The New Teacher Support Program: Reconceptualizing Teacher Preparation Beyond Graduation

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Abstract

The New Teacher Support Program provided twenty-six novice STEM teachers in high needs districts a comprehensive, flexible, and individualized induction support that utilized mentoring, social network building and professional development to increase teacher retention rates of the participants. This paper describes research-based components of the model. Utilizing an appreciative inquiry stance the authors share measures of program success. Specifically, new teachers received instructional, professional and personal support. Also, the dyad relationship was equally rated as satisfying by new teacher and mentor. Furthermore, the new teacher retention rate was well above the national average. Finally, this paper enumerates the insights gained regarding the support of early career STEM teachers.

Keywords: induction, mentoring, novice teacher

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Introduction

Teacher learning must be continuous; extending from their preservice coursework throughout the induction period, which proceeds from the point of hire in a district through the second to third year of teaching (Weathers, 2013). While some state departments of education have called on preparation programs to support their graduates once they are in the field, preservice programs cannot provide early career teachers with all they need to know. "No single institution has the expertise, authority, or financial authority to create the necessary structures and learning opportunities. Schools, universities, teachers' unions and the state all have an important part to play" (Feiman-Nemser, 2001).

According the National Association of Board Stage Boards (Sun, 2012), comprehensive induction occurs for less than one percent of new teachers. In order for induction to be effective it must be at least two years in length, utilize a well-trained mentor, allow for common planning with other teachers, include ongoing professional development and use standards-based evaluation throughout (Sun, 2012). This caliber of induction leads to improved teacher practice, higher student achievement, and lower teacher turnover. Many have called for more robust induction and mentoring experiences for new teachers (Feiman-Nemser, 2001; Ingersoll & Strong, 2011). Specifically, practice-based learning opportunities are needed while teachers are "on the job" (Feiman-Nemser, 2001a; Feiman-Nemser; 2001b; Ganser, 2002; Gold, 1996 & Hegstad, 1999) to fully prepare them for the complexities of professional practice.

Thus, the purpose of this research is to explore the successes of an individualized STEM induction program that utilized mentoring, learning communities, and professional development to support new teachers in the first two years of teaching. Specifically, the research will answer the question: Did the NTSP positively impact the instructional, professional and personal needs of early career teachers?

Literature Review

Early on in their teaching, new teachers discern the distance between anticipated and actual teaching effectiveness which only amplifies feelings of unpreparedness and inadequacy which informs their teacher identity. Fortunately, teacher competence improves with experience and the knowledge and practice that come with it (Katz, 2016). Furthermore, Katz suggests that in the early phases of Survival and Consolidation (years 1-3) mentor support and encouragement are vital in helping teachers to build knowledge, reflect on practice and gain insights regarding appropriateness of their practice. Opportunities to gather insights from colleagues is also essential in the first few years of teaching. Teachers widen their professional networks through the Renewal and Maturity phases (years 3-5) and seek answers to broad ranging educational issues that have an impact on their identity development and their practice. Many others have described the cycle of teaching to include these stages of teaching (Huberman, 1989; Steffy & Wolfe, 2001) recognizing that personal and contextual factors influence how teachers navigate various levels of the profession.

According to the 2010 Teacher Attrition and Mobility Report, heavy workloads, unsupportive relationships, a lack of autonomous decision-making and a lack of professional identity are all issues that new teachers face (NCES, 2010). As new teachers struggle in the early years, mentors provide both professional and personal support to offset the challenges new teachers face. In the broadest sense, mentoring is defined as a relationship in which an expert teacher provides a novice teacher with guidance, expertise, and overall support in the profession. Lipton,Wellman, & Humbard (2003) suggest learning-focused mentoring which involves collaborative problem-solving, data-based decision making and collegial support around a process of change. Others refer to this collegial mentoring as coaching (Aguilar, 2013; Knight, 2007). Wang and Odell (2002) suggest that the most effective type of mentoring has a foundation in the critical-constructivist perspective and focuses on a continuous and collaborative work between teacher and mentor with an eye toward personal improvement and agency (Dyson, 2010; He, 2009). Despite the title, mentors/coaches can positively impact all aspects of teaching from instructional to personal to professional (Killion & Harrison, 2007).

