Computer-Supported Communities for Novice Teachers: Needs Assessment and Design

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Abstract

Retention of novice teachers is a problem for school districts. Teacher induction programs are beneficial in increasing retention, but these programs take time, a commodity in short supply among novice teachers. Computer-based support has been suggested as an alternative resource. This paper reports the findings of a survey among novice teachers in the rural south-eastern United States as part of a needs assessment for developing support tools and programs for this population.

Introduction

Teacher turnover is an unfortunate problem in school systems across the United States. After five years, between 40 and 50 percent of all beginning teachers leave the profession (Ingersoll, 2003). High turnover rates create complex problems for schools including less stable learning environments for students (DePaul, 1998), diverted financial resources as time and money are spent in recruiting, hiring, and training replacements (Berry, Hopkins, Thompson and Hoke, 2002; DePaul, 1998), and limiting districts abilities to carry out long-term planning, curriculum revision and reform (Halford, 1999). Darling-Hammond (2003), in examining the issue of teacher retention, found four factors influencing teacher turnover: salaries, working conditions, preparation, and mentoring support in the early years. Mentoring support, in particular, has been shown to reduce attrition rates by more than two-thirds (NCTAF, 2003).

One method of mentoring that has proven beneficial is teacher induction programs. Such programs present a structured process of teacher learning in the first few years the teacher is in the classroom (Berry, Hopkins, Thompson and Hoke, 2002). The goal is to assist novice teachers in developing a wider repertoire of teaching strategies (Schafer, Stringfield, and Wolffe, 1992), stronger classroom management skills (Educational Resources Information Center, 1986), and strategies for dealing with behavior and discipline problems more effectively (Moir and Bloom, 2003). Components of successful induction programs include: professional development (Feiman-Nemser, 2003; Hinds, 2002; Johnson and Kardos, 2002; Wong, 2002); interaction with other teachers (Berry, Hopkins, Thompson and Hoke 2002; Brewster & Railsback, 2001; Wong, 2002); principal/administrator support (Brewster & Railsback, 2001; Johnston and Kardos, 2002; Wong, 2002); new teacher assessment (Berry, Hopkins, Thompson and Hoke 2002; Huling-Austin, 1992); reduced responsibilities (Berry, Hopkins, Thompson and Hoke 2002; Renard, 2003; Voke, 2002); trained mentor support (Berry, Hopkins, Thompson and Hoke 2002; Brewster & Railsback, 2001; Darling-Hammond, 2003); and school/university collaboration (Berry, Hopkins, Thompson and Hoke 2002; Brewster & Railsback, 2001; Hinds, 2003). In addition to improving retention, induction programs have been shown to influence teaching practices, increase teacher satisfaction, and promote strong professional development and collegial relationships (Voke, 2002).

Novice teachers have constant questions and concerns. They may participate in scheduled formal professional development sessions as part of their induction program; however, the content of the workshops may not be of immediate use to the teachers and may not answer the questions that plaque new teachers everyday. Getting answers to the many questions they have is also impeded by the novice teachers' concern of how their colleagues will perceive them and their ability to teach after asking the questions (Stapleton, 2002). Once they decide to ask someone, novice teachers often find that they lack free time needed to ask their question, or the time they have does not coincide with the time that knowledgeable teachers are available to assist them (Stapleton, 2002).

Computer-supported interaction may be an appropriate method for novice teachers to obtain the support and information they need on a daily basis. Listservs and email (Ersinnan and Thornton, 1999) as well as video conferencing (Thomson and Hawk, 1996) have been used to provide feedback to teachers. Case libraries have also been developed to assist in learning about classroom practice (Jonassen, Wang, Strobel, and Cernusca, 2003). But these represent isolated tools. The integration of a number of tools that could serve as a

virtual community for novice teachers may be beneficial in providing support when it is needed. This timely, multifaceted support may help to increase the retention rate.

