Developing Reflective, Professional Middle Grades Teachers Through Action Research and Inquiry Into Practice

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The authors describe a redesigned university graduate middle education program that links educational research and evaluation courses with a school-based, problem-centered action research projects appears to be an effective means toward increasing students' ability to comprehend educational research as well as conduct action research projects. Eliminating a comprehensive examination and replacing the exam with the completion of a research project that is connected to previous coursework and directed toward practice appears to be a desirable way to help graduate students develop bridges among research, theory, and practice.

The education, training, and development of middle grades teachers are commonly discussed topics within the middle-level educational community (Scales & McEwin, 1994). Although much of the discussion revolves around both improving the specialized knowledge base of middle level education and urging teacher preparation institutions to include middle level

education as specialized fields of study, new middle level teachers enter an educational world that is fraught with uncertainty, often plagued with both serious and faddish reform programs, and subjected to unparalleled public scrutiny. Middle grades teachers, therefore, need to have a firm grasp of not only effective and developmentally responsive teaching methods, but extensive knowledge of the research that informs practice, reform efforts, and policy. Furthermore, and perhaps most important, middle grades teachers need to be able to recognize, reflect upon, and solve classroom and school problems in a professional, thoughtful, and systematic manner.. That is, today's middle grades teachers need to be effective action researchers and be able to accurately and professionally communicate and translate research findings.

The purpose of this article is to describe how a university graduate and post-baccalaureate middle level education program has attempted to link three graduate courses and transform the courses into a sequenced process of training both preservice and in-service middle grades teachers to complete school-based, problem-centered, systematic, and properly conducted action research projects. The article also briefly describes how during the last three years of the process, student projects have been the impetus for changing several public school policies and programs. In addition, the projects have replaced the traditional comprehensive exam as a culminating experience for graduate students.

History

Since 1988, both the undergraduate and graduate middle level education programs at the university have enjoyed growing enrollments, nearly 100% placement of graduates in middle schools, and a widely held admirable reputation. Until 1994, the programs were fairly typical in structure and content, containing extensive classroom and practicum work in the areas of developmental characteristics of middle level students, teaching and

planning methods in the various core subject areas, educational history and philosophy, research and evaluation, and curriculum theory. In 1994, the undergraduate program was dramatically changed into a team-taught, integrated series of courses that included all of the previous program's content and added substantive content in the areas of technology, parent and community involvement, discipline and behavior management, and special education. However, the graduate program remained unchanged, with a 30+ semester hour program that culminated with a seminar course and comprehensive examination.

Program Concerns

As in many graduate programs, few of the courses outside of the teacher preparation portions of the series were meaningfully connected with each other or with the world of practice. Students were required to take an introduction to educational research course, an evaluation course, as well as a curriculum theory course. All three of the courses required a comprehensive review of the literature surrounding an educational topic, and each required varying degrees of a written paper regarding a topic. Typically, students completed a research proposal that included a properly posed research question, literature reviews, methodology, analysis, and treatments. It was unlikely that any of the proposals would ever actually be implemented. Although the courses are pedagogically sound, program and course assessments indicated that neither the students nor their cooperating teachers felt the theoretical courses or the activities associated with the courses were particularly beneficial for the pragmatic aspects of teaching in the middle grades.

A two part comprehensive examination containing both written and oral parts also served as a culminating experience for students; program assessments also suggested that this examination served little practical purpose beyond forcing students to extensively review program materials and content.. The notion of using a comprehensive examination as a form of professional

gate-keeping appeared ludicrous and untimely at this point in the students' courses of study, and suggested that gate-keeping should perhaps take place much earlier..

New Goals

The initial goals for changing the methods were first to effectively connect the research, evaluation, and middle education content, and second to replace the comprehensive examination with an experience that helped students recognize the synergistic nature of their previous courses and be able to use the synergy and their knowledge to enhance their professional perspectives as well as provide a framework from which new teachers could serve as change agents and leaders.

Following a number of meetings and a substantial review of the literature regarding reflective practitioners, teaching as a profession, teachers as leaders, teacher thinking and beliefs, and successful beginning teaching, the professors involved in teaching the majority of the courses agreed to replace the comprehensive examination with a school-based research project connected to the work the students performed in the research and evaluation courses. The notion of inquiry and teacher research emerged as a relatively common context within which most of the discussion took place. As a culminating experience and as a form of assessment, the examination would be replaced with a scholarly professional presentation of the students' projects that would be open to the educational community, including interested teachers and administrators from the area.