Social capital development is equally important to teacher quality (Baker-Doyle & Yoon, 2010) particularly in the early years as teachers are unaware of its inherent value in helping to negotiate the social dynamic of the school context. Along with school-based networks, larger professional learning communities support teacher identity development (Baker-Doyle, 2011; Baker-Doyle, 2017). As teachers transition from preservice to inservice, they have opportunities to build competence through development and synthesis of pedagogical and content knowledge in a real world context of the classroom (Fernandez, 2014; Katz, 2016; Steffy & Wolfe, 2001), cultivate social networks to build vital supportive structures for professional growth (Baker-Doyle and Yoon, 2010), maintain a work-life balance through deliberate self-care and (Butler, 2010) engage in leadership opportunities in their respective learning communities.

New teachers need broad, well-defined induction programs that employ knowledgeable mentors and veteran teachers and engage teachers in learning communities (LCs) inside and outside of schools (Ingersoll & Strong, 2011). LCs assume that no one individual is the keeper of all knowledge (Waldron, 2010). Educators who participate in LCs are more likely to: share teaching practices and responsibility for student learning with other teachers, help students to achieve to higher levels, engage in shared leadership and remain in the profession (DuFour & Mattos, 2013).

Research Context-The NTSP Model

Given what research suggests regarding impactful induction which includes mentoring, social networking and supportive learning communities, the New Teacher Support Program was created as an initiative of a regional STEM teacher support collaborative partnership made up of 8 higher education institutions and nonprofits. Novice teachers from the various institutions agreed to participate in the NTSP regional induction program which used STEM-focused regional teacher resources to sustain and ultimately retain its participants. Aligned with the best practices for new teacher support, the induction model employed an individualized support plan (ISP), that was informed by a needs assessment. The ISP served as a roadmap for trained mentors as they engaged new teachers to support their professional, instructional and personal needs. During the program, mentors visited classrooms for observations, attended professional

development events alongside their new teachers, counseled new teachers on personal, instructional and professional matters and assisted with leadership development.

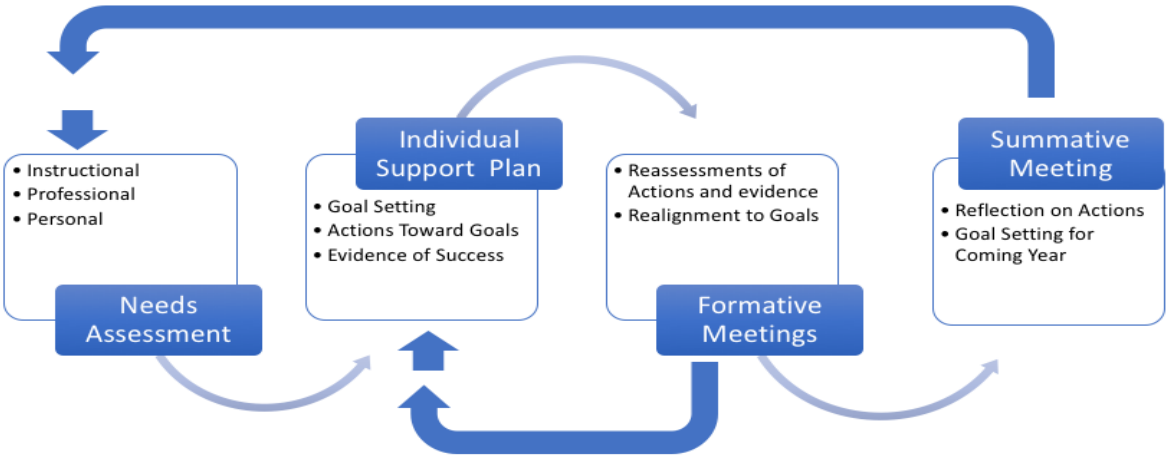
New teacher professional development sessions addressed problems of practice, classroom management, cultural proficiency, getting ready for school, social capital building, health and wellness and getting organized.

