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## Mentoring Practices to Keep Teachers in School

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### Abstract

This study investigates the relationship between mentoring practices and beginning teacher migration. Mentor matching, degree of support, and frequency of interactions were examined to determine under which conditions novice teachers are more likely to stay in their school—in hopes of establishing continuity and a culture that positively impacts student performance. The sample consists of 8,838 teachers who were mentored during their first 2 years of teaching. Secondary analysis of data from the 2006 North Carolina Teacher Working Conditions Survey was used to examine mentoring practices. Chi-Square analyses revealed that beginning teachers who were purposefully matched, who received “a lot” of assistance with the supports listed, and who met with mentors monthly or several times a month for the specified activities were more likely to remain in their school than their peers who had received less support.

**Keywords:** teacher migration, beginning teachers, matching, mentoring

### Introduction

Every day approximately 1,000 teachers in the United States change schools, many in pursuit of more supportive working environments (National Commission on Teaching and America’s Future, 2003). To further illuminate the situation, the estimated cost of replacing public school teachers who transfer schools is between \$2.7 and \$3.8 billion annually (Shockley, Guglielmino, & Watlington, 2006; Shakrani, 2008). Current economic conditions have led to widespread budget cuts in educational settings across the U.S., which exasperate this situation further. Due to budget constraints, positions have been eliminated and funding for recruitment has dwindled. Thus, retaining capable teachers has become an even more pressing challenge for the nation’s school districts.

A teacher's decision to stay or leave a particular school is contingent on a variety of teacher and school characteristics. Researchers have found that teachers with strong education credentials (e.g., certification and an undergraduate degree in education) are more likely to move between schools than those who have high academic credentials (e.g., high GPA, graduating from a highly selective college) (DeAngelis & Presley, 2007; Goldhaber, Gross, & Player, 2007). A report by the Alliance for Excellence in Education (2008) revealed that public school teachers who transferred schools cited moving to get a better teaching assignment as a deciding factor 38.1% of the time (p. 23). Other reasons include dissatisfaction with the support received from administrators and organizational conditions such as salary, student discipline, and inadequate planning time (Ingersoll, 2001; Shakrani, 2008). Typically, the desire for working conditions that contribute to student achievement is the impetus for teachers moving from one school to another (Certo & Fox, 2002; Alliance for Excellence in Education, 2008).

Teachers who move to other schools are characterized as “movers,” and this phenomenon is known as migration (Hirsch, 2009, Ingersoll & Smith, 2004). Movers constitute a large portion of teacher turnover each year in the United States and abroad (The Alliance for Excellent Education, 2008; Smithers & Robinson, 2003). However migration may be offset by giving teachers the critical support that is necessary to raise their students’ academic performance. System wide initiatives, such as comprehensive induction programmes strive to make such success possible through varying degrees of training and support (Kelley, 2004; Department of Public Instruction, 2006; Alliance for Education, 2008). A major component of induction is mentoring, wherein an experienced teacher assists a new teacher with becoming acclimated to the profession. Often the mentor assists with curriculum, guidance with classroom management, and general support and encouragement (Shakrani, 2008; Huling & Resta, 2007). There is a plethora of research that suggests that mentoring has a positive impact on novice teachers and their retention (Guarino, Santibanez, & Dalely, 2006; Smith & Ingersoll, 2004; Odell & Ferraro, 1992). However additional research is necessary to determine which mentoring practices lead to the most favorable outcome, keeping teachers in their current school. This may decrease the costs associated with replacing teachers, and increase both student achievement and overall school performance (Smith & Ingersoll, 2004).

## Literature Review

*Mentoring* - Beginning teachers need to receive support in their early years to assist with the transition to their own classrooms. As teacher candidates they are accustomed to the support of their cohort, cooperative teachers, and university supervisors. As their roles shift from teacher candidate to novice, teachers need this same kind of assistance and support (Certo & Fox, 2002). Mentoring is a one-to-one process where an experienced teacher helps guide, support, and advise a new teacher (Shakrani, 2008). Mentoring can help new teachers improve classroom practices and learn professional responsibilities to become effective sooner (Fluckiger, McGlamery & Edick, 2006).

