mentors was "very important" or "extremely important", there was a statistically significant and positive association with frequency of interaction. This compliments previous research which suggests that when ECTs are receiving valuable support they are more likely to continue to seek out those individuals for assistance (Youngs, 2007a; Grossman & Thompson, 2004; Achinstein, Ogawa, & Speiglman, 2004). Additionally, this may be an indication that the mentors are actively seeking out the mentees to provide support and not waiting for the novices to come to them.

In Chapter 6, I addressed Research Question 3: "How are novices' professional relationships associated with their levels of commitment?" I was particularly interested in exploring how the novices' perceptions of the support they received from their formal mentors and colleagues, perceptions of professional fit, and perceptions of labor-management relations in their school were associated with their commitment levels, expressed by their indication of their future career plans. Novices' perceptions of their organization are in part based on how they relate to the formal structures, but also based on their relationships within the organization, both with their fellow teachers as well as with their administrators. Additionally, it is through these relationships that they gain

access to resources and support, but also feel pressure and experience expectations, which may have negative consequences on their commitment levels.

To explore this research question, I first ran a series of hierarchical linear regressions with commitment to teaching in their grade-level / school / district as the outcome variables (constructed from spring responses). The key independent variables of interest included a measure of the importance of support the mentors and colleagues provided to the ECT, perceptions of labor-management relations in their school, and perceptions of their professional fit within the school. I also controlled for district and school demographics, prior levels of commitment, as well as ECT years of experience and level taught.

The regression results indicated that perceptions of professional fit were positively associated with overall commitment, commitment to grade-level, and commitment to school. This makes intuitive sense, given that if one shares professional goals and beliefs with colleagues they are more likely to invest themselves in the organization. Previous research also provided evidence that when a teacher has similar beliefs and practices as their colleagues, they are more likely to have access to resources and support and have higher levels of commitment (Bryk & Schneider, 2002; Desimone et al., 2002; Kardos et al., 2001).

When the ECTs had poor perceptions of relations between teachers and administrators in their school, it was associated with lower commitment levels to their school. Principals not only provide direct support to new teachers, but they also partially define the professional climate within which they work (Youngs, 2007b; Desimone & Smith, 2008; Chester & Beaudin, 1996). Principals are most often directly responsible

for teacher assignment within a building, teacher evaluation, the implementation and oversight of policy within a building, and also responsible for handling student and parent issues. This potentially makes them a very critical component in the socialization of novice teachers.

In addition to spring commitment measures as outcomes, I ran hierarchical linear regression models with "change-in-commitment" from fall to spring as the outcome. The coefficients for professional fit and poor perceptions of labor-management relations were not statistically significant in any of the four models. This may reflect the fact that there was very little change-in-commitment from fall to spring, which makes it hard to model that change. Additionally, there was no information regarding the novices' personal lives (e.g., changes in spouses career, illness, family plans, etc) that may be better predictors of career change. Surprisingly, the more coefficient for colleague support (valued as "very important" or "extremely important") was negative and statistically significant for change in overall commitment. This was not expected, but because there was very little change from fall to spring, and approximately 90 percent of ECTs rated support from colleagues as "very important" or "extremely important", the estimate may be biased.

Finally, I conducted social network analysis using data from the ECT surveys and surveys of ECTs' mentors and colleagues. The aim was to see how the perceptions of the mentors and colleagues pertaining to professional fit were related to the perceptions and beliefs of the ECTs. The data indicated that the colleagues', more so that the mentors', perceptions of professional fit were positively related to the levels of perceptions of professional fit of the ECTs. Previous research indicates that individuals make sense of their organization not only through their own response to institutional rules and norms,

but also through their interactions with individuals within the organization (Lounsbury, 2001; Powell & Colyvas, 2007; Frank, Krause, & Penuel, in progress). This study further provides evidence that how novices make sense of their organization is partially determined through their interactions with their colleagues.