As new teachers engaged in various supportive activities, the mentors underwent professional development. Beyond the program onboarding and administrative meetings, the mentors met monthly to address their mentoring concerns and to engage in development around cultural proficiency, the use of the Danielson Framework, self-care/social-emotional support, and active listening.

In the latter half of the program, new teachers transitioned from external to internal mentors. With the explicit support of their external mentor, new teachers were charged with identifying an in-school collaborator who would assume the mentoring responsibilities taken on by their external mentor. The in-school collaborator agreed to monitor the new teacher's progress and reported back to the program periodically. Through regular interactions with their in-school collaborator as well as teachers across the program, new teachers were encouraged to take on leadership opportunities at their schools and within the program which included writing grant proposals for classroom equipment, leading in-school and program wide professional development sessions and networking with educators from other schools.

Over a two-year period, mentors (external and in-school) and new teachers would revisit and revise the ISP as needs were addressed and other needs arose (See Figure 1). Integral to the program was the new teacher's participation in regular cohort meetings as well as regional and cohort-specific professional development sessions and social networking events.

Figure 1. The NTSP-ISP Model of Action



Methodology

An appreciative inquiry (AI) approach was used to address the following research question: Did the NTSP positively impact the instructional, professional and social emotional needs of early career teachers? "AI involves…the art and practice of asking questions that strengthen a system's capacity to apprehend, anticipate, and heighten positive potential" (Cooperrider, Whitney & Stavros, 2003). Data collection and analysis employed a concurrent mixed-methods design (Creswell, 2009). Both qualitative and quantitative data were collected and analyzed to address our research questions at various points of program implementation.

Participants

The New Teacher Support Program enrolled 28 new teachers over the three years of this grant. A total of 26 new teachers actively participated in program activities. Ten teachers entered the program in year 1, an additional 12 teachers began in year 2, and a third cohort consisting of 6 new teachers participated in year 3. Of the active participants, there were 5 male and 21 female teachers that worked with one of 10 mentors. New teachers were all young adults who were recent graduates of their undergraduate or graduate certification programs from member institutions. Per the requirements of the scholarship program, all taught in a high needs school and/or district. The new teachers taught high school and middle school students in either mathematics or one of the sciences (Physics, Chemistry, Biology, etc.). Each cohort received a maximum of 24 months of support.

Instrumentation

In order to address the research question, a content analysis of program monitoring documents was conducted. Specifically, participants' Needs Assessment, Individual Support Plans and Mentoring Reports were reviewed. In addition, quantitative analysis of select items from the Year-End Feedback Survey for three cohorts (N=26) were reviewed.

Needs Assessments, ISP. Twenty-six new teachers completed the Needs Assessment Survey. Part one asked respondents to indicate on a 3-point Likert scale (2=Very Comfortable; 1 = Somewhat Comfortable; and 0 = No Comfort) their comfort with the listed instructional and professional areas. Members of the research team reviewed the draft survey individually and then collectively to determine the appropriateness of the elements with respect to the goals of the program. Part two of the survey was a worksheet adapted by Butler, (2010) and asked respondents to rate on a 6-point Likert scale the frequency with which they used the listed self-care actions (3 = I do this well (e.g., frequently); 2 = I do this OK (e.g., occasionally); 1 = I barely or rarely do this; 0 = I never do this; and ? = This never occurred to me).

The tool provided priority rankings for each new teacher's needs in the areas of instructional, professional and personal practices. ISPs were generated noting the top three areas of need for each of the areas. The ISPs were verified for accuracy by the new teachers after which time they were shared with each new teacher and his/her mentor. The ISP and needs assessment were used by the dyad to inform monthly interactions captured in the monitoring forms.