Mentoring programmes have been implemented throughout the United States and in other countries (Howe, 2006) due to consensus that novice teachers’ benefit from mentor support and that such support should be made available in the beginning of their career (Sawchuk, 2008; Huling & Resta, 2007; Smith & Ingersoll, 2004; Feiman-Nemser, Carver, Schwille, & Yusko, 1999). Although mentoring has been widely adopted, these programmes vary in infrastructure, focus, and outcomes (Huling & Resta, 2007; Mullen, 2008). For instance, some programmes train mentors, specify activities, have a formal mentee selection process, or designate the location and frequency of meetings whereas other programmes are less structured (Wong & Wong, 2008, Huling & Resta, 2007; Ingersoll & Smith, 2004; Jacobi, 1991). While it is vital to offer mentoring to novice teachers, it is equally as important to improve the quality of these experiences to help new educators become more effective and reduce teacher turnover—to create continuity and to build a school culture that is dedicated to student success.

*Mentor Matching* - Carefully pairing veteran teachers with beginning teachers can accelerate induction to the profession (Anderson & Pellicer, 2001; Shields et al., 2004; Wayne, Youngs, & Fleischman, 2005) and help novices become acclimated to their school. In a national study on mentoring, in the United States, Ingersoll and Smith (2004) found that 70% of new teachers were matched with mentors in the same discipline. Scholars report that teachers are more likely to continue teaching when they receive mentoring from teachers in their content area (Cohen, 2005; Smith & Ingersoll, 2004). Although this illuminates the mentor-mentee matching strategy that most favorably reduces teacher attrition (leaving the profession) we need information on how to keep novices in their current schools. In addition to matching by content area, Huling and Resta (2007) advocate matching beginning teachers and their mentors by proximity. Related to this Irinaga-Bristolas and his associates’ (2007) revealed that

beginning teachers in rural settings, who were paired with a mentor in the same building, had their informational, instructional and emotional needs being met at higher levels than participants whose mentors were in another location. Meanwhile, Heider (2005) encourages pairing new teachers with mentors in the same grade level since mentors can be more helpful if they are experiencing similar conditions. Galvez-Hjornevik (1986) concurs with each of these recommendations by asserting that the most productive mentoring relationships develop when the mentor and beginning teacher instruct similar grade levels and content and when their classrooms are located in the same area. Since mentor matching by grade level, content, and building does not typically occur, it will be beneficial to determine under which circumstances mentor-mentee matching produces the most favorable result, less migration and capacity building.

*Degree of Assistance* - The education profession has been criticised as ignoring the support needs of new teachers (Renard, 1999). Among teachers who voluntarily transferred schools, lack of planning time, a too heavy workload, problematic student behavior, and lack of influence were cited as the common sources of dissatisfaction (Skakrani, 2008). Mentoring is designed to allow novice teachers to receive support in these areas. Intensive mentoring when mentors are released from their classrooms to concentrate on the needs of the beginning teachers for the full academic year, delivers ongoing concentrated support. Effective mentors target areas that benefit the teacher, such as reviewing curricula, observing lessons, and modeling instruction (Kelley, 2004; Sawchuk, 2008). In 1999, approximately 40% of all public school beginning teachers surveyed in the USA stated that their mentors “helped to a great extent” (National Center of Educational Statistics, n.d.).

The degree of support new teachers receive varies based on the type of support and within each mentoring relationship. To investigate this claim, Odell and Ferraro (1992) asked 141 first-year teachers to rate the helpfulness of seven categories of supports (emotional, instructional, resources, discipline, parental, management, and system). The most valued support was emotional and the least valued support was managing the school day and functioning within the district. Overall, the respondents perceived mentoring supports as “somewhat helpful” which mirrors Andrews and Quinn’s (2005) findings. In their survey of 135 first-year teachers, the novices perceived the most support with policies/procedures and personal/emotional support and perceived the least support with instruction/curriculum and resources/supplies. More recently, Hirsch and Emerick (2006) collected Teacher Working Conditions data from 10,000 new teachers in North Carolina USA. They reported that approximately half of new teachers received a lot of help or help that was critical, while 25% did not find the assistance helpful. Further research is needed to explore the relationship between the degree of mentoring supports and beginning teacher migration. The effectiveness of a mentoring programme will most likely depend on the amount of help and the types of supports available to new educators.