Implications for policy and practice. Based on the findings, I propose three general implications for policy and practice. The first is for policy makers to instill more oversight of mentoring program implementation in order to monitor and evaluate the effectiveness of mentoring programs. The interviews with several of the human resources directors and teacher association presidents indicated that there were few formal mechanisms to accurately monitor and evaluate the effectiveness of their programs, and therefore the quality of mentoring could vary greatly within a district and even within a building. Many of the districts required the new teachers and their mentors to keep a log, but as the Wagner human resources director stated, the district was still unable to really know whether or not they were actually meeting, and knew even less about what they were talking about. The data from the surveys also indicates that many of the ECTs met with their mentors rarely or never.

Part of the reason why some mentors and mentees may not have been interacting regularly was because they were not teaching the same grade-level or subject matter (as indicated by the data). Although it was often district policy to match mentors and mentees by grade-level, subject matter, or certification (as well as by personality), the assignment was left to principals, and as indicated by the interviews some principals did a better job of matching mentors and mentees than others. I am not suggesting that the central administration take on the role of assigning mentors directly (although in some of

the Indiana districts they did have a larger role), but to hold principals accountable for the quality of the mentoring that takes place in their building. If there is more district oversight over principals in the administration of mentoring policy, and more oversight by principals in ensuring the mentoring relationship is beneficial, then there will likely be a reduction in the variation in quality (raising the bar), as well as a reduction in the gap between the formalized policy and actual practice. This may be an area where teacher associations can play a larger role; if they are dedicated to promoting teacher quality and support, they can negotiate for more oversight of mentoring programs to help ensure some quality control. Even outside of collective bargaining, teacher associations can help promote greater support for novice teachers through promoting greater collaboration among their members.

This of course takes time and resources, which are often in short supply within a school and district. Additionally, regardless of policy and oversight, the crux of a mentoring program is the relationship that develops between the mentor and mentee. Administrators can put elements of the program in place which can facilitate more productive interaction (e.g., proper matches, release time), but ultimately the value that early career teachers receive from the mentor comes down to the relationship that they build. As shown, often times it is difficult to make matches, and even if mentors and mentees have release time it does not mean that they will necessarily use the time productively.

Therefore, this leads to a second general policy implication; instead of focusing on a one-to-one mentoring program, instill a network of collegial support based in part on the direction of the novice teacher. The novices in this sample, on average, interacted

more frequently with key colleagues and found the support they provided more important that the support offered by their mentors. Several schools have developed instructional teams based on grade-level assignment or subject matter which can work in similar ways to a one-to-one mentoring relationship in providing resources and support to new teachers. By having a network of support, which is still in some ways formally assigned, novice teachers may have increased access to resources, but will also have more choice to gravitate to someone within the network to whom they can relate professionally and socially. Additionally, different colleagues are more likely more equipped to provide different valuable resources.

The third area with policy and practice implications concerns the labor-management relations climate within the schools. When an ECT had poor perceptions of relations between the teachers and administrators in a school, they were more likely to have lower levels of commitment. As stated, several of the human resources directors and teacher association presidents indicated that there were several schools where labor-management relations were poor, and where the quality of the administrative leadership was poor. Principals play an important role in providing assistance to new teachers as well as in establishing a climate of collaboration amongst all the teachers. In these circumstances, districts need to improve their ability to identify sub-par principals in order to provide them assistance or remove them, and to identify schools where the relationship between the administration and the teachers is suffering in order to implement some type of intervention. Teacher associations in these circumstances can also play an important role in working to improve collaboration between teachers and

administrators in these schools, with the ultimate goal of ensuring that teachers have the resources and support they need to properly perform their jobs.

Limitations of study and future research. There are several limitations of this study which can be addressed by future research. First, while this study was able to explore the frequency and some of the substance of interaction between ECTs and their mentors and colleagues, this study was not able to gauge exactly what type of support the mentors and colleagues were providing. For this sample of teachers, the novice teachers were most often interacting with their formal mentors and their colleagues around curriculum, teaching strategies, and student behavior. This may be an indication that these are the areas with which novice teachers need the most assistance, but I was not able to gauge what type of support the mentors and colleagues were providing in these areas. For example, were they sharing tricks-of-the-trade in dealing with common student problem behaviors, or were they discussing a particular problem student they both taught to discuss and evaluate interventions? Were they discussing general teaching strategies such as how to properly use group work, or were they sitting down to co-plan a unit or lesson? By better understanding the type of support that is provided and actually valued by the novices, program designers can provide training to mentors or teams as to what type of support to provide.

