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## ABSTRACT

While research indicates that new teachers have several needs, experienced teachers and novice teachers may have differing views of the importance of these needs. In addition, needs may vary due to changes in society, special geographic needs, or small school issues. This study is an analysis of information gathered during and following the first year of a mentoring program to determine how early-career teachers perceive the mentoring process and its outcomes. The successes and weaknesses of the program are reported and well as recommendations for future mentoring support programs. (Contains 10 references.) (MVL)

# Novice Teachers' Perceptions of a Multifaceted Mentoring Program and the Needs of Early-Career Science Teachers

by  
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## **NOVICE TEACHERS' PERCEPTIONS OF A MULTIFACETED MENTORING PROGRAM AND THE NEEDS OF EARLY-CAREER SCIENCE TEACHERS**

**Carolyn Dawson, Northern Michigan University**

My first year of K-12 teaching began with the principal taking me to my room and wishing me luck. The atmosphere in that small, rural school was not very welcoming nor was it supportive. The school had experienced a high turnover in many positions but the teachers in the remaining positions had been in the community and school for many years thus there were few mid-career teachers. The experienced teachers seemed to view the new teachers with suspicion. It was a "sink or swim" proposition. I found a different position after one year. My position was filled by a succession of first year teachers during the next few years. I am certain most would agree with me that it would have been beneficial to have had a mentor. A colleague mentioned that teaching might be the only profession in which the newest employee is given the most uncomfortable chair, the broken stapler, and the most difficult assignment.

It has long been recognized that teachers need more-more support, more resources and a more supportive environment (Breeding & Whitworth, 1999; Fuller & Brown, 1975; Hirst, 2000; Prosis & Heller, 1993). Research has identified a number of recurring needs common to many new teachers, such as the need for better classroom management skills, better understanding of the workings of the specific building, and help in communicating with parents (Fuller & Brown, 1975; Hirst, 2000). Teachers in science and mathematics may have additional problems such as understanding content, obtaining and preparing laboratory materials, or helping students understand particularly difficult material. But new teachers are not the only ones needing support and assistance. Mentors need help in knowing how best to mentor and administrators need to know how to support. Providing resources for mentors and administrators can improve the induction program and thus the experience of the novice teacher (Brock & Grady, 1997).

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Supporting new teachers can improve student performance, teacher success, morale, and retention (Hirst, 2000; Million, 1988; Prosise & Heller, 1993). This can be particularly important in areas such as science and mathematics where nationwide teacher shortages are common (Shortage of teachers to grow, 1998).

Within the last decade the state of Michigan began addressing these needs and requiring that new, probationary teachers receive mentoring (Hirst, 2000). Although Michigan legislation was passed several years ago (Pa 335, 1993 & PA 289, 2996), our experience shows that many rural, Upper Peninsula schools have been slow to establish programs to support new teachers. Out of concern for new teachers, the Upper Peninsula Center for Educational Development and the Glenn T. Seaborg Center for Teaching and Learning Science and Mathematics, both of Northern Michigan University, coincidentally proposed and received grants to provide frameworks for support during the induction years of new teachers. Upon discovering that the goals were similar, the two centers administering the Upper Peninsula Mentoring Project and the Seaborg Academy began collaborating and a program was designed.

Schools in the Upper Peninsula of Michigan have some special problems associated with providing professional development and support for teachers. Many of the schools are small and rural. Some of our new teachers had a different prep each hour and, in some cases, one teacher comprises the entire science department of a school. Weather in the winter often results in hazardous travel, making it difficult for teachers to travel to us for support. Finally, a shrinking student population in many areas results in districts offering experienced teachers retirement buy-outs, leaving a larger cadre of inexperienced teachers in the wake.

During the first year of the program, presenters from the sponsoring programs, the Upper Peninsula Center for Educational Development and the Seaborg Center, traveled to three

different sites in the Upper Peninsula, seven times throughout the year, to meet with new teachers and their mentors. The needs of both new teachers and mentors were continuously monitored and consequently the delivery of the program was adjusted accordingly. Science and mathematics teachers met separately with the faculty and administration of the Seaborg Center and received special support and assistance from them.

During the second year, first year teachers and mentors received approximately the same support as those participating during the first year. Second year science and mathematics teachers had a different set of options. One of those was a graduate course in the Effective Teaching of Science delivered by distance learning during the fall semester. During the winter semester, two courses, Motivation and Management in the Science Classroom, and Motivation and Learning in the Mathematics Classroom, were combined in a web-based classroom.

While research indicates that new teachers have several needs, experienced teachers and novice teachers may have differing views of the importance of these needs. In addition, needs may vary due to changes in society (e.g., the need for distance learning options), special geographic needs (e.g., isolated rural schools) or small school issues (e.g., the new teacher is the only science teacher in the school). This study is an analysis of information gathered during and following the first year of a mentoring program to determine how early-career teachers perceive the mentoring process and its outcomes. We report on the successes and weaknesses of the program and make recommendations for future mentoring support programs.

### Design and Approach of the Program

The mentoring program was designed to provide support to three different groups; novice teachers, experienced teacher mentors, and administrators. In the fall, prior to the first day of school, we met for an early-morning meeting with administrators, including principals and

superintendents. This was followed by an all-day introductory meeting with new teachers and their mentors, as well as the administrators. During the year we met seven times with each of the groups of teachers. All participants were provided with loose-leaf notebooks of information.