Mentor Monitoring Reports. The monitoring forms asked mentors to record the current needs, the status of each need, and evidence of resolution or next steps for each. Also, the forms asked for a list of needs to be addressed next and resources required along with steps both

mentor and new teacher should take to address the needs. Finally, the form documented date, time and focus for the next meeting.

Mentors completed initial, formative and summative monitoring reports during the mentoring cycle. An a priori coding scheme was derived from the needs assessment. Analysis of each mentor report from the mentor interactions with the first and third cohort was completed by comparison of the monthly reports to the corresponding new teacher's action plan and to the items on the coding scheme.

Mentor Relationship Questionnaire (MRQ). Mentors and new teacher dyads completed an adapted version of the MRQ. The four-part survey examines the similarities and differences in the mentor-new teacher dyad relationship (Greiman, 2002, Greiman, 2007; Burris, Kitchel, Grieman, & Torres, 2006). In order to align the tool with the program structures, statements were either eliminated or reworded as needed to reduce redundancy and increase clarity for the user. The rating responses was adjusted to an 8-point Likert scale (1=Not at all to 8=To a very large extent) and made consistent across the instrument. Responses are compared to determine to what extent the mentors and new teachers possessed similar views of the mentoring experience.

Program Evaluation Surveys. At the close of each year, a confidential survey was administered electronically to all of the new teachers and the mentors in the program. The New Teacher Survey consisted of 23 multiple choice and free response questions. New Teachers were asked to provide feedback about their experiences with the program including: usefulness of monthly meetings, program design, quality of mentor support and their intention to continue as a classroom teacher in a high needs school. The mentor survey consisted of a total of 9 questions including multiple choice and free response questions. Feedback was requested on program administration, mentor professional development and suggestions for program improvement. The results were summarized by the external evaluator and distributed to program administrators. The findings were then reviewed by the researchers and themes for mentors and new teachers were noted.

Results

The overarching research question is, Did the NTSP positively impact the instructional, professional and social emotional needs of early career teachers?

Mentor Monitoring Reports

A total of 60 mentoring progress reports were electronically submitted by 9 out of the 10 external mentors. One mentor did not submit reports. In some cases, mentors had difficulty meeting with the new teacher as often as the program suggested. As a result, the submission of reports was not 100% consistent across mentors. Reports were coded by hand for each mentor and analyzed to determine frequency of each specific mentor action. Results were compiled for all of the mentors to determine the overall focus of the work of the mentor group (see Table 1). It is noted that although the work of the mentors was a direct result of the stated needs of each new teacher, there were sufficient redundancies in the needs assessments to aggregate the data in defined categories.

Table 1
Substance and Frequency of Mentoring Exchanges

Substance	Frequency
Classroom management	23
Content resources	15
Content advice	9
Pedagogical resources	18
Pedagogical advice	14
Wellness advice	18
Professional advice	18

Note: mentors (n=9)

Specifically, three actions that occurred most often were providing pedagogical advice and resources (n=32), providing advice and resources for classroom management (n=23) and providing professional support such as attendance at professional organizations and assistance with employment options (n=18). Additionally, there was evidence that mentors were supporting the social and emotional health of the new teachers, with wellness advice (n=18) a theme that was an expressed focus of the program.

The three categories of identified needs were instructional practices, professional practices and personal practices. Overwhelmingly, the need most frequently addressed was classroom management. Progress reports noted that new teachers had their instructional needs met more often than other needs. Among the instructional needs met were classroom management, routines and procedures, student engagement, content-related pedagogical strategies, problem and project-based learning and content related resources. The second category of needs was professional. Networking and collaborations with colleagues was most often cited as a met need. Overall, fewer needs were addressed in this area as compared to instructional needs. The final category of personal practices had few met needs as well. Work-life balance was addressed most often followed by time management.