*Frequency of Interactions* - Mentoring programmes are not universal in terms of designating the frequency of contact through meetings and other means. Some mentor programmes require mentors and beginning teachers to meet face-to face occasionally throughout the school year, whereas others dictate weekly or even daily meetings (Robbins, 1991) for reflection on teaching practices, both inside and outside the classroom (Odell & Ferraro, 1992). Such reflection may involve observing lessons taught by teachers with varying levels of experiences, and then meeting to share strategies and discuss solutions to problems. Kelley (2004) describes intensive mentoring and relays that the frequency of classroom assistance from mentors is at least one half day each week for the entire school year. At the University of Texas at Austin, USA mentors and beginning teachers are encouraged to communicate at least once a week for a period of 15 to 24 months (Abbott, 2003).

Although Wayne, Youngs, and Fleischman (2005) recommend that new teachers and mentors meet with each other as well as observe in one another's classrooms, they do not indicate how often this should occur. Few teachers observe their mentors, regularly, even when given the time, because of competing responsibilities (Andrews & Quinn, 2005). The survey item with the lowest mean, in Andrew and Quinn's (2005) study, was "I have had the opportunity to plan lessons and/or units with my assigned mentor or a colleague at my school (p.112)." Out of 21 first-year teachers who commented on this item, only three said that they planned regularly with their mentors. The others planned with their partners or with other grade-level or department colleagues. Although Hirsch and Emerick (2006) examined the frequency of mentoring activities for beginning teachers in the state of North Carolina, they only provide descriptive information for four of the six supports listed on the Teacher Working Conditions Survey. Overall, there were more "stayers" who received those supports "sometimes" or "at least once per week" than "movers." While this provides meaningful information it would be helpful to know if the results were statistically significant and to examine all of the supports to gain a better understanding of frequency of mentoring and beginning teacher migration.

### **Beginning Teacher Support in North Carolina**

In the state of North Carolina, beginning teachers are required to participate in a three-year induction period with mentor support. Each beginning teacher is assigned a mentor soon after employment. Mentors are selected based on successful teaching in the area of licensure; willingness to serve as a mentor; willingness to participate in ongoing annual professional development related to mentoring; and experience in the district norms, culture, and mission, as well as the State's goals, strategic priorities, and standard course of study. Mentors must have 24 hours of training provided by organizations such as the Department of Public Instruction or the Association of Supervision and Curriculum Development: "Mentors need the knowledge, skills, and attitudes to be effective instructional coaches, emotional supports, and organizational guides to those entering the profession" (Department of Public Instruction, 2006, p. 3).

Prior research on mentoring in the state of North Carolina, USA focuses on mentoring practices in general (Hirsch & Emerick, 2006), mentoring and teacher attrition (Parker, Ndoye, & Imig, 2009), and frequency of mentoring for select supports and teacher migration (Hirsch, 2009). The purpose of this study was to investigate the mentoring process of beginning teachers in North Carolina beyond what has already been conducted. Specifically, the researcher examined the association among mentor matching, degree and frequency of support, and novice teachers' intentions to stay at their school. The research questions were:

1. Is there a relationship between mentor/mentee matching and beginning teachers' intentions to stay or leave their school?
2. Is there a relationship between the amount of support beginning teachers receive and their intentions to stay or leave their school?
3. Is there a relationship between the frequency of support and beginning teachers' intentions to stay or leave their school?

## Methodology

The researcher undertook a secondary analysis of data from the Teacher Working Conditions (TWC) Survey conducted at both public and private K-12 schools throughout the state of North Carolina. The TWC survey is an initiative to assess whether teacher working conditions standards are being met and to ensure that teachers' needs are taken into account. SPSS 16.0 was used to conduct chi-square analyses. Missing values were handled using listwise deletion, which excluded cases with missing values for the specified variable(s). Hence, the number of teachers in each analysis varied. The chi-square assumptions of independent observations and expected cell frequencies greater than 5 were met (Weinberg & Abramowitz, 2008) and an alpha level of .05 was used for each statistical test.