### Administrators

The administrators were provided with information about the state requirements for mentoring novice teachers as well as the more extensive requirements for professional development. They were also informed about research into the needs of new teachers and provided with suggestions concerning how they could better support both the mentor and his/her protégé. Following this meeting, the new teachers arrived with their mentors and were given the opportunity to interact with the administrators.

### Mentors

Mentors were given much information about the needs of novice teachers and how they could supply support in meaningful ways. They were trained about how to observe in a classroom and ways to give feedback without taking on the role as an evaluator. We also provided them with information concerning how best to work with adult learners. Mentors were offered the opportunity to obtain graduate credit by completing a project along with their mentoring experience. Many chose to create handbooks for new teachers in their buildings.

### Novice Teachers

Topics for novice teachers included many of the topics research has identified as particular problems for new teachers. Sessions were provided on management, assessment (including state-wide mandated testing), addressing the needs of special education students, and legal issues for teachers. Teachers were provided with copies of *The First Days of School* (Wong & Wong, 1991) along with many valuable resources for their loose-leaf notebooks.

### Special Help for Science Teachers

We provided dinner for the attendees each meeting as well as time for the mentors and novice teachers to spend some time planning and working together. During dinner, members of the Seaborg Center for Teaching and Learning Science and Mathematics sat with the science and mathematics teachers and their mentors, providing additional help specific to their subject areas. We provided them with registration to the Seaborg Center Fall Conference, a regional conference for science and mathematics teachers. It was also possible to get to know these new teachers quite well during the meetings. During the second year, first year participants were provided with special invitations to participate in the distance-education graduate courses mentioned above and some financial support was provided.

### Initial Indicators of Effectiveness

Participants were asked to respond to evaluations at each session as well as a more extensive evaluation at the end. In addition, we are currently interviewing science teachers to determine in what particular ways the program was or was not helpful. While all the data is not in, initial surveys indicated that many aspects of the mentoring program were found to be helpful to both the novice and her mentor.

### What Worked

Almost all of the novice teachers indicated that the materials we provided were of immense help to them. Comments indicated that the new teachers referred to the materials often during their first year. The only comment made that was somewhat negative was that some of the teachers wished they had been able to use all the materials from the first. During the second year we complied by giving them all the materials in the beginning.

Both the mentors and the new teachers greatly valued the time spent together and some commented that they did not want the groups to be split apart as often. Many indicated that they did not feel they had sufficient time during the school week to work together as a mentor/mentee team and that this time together was very valuable.

All of the sessions offered were found to be very helpful to the novice teachers. However, it should be noted that mentors did not find all sessions as helpful, perhaps understandably. On the other hand, mentors indicated that they felt that the program greatly enhanced their ability to be effective and supportive. Some even indicated that they had no idea prior to the program the extent or importance of the role of mentor.

#### Participant Reservations

While the overall assessment of the program by the teachers was quite positive, some specific comments were made by a number of teachers and these are being addressed during the second year. Some of the teachers, particularly new teachers, felt that the time of day (immediately after school) did not give them enough time to recover from their day. They felt that they were so fatigued that they could not “get as much out of it” as they would have liked. Along with this, it was felt that five meetings (the introductory meeting followed by two additional meetings each semester) would be sufficient. We are trying this approach during the second year of the program.

Another comment made frequently by both the novice teacher and the mentor was that they wanted more time together and less time in separate sessions. As mentioned above, teachers felt that administration did not provide sufficient time or support for the teachers to spend time working together during the school day and this time was invaluable to them.

Probably one of the most difficult problems to manage was that of “new teachers” who came to the program with many years of experience. At least one science teacher had over twenty years of teaching experience. Unfortunately, this teacher, while new to the district, did not feel that the program was appropriate for her and we would have to concur. Her needs were very different from those of a first-year teacher.

#### In Conclusion: Some Suggestions

Particularly in science, teacher retention is a very real problem. Providing support for new teachers could potentially increase the number of teachers who remain in the field. Administrators should be encouraged to provide whatever support they can to both the new teacher and the mentor. The administrator should choose mentors carefully and the mentors should be willing to take this role seriously. Both novice teachers and their mentors should be given ample time to interact, visit one another’s classroom, and give and receive feedback. Also, administrators need to realize that the needs of the new-to-the-district but experienced teacher are very different from those of a first- or second-year teacher and appropriate support should be given.

Since rural teachers may not have a mentor in the same subject area, a network of teachers in the region can be provided electronically which would serve as support for teachers in isolated areas. This is one of the directions we are planning to take with the next phase of the program.

We found that mentors needed and wanted the support of a training program on how to be a mentor. In addition the training and materials we provided both the mentors and the novice teachers were found to be of great value. Well-organized reference materials and tips were used

often by the new teachers and planning sheets provided to the mentor-novice teams were used by most.

Probably the most successful aspect of the program was simply providing the time and support for the mentors and new teachers to interact with each other and with others in the same situations, as well as university-level educators. As the teams took the time to plan, work and reflect together, relationships were built and nurtured, and teachers indicated that they felt more competent and confident.

The second-year graduate courses provided via the Internet and Interactive Television are proving to be extremely popular with the newer teacher. Initial reports of the data indicate that the participants found these courses to positively impact their classrooms and themselves. It is hoped that, with continued support, we can increase both retention and effectiveness of the teachers of science in the Upper Peninsula of Michigan.

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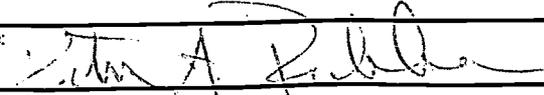
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