It is important to note that each new teacher had numerous needs met. The number of met needs per teacher ranged from three to eleven. Again, the distribution of needs across the three categories of practices was notably unequal with most addressed needs being instructional practices.

Mentor Relationship Questionnaire

Eight matched pairs of new teachers from Cohort 1 and their mentors were analyzed (see Table 2). High agreement is hereafter defined as group mean differences ranging from -0.5 to 0.5. Negative means indicated higher mentor ratings per question.

Table 2
High Agreement Mean Responses and Mean Differences on Mentor Relationship Questionnaire (N=16)

Part A To what extent have you… *Part A To what extent has your mentor…..*	Mentor. *n=8*	New Teacher *n=8*	Diff
Thought highly of your new teacher/mentor	7.6	7.4	-0.3
Served as a role model	7.3	7.3	0.0
Conveyed feelings of respect	7.6	7.5	-0.1
Served as a sounding board for the new teacher/mentor to develop and understand him/herself	7.8	7.3	-0.5
Considered the new teacher/mentor a competent colleague	7.4	7.0	-0.4
Been someone you identified with	7.0	6.9	-0.1
Shared personal experiences as another perspective to help the new teacher/mentor work through his or her problems	7.8	7.4	-0.4
Been someone the new teacher/mentor could trust	7.5	7.3	-0.3
Part B To what extent did your new teacher need assistance in the following areas? *Part B To what extent did you need assistance as a new teacher?*			
Evaluate student work	3.5	3.9	0.4
Manage daily tasks	4.9	5.4	0.5
Manage personal stress	5.5	5.8	0.3
Manage time	5.8	5.4	-0.4
Use educational technology	5.3	5.5	0.3
Part B To what extent were you adequately prepared to provide assistance to your new teacher in the following areas? *Part B To what extent were you provided assistance by your mentor?*			
	No high agreement items		
Part C. My new teacher and I…. *Part C My mentor and I….*			
Have similar working styles	5.4	5.4	0.0
See things much the same way	5.9	5.5	-0.4
Part C When I reflect on my mentoring experience, I think that… *Part C When I reflect on my mentoring experience, I think that….*			
I was satisfied with my interactions with my new teacher/mentor	7.4	6.9	-0.5

Note: 8-point Likert scale (1=Not at all to 8=To a very large extent)

For Part A (Psychosocial), mentors and new teachers had high agreement on the questions, *Served as a role model* (0.0); *Served as a sounding board*…(-0.5); *Been someone you identified with* (-0.1); *Thought highly of your new teacher* (-0.1); *Considered a competent colleague* (-0.4); *Shared personal experiences*…(-0.4); *Conveyed feeling of respect* (-0.1)*;* and *Been someone to trust* (-0.3).

For Part B (Professional Mentoring Need), means ranged greatly. Across the groups, few statements yielded similar ratings. Areas of high agreement included; *Evaluate student work* (0.4);

Manage daily tasks (0.5); *Time management* (-0.4); *Manage personal stress (0.3); and Use educational technology* (0.3).

For Parts C and D (Dyad Similarity and Satisfaction), participants held similar views of the experience. They had high agreement for *Have similar working styles* (0); *See things much the same way* (-0.4); and *I was satisfied with my interaction with my new teacher/mentor* (-0.5).

Program Evaluation Surveys

Results from the annual program evaluation surveys across all three 3 years of the program, all 3 cohorts of new teachers and all of the mentors were aggregated. New teachers gave high ratings to their relationships with mentors and the professional development sessions offered by the program. New teachers frequently cited the following areas where they received mentor support: classroom management, building confidence, and maintaining effectiveness with dysfunctional systems or administration. Additionally, teachers indicated that they were able to transition to school-based collaborative support once the support of the external mentor concluded.