### *Sampling and Participants*

The analysis focused on beginning teachers in their first 2 years of teaching. Only teachers who had been mentored for both years are included in the analysis, and this produced a sample of 8,838 teachers. To select the sample, researchers used the item "Have you been formally assigned a mentor in your first *and* second year teaching in North Carolina?" If teachers responded "yes" they were included in the analyses. Racial and ethnic composition was 85.5% White, 10.0% Black or African American, 1.4% Mixed or multiple ethnicities, 1.1% Hispanic, 1.1% American Indian/Alaska Native. In addition, 0.5% stated "some other race or ethnicity," and 0.4% Asian or Pacific Islander. Eighty percent of the respondents were female and 20% were male. Seventy percent earned a bachelor's degree, 18% took an alternative route to becoming an educator, and 12% had earned a master's degree.

### *Instrument*

The North Carolina Teacher Working Conditions Survey contains 139 questions and is typically administered either electronically or via hard copy to every licensed public school teacher in the state of North Carolina. Teachers either respond "yes" or "no" to a series of statements or rate their level of agreement via each statement using a Likert scale with respect to these domains: time, facilities and resources, empowerment, leadership, professional development, mentoring and demographics. The North Carolina Professional Teaching Standards Commission developed the TWC Survey in 2001 and it was based on data from the National Center for Education Statistics' School and Staffing Survey (Moir, n.d.). After the first administration of the TWC survey, a factor analysis was conducted to create a set of core questions in each domain. Questions with high factor loadings were grouped together in their respective domains. Content validity was established by asking "a group of approximately 50 educators—including practicing educators on the North Carolina Professional Teaching Standards Commission and other colleagues within their schools...to rank on an ordinal scale the relevance and importance of each question on the 2004 instrument" (Hirsch, 2007, p. 41-42).

### *Operationalisation of Items*

The mentoring section of the TWC survey contains items on receiving mentoring and being a mentor; hence, this study used the items that pertained to receiving mentoring. For mentor matching, the item "Please indicate whether each of the following were true for you and your mentor" was used. Respondents were asked to select "yes" or "no" based on these statements: a) My mentor and I were in the same building, b) My mentor and I taught in the same content area or c) My mentor and I taught the same grade level.

Degree of assistance was measured using the item, “My mentor was effective in providing support in the following areas” (a) Instructional strategies, (b) Curriculum and the subject content, (c) Classroom management/discipline strategies, (d) School and/or district policies and procedures, (e) Completing products or documentation required of new teachers, (f) Completing other school or district paperwork, and (g) Social support and general encouragement.” The Likert scale ranged from 1 to 5, where 1 = of no help at all, 2 = Has helped a little, 3 = Has helped some, 4 = Has helped a lot, 5 = Help was critical. To facilitate the analysis, the scale was collapsed into the following three categories: “No help” (based on *of no help at all*), “Some help” (consisting of *has helped a little* and *has helped some*) and “a lot of help” (which consists of *has helped a lot* and *help was critical*).

Frequency of interactions was based on the item, “On average, how often did you engage in each of the following activities with your mentor? a) Planning during the school day with my mentor, b) Being observed teaching by my mentor, c) Observing my mentor's teaching, d) Planning instruction with my mentor, e) Having discussions with my mentor about my teaching, and f) Meeting with my mentor outside of the school day.” Teachers were asked to respond using a scale from 1-5, where 1 = Never, 2 = Less than once per month, 3 = Once a month, 4 = Several times a month, 5 = Once a week, and 6 = Almost daily. This scale was collapsed into four categories: “never” based on the first option, “rarely” (comprises *less than once per month* and *once a month*), “several times a month” (consists of *several times a month* and *once a week*), and “almost daily,” for the remaining option.