In 2002, the Golden LEAF Foundation awarded East Carolina University's College of Education funds to develop a model of teacher recruitment and retention for eastern North Carolina. One product of the funding was the formation of the Golden LEAF Educational Consortium (GLEC). GLEC is a partnership between East Carolina University, University of North Carolina at Pembroke, Elizabeth City State University, Edgecombe Community College, and eight county school districts: Bertie, Edgecombe, Greene, Jones, Halifax, Perquimans, Robeson, and Washington. All of these counties represent rural districts. GLEC was charged by the Golden LEAF Foundation to develop, implement, and evaluate a model of teacher recruitment and retention and to create a toolbox of strategies that school systems could use to recruit and retain teachers. One strategy proposed by GLEC was the development of a virtual community for novice teachers. Prior to development, a needs assessment was implemented to determine if novice teachers in rural areas have acceptable access to the technology needed, and to determine the concerns that were most evident to teachers during the first years of teaching. This study reports the findings of a survey among novice teachers in rural north-eastern North Carolina as part of a needs assessment for developing support tools and programs for this population.

Method

Participants

Participants included novice teachers in rural north-eastern North Carolina who were included in the Golden LEAF Educational Consortium (GLEC). For the purposes of this study, novice teachers were defined as teachers in their first three years of teaching; however, there were a small number of participants who were in their first year of teaching in the county but not their first three years of teaching. The eight participating counties included: Bertie County Public Schools, Edgecombe County Public Schools, Greene County Public Schools, Jones County Public Schools, Halifax County Public Schools, Perquimans County Public Schools, Washington County Public Schools, and the Public Schools of Robeson County.

Instrument

The survey instrument contained 43 questions. The first 11 questions were demographic questions dealing with age, gender, ethnicity, teaching and educational experience, type of teaching license and amount and type of orientation received. The next 12 questions asked about the support the new teachers received from their principals, mentor teachers, and New Teacher Coordinators (ILT Coordinators), the biggest challenges they had, the types of professional development they received, how much of their own money was spent, how much time they spent, and if they were planning on returning to teach the next year. The next five questions asked about strategies implemented by GLEC and classroom management challenges. Ten questions were asked to ascertain novice teacher access to and use of computer and computer related resources. The last three questions asked new teachers to give suggestions for improving GLEC strategies, mentor teachers support and new teacher induction.

While the survey questions dealt with a number of issues, only those questions pertinent to the technology needs assessment are addressed here. Specifically, this article focuses on novice teachers' answers to classroom challenges, the preparedness of the teachers to handle those challenges, their sources for information and advice, their satisfaction with the answers they received, and their access to technology at home and in the school.

Data Collection and Analysis

In spring 2003, surveys were sent to the new teacher coordinators (ILT Coordinators) in the eight participating counties. The ILT Coordinators distributed the surveys to the novice teachers during a support meeting. The completed surveys were then returned to the GLEC Principal Investigator by the ILT Coordinator. Of the 370 surveys distributed to novice teachers, 225 returned the surveys for a response rate of 61%. Surveys were received from all eight counties participating in the program. Surveys were coded and results were analyzed using SPSS (Statistical Package for the Social Sciences).

Results

Demographic Results

Forty-three percent of the respondents were age 21-25; 19% were 26-30; 23% were 30-39; and 15% were 40 or older. Seventy-four percent of respondents were female; 26% were male. Fifty-six percent reported their ethnicity to be Caucasian; 30% African-American; 9% Native Americans; 4% Hispanic; 1% did not respond. Ninety-five percent of the respondents had between one and three years of teaching experience. Fifty-three percent of those surveyed entered the teaching profession through an alternative licensure program. The respondents were divided between elementary (45%), middle (31%), and secondary (24%) schools.

Classroom management and discipline problems rank at the top of the novice teachers concerns at 47.5%. (see Table 1). Sspecific examples of problems included talking during class instruction, keeping the class on task, teaching and disciplining students within the short instructional time, following through on discipline, dealing with disrespect and student attitudes, and lacking principal support on discipline decisions. Planning and teaching to the state standards (15.5%), meeting the needs of students (13.6%), and school policies and procedures (12.3%) were a distant second, third and fourth. Other challenges listed by new teachers included lack of support/assistance, time, working with parents/staff, paperwork, amount of requirements/responsibilities, lack of resources, obtaining certification/licensure, and planning and teaching for state assessments.