Mentors reported a high degree of comfort with the program's mentoring model that included a focus on the new teacher's health and wellness as well as development of their critical listening skills. The articulation of specific new teacher needs using the program's model, provided the support that the mentors needed to address those needs, especially in the area of professional and instructional needs. Mentors also reported a high degree of satisfaction with the pairing of the new teachers.

Discussion/Conclusion

The data collected at various points in the program led us to the following conclusions about program impact.

Retention Rates

Program records monitored participants' employment. Retention rates met or exceeded reported national rates. The New Teacher Support Program enrolled 28 new teachers over the three years of this grant. A total of 26 new teachers actively participated in program activities. Ten teachers entered the program in year 1, an additional 12 teachers began in year 2, and a third cohort consisting of 6 new teachers participated in year 3. Nearly all (24 of 28 – 86%) of the teachers who enrolled in the program were still teaching after the end of the support program. This compares favorably to the findings reported in the longitudinal study, "Public School Teacher Attrition and Mobility in the First Five Years" (Gray & Taie, 2015). The study found that 10 percent of new teachers in 2007-08 didn't return the following year, increasing cumulatively to 12 percent in year three, 15 percent in year four and 17 percent in the fifth year. The totals include teachers who were let go and subsequently didn't find a job teaching in another district.

Impact of Mentoring

All of the instruments used provided consistent evidence that the mentoring experiences were positive for both mentors and new teachers. Mentors reported that they felt prepared to assist new teachers in a number of key areas with strongest emphasis on managing classroom and

students. New teachers identified these as areas of need as well. Areas of support identified by mentors were also the areas in which new teachers reported receiving the greatest assistance.

Individualized Support

The individualized nature of the program allowed for focused mentoring rather than broad-based support. The action plans developed by each new teacher formed the basis for continued mentor support and were consistently cited in the mentor reports. The major areas of teachers' reported needs, instructional and professional, were the needs most often articulated in the reports. Teacher satisfaction with their mentors is an additional indicator of the positive impact of focusing on the specific needs of each new teacher.

Significance

The NTSP reconceptualized teacher preparation to include two years of individualized support that includes attention to new teachers' instructional, professional and social-emotional needs among trusted colleagues. This model also recognizes the continuum of teacher learning and seeks to build connections between preservice and inservice learning opportunities ultimately leading to better teacher retention.

References

Aguilar, E. (2013). The art of coaching: Effective strategies for school transformation. San Francisco, CA: Wiley.

Baker-Doyle, K. J. (2017). Transformative #Teachers: Grassroots teacher leadership and learning in the digital era. Cambridge, MA: Harvard Education Press.

Baker-Doyle, K., & Yoon, S. A. (2010a). In Search of Practitioner-Based Social Capital: A Social Network Analysis Tool for Understanding and Facilitating Teacher Collaboration in a Professional Development Program. Professional Development in Education, 37 (1), 75-93.

Butler, L. D. (2010). The self-care assessment. The student self care manual: Wellness education services. Retrieved from http://wellnessed.buffalo.edu/stresmgt

Carpenter, D. (2015). School culture and leadership of professional learning communities. *International Journal of Educational Management, 29*(5), 682-694. doi:10.1108/IJEM-04-2014-0046

Cooperrider, D., Whitney, D., and Stavros, J. M. 2003. *Appreciative Inquiry Handbook*. Bedford Heights, OH: Lakeshore Publishers.

Creswell, John W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches.* Los Angeles, CA: Sage.

Dufour, R. (2017). What is a professional learning community? Retrieved from http://www.washougal.k12.wa.us/teach_learn/images/plc_article.pdf

DuFour, R., & DuFour, B. (2007). What might be: Open the door to a better future. *National Staff Development Council, 28*(3), 27-28.

DuFour, R., & Mattos, M. (2013). How do principals really improve schools? *Educational Leadership, 70*(7), 34-40.

Dyson, M. (2010). What might a person-centred model of teacher education look like in the 21st century? The transformism model of teacher education. Journal of Transformative Education, 8(1), 3-21.