The outcome variable, teachers’ intentions to stay in the school, was obtained from the survey. Teachers were asked “which statement best describes your future intentions for your professional career” and given five choices:

- a. Continue teaching at my current school.
- b. Continue teaching at my current school until a better opportunity comes along.
- c. Continue teaching but leave this school as soon as I can.
- d. Continue teaching but leave this district as soon as I can.
- e. Leave the profession altogether.

The first response was categorized as “stay in the school” and the next three options were categorized as “leave the school.” The last option “leave the profession” was excluded from the analysis.

## Results

Descriptive statistics revealed that 61% of the respondents indicated that they intended to stay in their current school and 39% planned to move to another school. Each type of matching criteria (by grade level, content area, or building) was statistically significant in relation to teachers’ intentions to stay in their current school (see Table 1). Higher percentages of teachers who were matched by grade level, content, or building were inclined to stay in the school. For example, 88% novice teachers who were matched with a mentor in the same building were more likely to stay in the school compared to 11% of new teachers who were matched with a mentor in another location.

**Table 1 - Mentor and mentee matching and beginning teachers' intentions to stay in their school**

	Yes		No		Total N	X <sup>2</sup>
	%	N	%	N		
<b>Were in the same building or school</b>						
Stay in the school	88.8	4411	11.2	556	4967	6.00*
Leave the school	87	2695	13	403	3098	
<b>Taught in the same content area</b>						
Stay in the school	58.2	2878	41.8	2071	4949	24.05**
Leave the school	52.6	1625	47.4	1466	3091	
<b>Taught the same grade level</b>						
Stay in the school	59.2	2925	40.8	2016	4941	11.52**
Leave the school	55.4	1711	44.6	1380	3091	

\* $p < .05$ . \*\* $p < .01$ .

The degree of support provided by the mentor in eight areas was also investigated to determine the relationship between the level of assistance beginning teachers' perceived and their desire to transfer schools. For each support (e.g., assistance with instructional strategies, curriculum and the subject content I teach, classroom management/discipline strategies), there was a statistically significant relationship with new teachers' intentions to remain at their school (see Table 2). New teachers were more likely to stay in their current location if they received "a lot" of help from their mentor with each of the supports listed. For instance, 62% of novices who received "a lot" of help from their mentors with school or district policies and procedures planned to stay in their current school. In contrast, only 31% who received "some help" with school or district policies and procedures intended to stay in their school. Similar results were found for social support and general encouragement. Seventy-eight percent of new teachers who received a "lot" of social support planned to stay compared to 18% who received "some" social support and general encouragement.

Each of the supports studied for frequency of mentor-mentee interactions was statistically significant in regards to new teachers' intentions to stay in their current school (see Table 3). Thirty-seven percent of novices who planned during the day with their mentor "several times a month" were more likely to stay in their current school, whereas 25% who "rarely" planned and 10% who planned "almost" daily intended to stay in their current school. New teachers who had discussions about their teaching with their mentors "several" times a month (45%) were more inclined to stay in their school than new teachers who had these conversations "rarely" (23%) or "almost daily" (28%). Sixty-four percent of beginning teachers who were "rarely" observed by their mentor planned to stay in the school as oppose to 14% who were observed several times. Similarly, 41% of novices who observed their mentor "rarely" and 9% who observed their mentor several times a month indicated they will stay in their current school.