Theoretical Framework

The theoretical underpinnings for these program changes are built on the notion that teachers who engage in systematic, intentional inquiry (Lytle & Cochran-Smith, 1990) will become life-long, ongoing learners (Boyer, 1990; Sardo-Brown, 1992; Sucher, 1990), be committed to developing and improving

practices (Dicker, 1990; Fullan, 1982; Santa, 1990), and hold more positive attitudes toward themselves and toward research (Bennett, 1993,1994). To some degree, the process is also based in the theoretical perspectives that guide professional teacher education. That is, when programmatic aspects of teacher preparation include a degree of competence in conducting and interpreting research, the concept of teaching as a profession is enhanced (Kennedy, 1990; McGlothlin, 1960).

New Connections and Processes

For middle level teacher education graduate students, the sequence of required courses now provides a meaningful platform for students to complete their respective projects. The proposal required in the research course provides a starting point for an identified, relevant, classroom-based research project.. Using a common rubric, proposals are evaluated with respect to rigor, procedures, methodology, statistical treatments, and administration; subsequent to course completion, the proposals are subjected to additional scrutiny in the areas of human subject use, school district acceptance and approval, parent notification and approval, and other exigencies related to pursuing research in public schools.

For pre-service teachers, data collection and administration generally take place during and after student teaching; for in-service teachers, data collection and administration take place during normal teaching assignments or within the teachers' respective school districts. The school districts involved have been very supportive; the districts have different methods and procedural requirements regarding research in the schools, and care is taken to follow the respective procedures carefully. Students generally complete the research analysis and scholarly presentations during the summer prior to graduation, at which time they are also enrolled in the final graduate seminar course.

Research Project Topics

Research has been completed and presentations have been made in such topical areas as:

> *the effectiveness of science education professional development;*
> *the relationship between classroom management style and student motivation;*
> *gender differences in mathematics education;*
> *the effectiveness of in-school and out-of-school suspension;*
> *the use of journals in mathematics education;*
> *differences in moral development;*
> *the use of authentic assessment processes;*
> *the effect of homework on students' attitudes toward different subjects;*
> *gender equity in computer laboratories;*
> *student attitudes toward recreational reading;*
> *teachers' attitudes toward computer use;*
> *student and teacher attitudes toward single-gender classes;*
> *the effectiveness of developmental spelling processes; and*
> *cooperative learning for gifted students.*

Since the program began, nearly 50 research projects have been completed, and in at least eight cases, the research projects have resulted in significant changes in school procedures, policies, or curriculum. In one case, a school changed its homework policies to reflect a more coordinated, consistent, and meaningful approach. In two schools, project results compelled school administrators to refocus their staff development efforts; yet another school changed its approach to computer laboratory use.

In several cases, the graduate students found some of their preconceptions altered by their results. For example, one

graduate student found that the difficulties she experienced with a period of uninterrupted sustained silent reading had less to do with students' attitudes about reading than her own actions during the reading period. In another case, a graduate student found the use of journals in mathematics instruction to be a powerful form of assessing her own teaching. Another student was surprised to find teachers' attitudes toward and use of technology and computers to be much higher than she expected.

And as in many forms of inquiry, the research findings often lead to additional, more difficult questions and problems. Thus, graduate students have been quick to see the importance of being able to read, critique, and understand other related research. The power of a good review of research and literature becomes obvious and useful, and the students appear to be more reflective and much slower to judge than in the past..

Further Discussion

Principals and central office administrators have been enthusiastically supporting the projects, particularly when the results of a project are supportive of current professional development directions or help them define directions. This support has incidentally become a supportive factor with respect to the placement of practicum students as well as student teachers. That is, the process through which the university places students in local schools has been enhanced as administrators see additional value for preservice students to become involved in classrooms. Cooperating teachers have also taken a strong interest in student research, since many of the research projects are based on their students and have distinct application for their classrooms.

Three additional factors point to the merits of this type of applied process. First, middle grades graduate faculty members have noted an increase in both the use of statistical terms and research methods and the competence with which students are able to utilize quantitative and qualitative methods, particularly

in the use of various statistical software packages. Second, the application of action research and general research principles has generated a great deal of discussion regarding the ethics of teaching as well as the ethics of the proper use of research in education. Third, the process established a relatively formal but useful way for teacher education faculty members from different departments and different areas of expertise to communicate, collaborate, and coordinate curriculum efforts.

Importance

The use of action research projects that are tied to and integrated with graduate level coursework appears to be one successful method for teacher educators to improve the quality of both beginning and in-service teachers' skills and attitudes in the area of research and inquiry. In addition, the use of such projects appears to be a worthwhile and beneficial replacement for comprehensive examinations.

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