Feiman-Nemser, S. (2001a). Helping novices learn to teach: Lessons from an exemplary support teacher. *Journal of Teacher Education, 52*(1), 12-30.

Feiman-Nemser, S. (2001b). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record, 101*(6), 1013-1055.

Fernandez, C. (2014). Knowledge base for teaching and pedagogical content knowledge (PCK): Some useful models and implications for teachers' training. Problems of Education in the 21st century, 60, 79.

Ganser, T. (2002, April 5). *Supporting new teacher mentor programs: Strategies for principals.* Paper presented at the International Mentoring Association, Fort Worth TX.

Gray, L., and Taie, S. (2015). Public School Teacher Attrition and Mobility in the First Five Years: Results From the First Through Fifth Waves of the 2007–08 Beginning Teacher Longitudinal Study (NCES 2015-337). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubsearch.

Gold, Y. (1996). Beginning teacher support: Attrition, mentoring and induction. In J. Sikula & T. J. Buttery & E. Guyton (Eds.), *Handbook of research on teacher education* (2nd ed., pp. 548-616). New York, NY: McMillian.

Greiman, B. C. (2007). Influence of mentoring on dyad satisfaction: Is there agreement between matched pairs of novice teachers and their formal mentors? *Journal of Career and Technical Education, 23* (1) 153-166.

Greiman, B. C. (2002). Providing professional and psychosocial assistance for beginning agriculture teachers: The perceptions of formal mentors and novice teachers. *Dissertation Abstracts International,* 63 (07), 2434A. (UMI No. 3060100)

Greiman, B. C., Torres, R. M., Burris, S., & Kitchel, T. (2007). Beginning teachers' perceptions of in-school and in-profession mentoring relationships. *Career and Technical Education Research, 32*(1), 23-44.

He, Y. (2009). Strength-based mentoring in pre-service teacher education: A literature review. Mentoring & Tutoring: Partnership in Learning, 17(3), 263-275.

Hegstad, C. D. (1999). Formal mentoring as a strategy for human resource development: A review of research. *Human Resource Quarterly, 10*(4), 383-390.

Huberman, M. A. (1989). The professional life cycle of teachers. Teachers College Record, 91(1), 31-57.

Ingersoll, R. M. & Strong, M. (2011). The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of Educational Research, 81*(2), 201-233.

Katz, L. G. (2016). Early Learning and Childhood Collaborative. Retrieved from http://ecap.crc.uiuc.edu/pubs/katz-dev-stages/index.html

Keigher, A. & Cross, F. (2010). Teacher attrition and mobility report: Results from the 2008-09 teacher follow-up. Retrieved from https://nces.ed.gov/pubs2010/2010353.pdf.

Killion, J. & Harrison, C. (2007). The roles of teacher leaders. Educational Leadership, 65(1), 74-77.

Knight, J. (2007). Instructional Coaching: A partnership approach to improving instruction. Thousand Oak, CA: Corwin Press.

Steffy, B. E. & Wolfe, M. P. (2001). A life-cycle model for career teachers. Kappa Delta Pi Record, 38 (1), 16-19.

Sun, C. (2012). Teacher induction: Improving state systems for supporting new teachers [NASBE Discussion guide]. Retrieved from New Teacher Center website: http://www.newteachercenter.org/products-and-resources/policy-briefs/nasbe-discussion-guideteacher-induction-improving-state-system

Waldron, N. L., & Mc Leskey, J. (2010). Establishing a collaborative school culture through comprehensive school reform. *Journal of Educational and Psychological Consultation, 20*, 58-74. doi:10.1080/10474410903535364

Wang, J. & Odell, S. J. (2002). Mentored learning to teach according to standards-based reforms: A critical review. Review of Educational Research, 72(3), 481-546.

Weathers, J. (2013). *Review of the Teacher Induction Literature and Related Theory and Research*. Unpublished manuscript, Philadelphia Regional Noyce Partnership.