**Table 2 - Degree of assistance and teachers' intentions to stay in their school**

	No help		Some help		A lot of help		Total	$\chi^2$
	%	N	%	N	%	N	N	
<b>Instructional Strategies</b>								
Stay in the school	5.7	284	33.3	1654	61	3034	4972	1.59**
Leave the school	10.4	322	41.9	1301	47.7	481	3104	
<b>Curriculum and the subject content I teach</b>								
Stay in the school	11.6	576	35.8	1776	52.6	2610	4962	1.39**
Leave the school	18.8	583	40.7	1263	40.5	1255	3101	
<b>Classroom management/discipline strategies</b>								
Stay in the school	6.6	326	33.8	1675	59.7	2959	4960	1.73**
Leave the school	11.9	369	42.6	1321	45.5	1410	3100	
<b>School and/or district policies and procedures</b>								
Stay in the school	6.2	307	31	1537	62.8	3112	4956	1.27**
Leave the school	10.8	332	38.4	1185	50.8	1568	3085	
	No help		Some help		A lot of help		Total	$\chi^2$
	%	N	%	N	%	N	N	
<b>Completing products or documentation</b>								
Stay in the school	5.1	254	24.6	1222	70.3	3493	4969	1.28**
Leave the school	10.1	312	30.7	949	59.2	1833	3094	
<b>Completing school or district paperwork</b>								
Stay in the school	7.3	363	28	1386	64.7	3204	4953	1.51**
Leave the school	13.5	419	34.3	1062	52.1	1614	3095	
<b>Social support and general encouragement</b>								
Stay in the school	3.8	188	18.1	898	78.1	3882	4968	1.36**
Leave the school	7	218	26.4	818	66.6	2068	3104	
<b>Other</b>								
Stay in the school	6.7	260	21.8	849	71.5	2783	3892	1.43**
Leave the school	12.8	312	29.7	727	57.5	1407	2446	

\* $p < .05$ . \*\* $p < .01$ .



**Table 3 - Frequency of interactions with mentor and teachers' intentions to stay in their school**

	Never %	N	Rarely %	N	Several times %	N	Almost daily %	N	Total N	$X^2$
<b>Planning during day</b>										
Stay in the school	26.9	1331	25.4	1257	37.1	1839	10.7	530	4957	157.4**
Leave the school	37.8	1168	27.7	858	27.4	848	7.1	219	3093	
<b>Being observed by my mentor</b>										
Stay in the school	18.5	909	64	3150	14.4	708	3.1	153	4920	51.6**
Leave the school	23.9	735	62.9	1933	10.4	320	2.8	85	3073	
<b>Observing my mentor</b>										
Stay in the school	46.2	2281	41.3	2039	9.3	460	3.1	153	4933	87.9**
Leave the school	56.7	1751	34.5	1067	6.2	193	2.6	79	3090	
<b>Planning instruction</b>										
Stay in the school	29.2	1440	33.1	1634	30.6	1511	7.1	351	4936	149.2**
Leave the school	41.7	1284	30.8	949	22.2	684	5.3	163	3080	
<b>Having discussions</b>										
Stay in the school	3.2	161	23.5	1166	45.1	2235	28.1	1392	4954	110.4**
Leave the school	5.7	175	30.7	949	43.3	1341	20.3	629	3094	
<b>Meeting outside of the school</b>										
Stay in the school	32.9	1629	36.4	1804	23.7	1173	7.1	350	4956	66.8**
Leave the school	41	1267	34.6	1068	19.6	606	4.8	148	3089	

\*p < .05. \*\*p < .01.

## Discussion

In this study, beginning teachers who had a mentor in the same building, content, or grade level were less inclined to transfer schools than novices who were not. This finding corroborates the suggestions of scholars who have advocated matching by content (Cohen, 2005; Ingersoll & Smith, 2004), by grade level (Heider, 2005), building (Huling & Resta, 2007; Irinaga-Bistolos, Schalock, Marvin, & Beck, 2007), or all three in order to create optimal conditions for mentors to assist beginning teachers (Galvez-Hjornevik, 1986). These matching strategies provide opportunities for assistance that ranges from instructional practices to more general tasks (completing paperwork and documentation) that is specific to that location. If the goal is to keep teachers from changing schools, then matching mentors and novices by grade level, content, or building may provide them with the necessary support that decreases their desire to move in search of better working conditions (Alliance for Excellence in Education, 2008; Shakrani, 2008).