Table 1 *Greatest challenge as a new teacher*

	Percentage
Classroom management/discipline	47.7
Planning and teaching to the state standards	15.5
Meeting needs of students	13.6
School policy procedures	12.3
Lack of support/assistance	9.5
Time	8.6
Working with parents/staff	8.6
Paperwork	8.2
Amount of requirements/responsibilities	5.0
Lack of resources	5.0
Obtaining certification/license	4.1
Planning and teaching for the state assessments	4.1

The follow-up question, "Did you feel prepared to handle these challenges?" was also asked of the new teachers. Fifty-three percent of the novice teachers answered yes, 20.9% answered no and 15.2% answered "somewhat"/"sometimes". Other responses to this question indicated that after receiving support from their mentor and/or principal, they did feel prepared. Others mentioned the difficulty they had at the beginning and their improvement as the year progressed. One new teacher mentioned the difficulty in applying his/her knowledge and theory into a classroom setting while still remaining positive. At lease one new teacher alluded to the fact that he/she thought he/she was prepared “until I realized I was not.”

When asked where the new teachers went to get answers to their questions, the respondents most often turned to experienced teachers (91%) (including their assigned mentor teacher [87%]) and administrators(72%) for answers to their concerns but they also used print resources (43%), teachers at other schools (39%), family members (32%), fellow novice teachers (30%), friends (29%), online resources (27%), and former classmates (20%) and professors from college (17%). (see Table 2).

Table 2 *Resources for answers for the new teacher*

	Percentage
Experienced teacher at my school	91.4
Assigned mentor teacher	87.3
School administrator	72.4
Print resource (book, manual)	42.5
Teacher at another school	38.9

A family member	32.1
A new teacher at my school	29.9
A friend	29.4
Online resource	26.7
Someone I went to college/university with	19.5
A professor from my college/university	16.7

Ninety-one percent of respondents were satisfied with the answer they received when consulting those resources.

Ninety-two percent of respondents indicated that they had daily access to a computer and 82.5% indicated they had computers in their home. Ninety-two percent have Internet access on a daily basis; 77.4% have Internet access in their home although 73.1% of respondents indicated that access from home was with a dial-up modem connection.

In response to the question, "If you had access to an online database of cases with solutions based on common classroom problems, how frequently would you access it?", 37.9% indicated they would access it weekly (see Table 3).

Table 3 *Likelihood of accessing an online database of cases*

	Percentage
Weekly	37.9
Occasionally	28.0
Monthly	15.9
Daily	13.1
Never	5.1

Discussion

The high percentage of novice teachers who listed classroom management as their biggest concern in an open-ended question indicates how heavily it affects novice teachers. Classroom management concerns and practices should be integrated more into pre-service education to better prepare beginning teachers to deal with this concern. Notifying principals and administrators of this concern may assist them in providing guidance and advice for novice teachers. Additionally, mentor teachers need training so they are aware of the challenges faced by novice teachers and have strategies to help these novice teachers through these challenges. It is encouraging that many of the overwhelmed novice teachers finally found they were able to handle their challenges after receiving support from their mentor teacher and/or their principal.

It is also interesting that when reporting resources novice teachers used to answer their questions, they listed experienced teachers (91.4%) in their school over their mentor teachers (87.3%). Possible reasons for this difference include availability of the experienced teachers, the lack of concern of evaluation by the experienced teacher, and/or new teachers seeking out the experienced teachers they feel could best answer their questions.

It is encouraging that 91% of respondents were satisfied with the answers they received from the various sources that they consulted. These teachers are primarily turning to resources within their schools (teachers and administrators) but they are also not restricting their search to that venue. Both personal and written resources play a role in assisting these teachers as they become proficient at their profession.

Computer access appears adequate although detailed information on the age and software on the computer was not gathered due to constraints on the number of questions that could be asked on the survey. The dependence on dial-up modems for Internet access indicates that high-bandwidth media such as video and audio may need to be kept to a minimum. The possibility of accessing an online database of cases dealing with common classroom problems was welcome by the group with only 5.1% stating that they would never access such a system.