This study also did not collect detailed information as to the context within which the interactions with mentors and colleagues were taking place. The survey did ask them to indicate if they met with their mentor before school (73 percent said yes), after school (58 percent said yes), during lunch (41 percent said yes), and during their planning period (43 percent said yes), but the survey did not collect information about the context of

interactions with colleagues. Also the surveys did not ask about the duration of their interactions. Were the novices interacting with their mentors and colleagues at regularly scheduled times, or were they available for quick pop-in questions? Were little bits of continuous help valuable, or was it more of programmed professional development through interactions that had a larger impact? This has implications for the design of support systems of novice teachers; for example, it may be more beneficial for a novice teacher to be located within a building surrounded by those who have knowledge of her curriculum and students, who she can quickly turn to between classes or at lunch, as opposed to having regularly scheduled meetings between a mentor and a mentee.

This study also did not ask the ECTs about their interactions with building-level administrators, nor was data collected from building-level administrators. Previous research and this study suggest that principals can play a significant role in the socialization of new teachers through direct interactions with novice teachers as well as through implementing mentoring programs and creating a collaborative work environment. The interviews with human resources directors and teacher association presidents indicated that the effectiveness in mentoring varied by building in part because of the variation in building leadership. It would be beneficial to know what processes principals use to recruit teachers to become mentors, what processes they use to assign mentors, and how they monitor the effectiveness of the mentoring program. Additionally, how in general do building-level administrators work to promote a collaborative work environment and maintain beneficial relationships with their staff? If principals are assigning mentors to mentees just to meet the requirements of the district and the state, they are not as likely to be systematic in how they go about it, and this may

lead to relationships that are not as productive as they could be. Additionally, if their involvement in the mentoring program ends after they make the mentor assignment they have no true way of measuring the effectiveness of the program. Principals not only can directly influence the support new teachers have, but by creating a collaborative work environment they can ensure a wider network of support for new teachers, and for all teachers. This may also work to improve the relationship between the administration and the teachers, which may further work to improve the commitment of teachers.

There were also some technical limitations with this study, particularly concerning the generalizeability of the findings. The ECT response rate was relatively low, with a 63 percent fall survey response rate and a 76 percent spring retention rate. Part of the concern is that novice teachers, especially first-year teachers, can be very overwhelmed by their work and participating in a study will not be their top priority. Additionally, because the study is longitudinal it is a challenge to retain teachers in the study. The teachers who initially completed the fall survey and those who remain in the study in the spring may have been fundamentally different from the eligible sample in the eleven districts. If those ECTs who were more overwhelmed by their busy schedules were more likely not to participate, then this study misses a key group of teachers that we should be concerned about, and the findings may be generalizeable even the new teachers in the eleven districts in the sample.

Additionally, the novice teachers were asked to name their mentor and key colleagues in the fall survey. It is more than likely that several of those who did not complete the fall survey did so at least in part because they were not comfortable naming names and involving their colleagues with the study. Even though the ECTs were

informed that the mentors/colleagues would not be informed as to who listed them, knowing that their colleagues would be contacted may have prompted some ECTs to not participate. Again, if that sample of teachers were fundamentally different from the sample that completed the surveys then it challenges the ability to generalize the findings.

Concerning the collection of social network data, this study collected egocentric social network data as opposed to socio-centric data. The study relied on the ECTs to name individuals with whom they interacted with, which may not cover the extent of the network of support that novice teachers are exposed to. Collecting socio-centric data involves surveying all teachers/professionals within a school, and allows researchers to get better school-wide measures. The study collected egocentric data due to time, human, and monetary resource constraints. Collecting socio-centric data, at least in a sample of schools, may allow more detailed analysis of the extent of novice teachers' access to resources and support, as well as provide opportunities to better understand the culture and norms of the whole school organization.