For each support (e.g., instructional strategies, curriculum and the subject content, classroom management/discipline strategies), the degree of assistance the mentor provided was statistically significant in terms of teachers' intentions to stay at their school. Upon close examination, beginning teachers who received "a lot" of support versus "some" support were less likely to express a desire to move from one school to another. Odell and Ferraro (1992) found similar results in their study on mentoring supports, wherein beginning teachers thought their mentors were "somewhat helpful" overall. In contrast, their study revealed that some supports were more helpful than others. New teachers indicated receiving a high degree of emotional support, as well as assistance with instructional strategies and obtaining resources for the classroom. The teachers received less help with student discipline, working with students, managing the school day, and functioning within the school district. The current findings support the importance of assisting mentees with curriculum and instruction and their need for constructive feedback (Andrews & Quinn, 2005; Rowley, 1999). Similarly, this study provides additional evidence that administrative support is crucial in individual school buildings, which is a main reason that new teachers stay in their schools (Certo & Fox, 2002).

Novice teachers can learn how to become effective teachers through meaningful interactions with their mentors. Based on the results it appears as though beginning teachers prefer to engage in the informal aspects of mentoring (having discussions and planning during the day) than the more formal aspects of mentoring (meeting outside the school day, planning instruction, having one's teaching observed, and observing one's mentor). New teachers who met with their mentors several times a month for more informal conversations and those who met less often for formal mentoring practices were more likely to stay in their current school. The findings on teaching observations conflict with Andrews and Quinn's (2005) suggestions for more emphasis on novices observing their mentors and being observed by their mentors. However new teachers may prefer less observation because of their fear of judgment, which results in minimal reflection and growth (Heider, 2005). Internationally, beginning teachers frequently observe their mentors, experienced and other new teachers in a variety of grades and subjects (Britton, Raizen, Paine & Huntely, 2000). The recent surge in telementoring (mentoring through electronic means) and novice teacher learning communities, substantiate the desire for more casual and frequent contact between mentors and mentees (Heider, 2005). While each of the activities investigated are integral components of intensive and effective mentoring programmes (Kelley, 2004; Ehrich, Hansford, & Tennent, 2004), the results highlight the need to balance mentor-mentee interactions so that new teachers have autonomy in the classroom and frequent opportunities for dialogue (Certo & Fox, 2002).

*Limitations* - Due to secondary analysis, the researcher was limited to measures that were readily available from the TWC survey. Given that a measure for migration was unattainable, teachers' intentions to stay in their current school were used in the analyses. With survey research, there is the risk of socially desirable response bias and common source bias (Boardman & Sundquist, 2009). Since there is no control group, conclusive statements on the value of mentoring cannot be made. Additionally, the relationship between mentoring and teacher migration may be the result of other factors related to either one or both such as teacher characteristics (age, gender, minority, salary, employment status) or school characteristics (urban, poverty enrollment, type) (Smith & Ingersoll, 2004). As a result of these factors, some teachers may be more susceptible to transferring schools than others regardless of mentoring practices. Findings from this study are based on TWC survey data in North Carolina US and are not generalisable to other states or countries.

## Conclusions and Future Research

Teacher migration is a pressing challenge in the United States and in other countries. Although teacher induction practices vary globally, because of “different cultural, social, geopolitical and economic contexts,” mentoring is a common component (Howe, 2006, p. 287). While information exists on exemplary induction programmes in different countries (Howe, 2006), school systems need to know exactly how to focus on the professional needs of novice teachers—in hopes of reducing migration. The scale of the study provides adequate evidence of the benefits of mentoring beginning teachers. Also, the findings support existing research and can provide guidance on specific mentoring practices. Policymakers and school district personnel should use this and other mentoring research to refine their mentoring programmes in order to further reduce teacher migration—and to build school cultures where every teacher and student can succeed.

Additional research on mentoring can be used to inform mentoring programmes across the country and abroad. Studies that examine matching, degree of assistance, and frequency of mentor-mentee interactions in other states and countries would provide comparative data. Novice teachers in more individualistic cultures may need to receive a balance of informal and formal support, whereas novices in more community oriented cultures may prefer ‘a lot’ of formal support, which may be associated with less migration. The culmination of mentor matching by grade level, content area, and building and migration can be investigated to determine whether a combination of mentor selection criteria are better than using a criterion to keep teachers in their schools. Researchers could also determine which group of supports (degree of assistance and frequency) increases the likelihood that beginning teachers will remain in their classrooms.

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