Conclusion

Given the high rate of turnover among novice teachers all avenues for increasing retention should be explored. This study indicates that beginning teachers have many questions, particularly about classroom

management, but that they are finding the answers they need through a variety of sources. Novice teachers most frequently turn to experienced teachers to answer their questions. For this reason, it may be helpful to used experienced teachers to build an online database of cases dealing with common classroom problems. In this database, experienced teachers could talk new teachers through certain situations and model for them the thought processes they used in deciding how to react to the situation. Placing this information online would extend the opportunity for finding answers beyond the time spent in the school building. Novice teachers could find the answers to their questions when it is convenient for them, not when they can have access to the experienced teacher. The online database would also give new teachers the opportunity to get advice from several teachers, not just the teacher that they could find at that moment. Building a prototype system and testing it with the population would be the next step in the process.

References

Berry, B., Hopkins-Thompson, P., Hoke, M. (2002). *Assessing and supporting new teachers: Lessons from the Southeast*. Chapel Hill, NC: Southeast Center for Teaching Quality.

Brewster, C. & Railsback, J. (2001). Supporting beginning teachers: How administrators, teachers, and policymakers can help new teachers succeed. Northwest Regional Educational Laboratory [Online]. Available: http://www.nwrel.org/request/may01/textonly.html.

Darling-Hammond, L. (2003). Keeping good teachers: Why it matters and what leaders can do. *Educational Leadership, 60* (8), 6-13.

DePaul, A. (1998). *What to expect your first year of teaching*. Washington, D.C.: U.S. Department of Education. Retrieved March 26, 2001, from the World Wide Web: http://www.ed.gov/pubs/FirstYear/

Educational Resources Information Center. (1986). *Teacher mentoring* (ERIC Digest No.7). Washington, D.C.: ERIC Clearinghouse on Teacher Education. Retrieved March 26, 2001, from the World Wide Web: http://www.ericfacility.net/ericdigests/ed271477.html

Eisenman, G. & Thornton, H. (1999). Telementoring: Helping new teachers through the first year. *THE Journal*. 26 (9) 79-83.

Feiman-Nemser, S. (2003). What new teachers need to learn. *Educational Leadership 60* (8) 25-29.

Halford, J.M. (1999). Policies to support new teachers. *Educational Leadership*, 56 (8), 85.

Hinds, M. D. (2002). *Teaching as a clinical profession: A new challenge for education*. New York: Carnegie Corporation.

Huling-Austin, L. (1992). Research on learning to teach: Implications for teacher induction and mentoring programs. *Journal of Teacher Education 43*, 173-180.

Ingersoll, R. M., (2003) *Who controls teachers' work? Power and accountability in America's schools.* Cambridge, MA: Harvard University Press.

Johnson, S. M. & Kardos, S. M., (2002). Keeping new teachers in mind. *Educational Leadership 59* (6), 12-16.

Jonassen, D. H., Wang, F., Strobel, J. & Cernusca, D. (2003). Applications of a case library of technology integration stories for teachers. *Journal of Technology and Teacher Education*, 11, 529-548.

Moir, E. & Bloom, G. (2003). Fostering leadership through mentoring. *Educational Leadership 60* (8), 58-60.

National Commission on Teaching and America's Future (NCTAF). (2003). *No dream denied: A pledge to American's children*. New York: Author.

Renard, L. (2003) Setting new teachers up for failure….or success. *Educational Leadership 60* (8), 62-64.

Schaffer, E.C., Stringfield, S., & Wolffe, D.M. (1992). An innovative beginning teacher induction program: A two-year analysis of classroom interactions. *Journal of Teacher Education 43*, 181- 192.

Stapleton, J. (2002). Unpublished survey: novice teachers in northeastern North Carolina.

Thomson, W. S. & Hawk, P. P (1996). PROJECT DIST-ED: Teleconferecing as a means of supporting and assisting beginning teachers. *Action in Teacher Education 17* (4), 9-17.

Voke, H. (2002). Understanding and responding to the teacher shortage. *Infobrief* (May 2002, issue 29) Alexandria, VA: Association for Supervision and Curriculum Development.

Wenger, E. (1998). *Communities of practice: Learning, meaning and identity*. Cambridge, UK: Cambridge University Press.

Wong, H. K. (2002). Induction: The best form of professional development. *Educational Leadership 59* (6), 52-54.