Although there are limitations with this study, the findings from this research do add to previous research on new teacher induction by further exploring the role that collective bargaining plays in the provision of mentoring, exploring the socialization of new teachers through one-to-one mentoring and collaboration with colleagues, and by exploring how novices' perceptions of their organizational context is associated with their commitment levels. In this sample, there was a very limited role that collective bargaining played in defining the scope of mentoring, but there could be a greater role for teacher associations to help ensure that mentoring policy is reformed and to provide greater oversight in the implementation of mentoring. Because novice teachers on

average valued the support from their colleagues as opposed to their mentors, districts and schools should consider developing networks of support as opposed to or in addition to one-to-one mentoring programs. Finally, districts need to evaluate the role principals play in providing support to novice teachers and their role in developing a collaborative work environment, because they potentially play a pivotal role in the socialization of new teachers into the profession.

APPENDIX

Table I: ECT response rates by district (fall & spring completers)*

District	# of Elementary ECTs eligible	# of Elementary ECTs in study	Elementary ECT Response Rate	# of Middle Schools ECTs eligible	# of Middle School ECTs in study	Middle School ECT respons e rate	Overall Resp. Rate
Daus (MI)	26	7	26.9	20	4	20.0	23.9
Greenberg (MI)	20	8	40.0	5	2	40.0	40.0
Kaline (MI)	14	9	64.3	9	5	55.6	60.9
Underwood (MI)	23	8	34.8	7	5	71.4	43.3
Wagner (MI)	8	7	87.5	0	0	NA	87.5
Whitaker (MI)	4	2	50.0	8	6	75.0	66.7
Englam (IN)	53	30	56.6	19	12	63.2	58.3
Luckman (IN)	14	8	57.1	5	3	60.0	57.9
Payton (IN)	27	18	66.7	5	2	40.0	62.5
Sayers (IN)	29	20	69.0	13	5	38.5	59.5
Wilson (IN)	31	15	48.4	28	8	28.6	39.0
Total	249	132	0.53	119	52	0.44	0.50

* 63 percent response rate in the fall, and a 76 percent retention rate in the spring

Table II: ECT interaction with mentor - Percent ECT response

Frequency	Fall	Spring
Never	7.5	3.3
Less than once a month	8.5	15.8
1-3 times per month	17.9	21.7
1-2 times per week	24.5	17.5
3-4 times per week	13.2	15.8
Everyday	28.3	25.8

Table III: ECT interaction with mentor by years experience - Percent ECT response

Frequency	1st yr	2nd yr	3rd yr
Never	0	5.6	5.3
Less than once a month	12.8	16.7	21.1
1-3 times per month	23.4	24.1	10.5
1-2 times per week	14.9	20.4	15.8
3-4 times per week	21.3	13	10.5
Every day	27.7	20.4	36.8

Table IV: ECT interaction with mentor by level – Percent ECT response

Frequency	Elem	Mid Sch
Never	2.2	7.1
Less than once a month	15.2	17.9
1-3 times per month	20.7	25
1-2 times per week	15.2	25
3-4 times per week	16.3	14.3
Every day	30.4	10.7

Table V: Importance of mentor and colleague support (frequency of response)

Response	Mentor Support	Colleague Support
Not at all important	12	0
Somewhat important	25	16
Very important	28	64
Extremely important	48	86

Table VI: Perceptions of professional fit items

Indicate your level of agreement or disagreement with each of the following statements.

Darken one circle on each line	Strongly disagree	Disagree	Agree	Strongly agree	Not sure*
My approach to teaching fits in throughout this school	O	O	O	O	O
My professional interests are the same as those of other teachers throughout this school	O	O	O	O	O
I identify with other teachers throughout this school	O	O	O	O	O
My professional goals are the same as those of other teachers throughout this school	O	O	O	O	O
I matter to other teachers throughout this	O	O	O	O	O
Other teachers throughout this school matter to me	O	O	O	O	O

* Not Sure was recoded to "missing"

Table VII: Perceptions of stress/burnout items

Indicate your level of agreement or disagreement with each of the following statements.

Darken one circle on each line	Strongly disagree	Disagree	Agree	Strongly agree	Not sure*
I feel emotionally drained from my work	O	O	O	O	O
I feel used up at the end of the workday	O	O	O	O	O
I feel fatigued when I have to get up in the morning and face another day on the job	O	O	O	O	O
I feel burned out from my work	O	O	O	O	O
I feel frustrated by my work	O	O	O	O	O
I feel I'm working too hard on my job	O	O	O	O	O
I feel fed up with my work	O	O	O	O	O
I've become more callous toward people since I took this job	O	O	O	O	O
I worry that this job is hardening me emotionally	O	O	O	O	O

* Not Sure was recoded to "missing"

Table VIII: Spring ECT commitment – conditional model

	Grade Level Parameter Estimate	|t-value|	School Parameter Estimate	|t-value|	District Parameter Estimate	|t-value|	Overall Parameter Estimate	|t-value|
Intercept	1.80***	2.74	1.06*	1.94	2.50***	3.47	1.46**	2.51
District size	-0.003	0.35	-0.01	1.13	0.005	0.46	0.003	0.31
Percent white	-0.07	0.26	0.24	1.05	0.34	1.21	0.14	0.60
Percent free/reduced lunch	0.03	0.10	0.29	1.06	-0.08	0.24	0.02	0.08
Fall commitment	0.39***	4.82	0.57***	8.58	0.43***	5.13	0.53***	6.64
Middle school teacher	-0.22*	1.76	-0.15	1.31	-0.20	1.45	-0.16	1.44
1st yr teacher	-0.19	1.53	-0.0003	0.00	-0.02	0.19	-0.04	0.35
White	0.08	0.44	0.03	0.19	-0.18	0.96	-0.24	1.40
Female	0.10	0.76	-0.07	0.59	-0.04	0.27	-0.03	0.25
Mentor	0.16	1.10	-0.27**	2.22	0.14	0.87	0.09	0.69
Import. of mentor support	-0.07	0.50	0.20*	1.75	0.13	0.90	0.10	0.91
Import. of colg. support	-0.001	0.01	0.23	1.39	-0.21	1.09	-0.18	0.91
Poor labor-mngt relations	0.17	1.03	-0.39***	2.79	-0.20	1.11	-0.17	1.36
Excl labor-mngt relations	0.03	0.24	0.17	1.60	0.17	1.26	0.14	1.36
Professional fit	0.30***	2.70	0.19**	2.05	0.03	0.27	0.23**	2.49
Stress/burnout	-0.36***	3.74	-0.21**	2.55	-0.27**	2.51	-0.20**	2.33
n	135		144		138		103	

Statistically Significant: *** 0.01; ** 0.05; * 0.10

Table IX: ECT change-in-commitment – Conditional model

	Grade Level Parameter Estimate	|t-value|	School Parameter Estimate	|t-value|	District Parameter Estimate	|t-value|	Overall Parameter Estimate	|t-value|
Intercept	-0.20	0.28	-0.29	0.46	0.03	0.04	0.14	0.22
District size	-0.005	0.40	-0.005	0.43	0.007	0.48	0.004	0.39
Percent white	0.11	0.31	0.01	0.03	0.30	0.70	0.06	0.21
Percent free/reduced lunch	0.33	0.81	0.44	1.15	0.11	0.23	0.13	0.41
Middle school teacher	-0.10	0.64	-0.03	0.20	-0.16	1.00	-0.11	0.86
1st yr teacher	-0.25*	1.67	-0.13	1.07	-0.07	0.45	-0.14	1.19
White	-0.07	0.32	0.11	0.62	-0.20	0.93	-0.24	1.17
Female	0.08	0.48	0.04	0.29	0.12	0.70	0.007	0.06
Mentor	0.21	1.21	-0.28**	1.96	0.06	0.35	0.08	0.50
Import. of mentor support	-0.001	0.01	0.21	1.51	0.16	0.88	0.08	0.56
Import. of colg. support	-0.25	1.16	-0.08	0.45	-0.45**	2.02	-0.50**	2.25
Poor labor-mngt relations	0.08	0.41	-0.24	1.43	-0.06	0.29	-0.09	0.51
Excl labor-mngt relations	0.08	0.56	0.11	0.93	0.22	1.44	0.19	1.54
Professional fit	0.17	1.31	0.09	0.80	0.03	0.20	0.13	1.21
Stress/burnout	-0.23**	2.03	-0.08	0.86	-0.08	0.62	-0.09	0.91
n	135		144		138		103	

statistically significant: *** 0.01; ** 0.05; * 0.10

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