AN EXPLORATORY STUDY OF THE EFFECTS OF PROFESSIONAL
DEVELOPMENT SCHOOL EXPERIENCE ON THE RESEARCH,
TEACHING, AND SERVICE OF PROFESSORS AT
A LARGE MIDWESTERN UNIVERSITY

VOLUME I

By

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ABSTRACT

AN EXPLORATORY STUDY OF THE EFFECTS OF PROFESSIONAL DEVELOPMENT SCHOOL EXPERIENCE ON THE RESEARCH, TEACHING, AND SERVICE OF PROFESSORS AT A LARGE MIDWESTERN UNIVERSITY

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The researcher's purpose was to examine the effects of Professional Development School (PDS) experiences on tenured and nontenured university professors in the areas of service, teaching, and research. The subjects were seven tenure-stream and tenured faculty selected from a population of 54 PDS participants. The interview protocol was developed using a focus group and field-tested with two other faculty. Interview transcripts were analyzed using a computer program designed to assist in analyzing text-based data.

Ten findings relative to this exploratory study emerged, including (a) PDS work has eight characteristics; (b) these eight characteristics refute the assumption that PDS work is just service; and (c) the actions of some study participants were congruent with the scholarship of discovery, integration, teaching, and application.

A comparison between the characteristics of the typical collegial culture and the PDS subculture, using Ott's (1986) classification of enhancing, orthogonal, and countercultural relations between organizations and their subcultures, clarified

elements of tension between a collegial university culture and the PDS subculture. Characteristics distinguishing the PDS subculture from the typical collegial university culture included (a) an emphasis on groundedness and collaboration in research; (b) the pursuit of knowledge as a means to an end rather than an end in itself; (c) stronger connections between research and teaching; (d) an emphasis on the scholarship of application; (e) greater emphasis on collaborative dissemination; (f) a norm of collaboration rather than autonomy and individualism; (g) a mismatch between PDS subculture values and the traditional values of promotion, tenure, and merit pay; and (h) career development of junior faculty being slowed due to differences in norms.

It was not possible to compare the emerging PDS subculture to the university or College of Education directly. However, using Ott's (1986) classification of subculture types and the researcher's understanding of the research environment, the findings support the view that the PDS is an enhancing subculture on some characteristics (e.g., research), an orthogonal subculture on some characteristics (e.g., time), and a counter subculture on other characteristics (e.g., evaluation). The PDS subculture emerged from (a) the components of collegial culture of the College of Education and the Department of Teacher Education that supported this subculture, (b) the university's land-grant mission, and (c) the self-selection of the PDS participants.

For the love I had, I dedicate this work to my late sister,

Sarah Mulondo

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I wish to extend my sincere thanks and gratitude to my late father, Johannes Tshiduhulwana, and my mother, Tshinakaho Josephine, for giving me life and values that sustained me to this day. You are the foundation of all my accomplishments. For that, I thank you.

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I offer my deep gratitude to my wife, Wendy Singo, and children, Ndivhuho, Fulufhelo, Phumudzo, and Ndavhelelo. You are all very special and dear to me. This, plus your love, patience, tolerance, and support, to name but a few things, sustained me during the long hours that brought this work to fruition. For this, I

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Jonas Letswalo and Solly Noor, and many friends and relatives around the world. I thank you all!

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CHAPTER I

INTRODUCTION

Background of the Study

The purpose of this study was to understand the effects of the Professional

Development School experience on the research, teaching, and service roles of

tenure-stream and tenured faculty working in the Professional Development School

settings of Michigan State University. The main research question for the study was,

"In what way(s) has the participation of tenure-stream and tenured faculty associated

with Michigan State University affected their research, teaching, and service?" The

findings of the study were derived from in-depth interviews of tenure-stream and

tenured faculty associated with Michigan State University, a large midwestern land-

grant university. The study is, therefore, a description of the beliefs, values, and

meanings that the respondents have about the effects of their Professional

Development School work on their research, teaching, and service functions. This

chapter contains background information pertinent to the topic of this study.

Numerous researchers have stressed the importance of faculty development

in higher education (Heppner & Johnston, 1994; Marshall, 1994; Mills, 1994; Nathan,

1994; Reich, 1994; Sorcinelli, 1994; Swain, 1994; Watson & Grossman, 1994). For

example, Nathan stated that "faculty development is no longer an optional or

dispensable 'add-on' to the list of benefits available to faculty at universities in the United States" (p. 508). Other researchers have insisted that universities are not doing a good job in the area of faculty development. Swain represented this perspective when he argued that the "academy devotes little attention to the preparation and development of excellent teachers" (p. 510). Swain further insisted that the challenge facing academia today is "whether we will give increased attention to the development of faculty in their instructional and service roles" (p. 510). Heppner and Johnston asserted that the "common theme [of faculty development] is the growth and effectiveness of faculty in teaching and research" (p. 451).

The need for the professional development of university professors is closely tied to three transformations initiated at Michigan State University (MSU) at the end of the 1980s and the beginning of the 1990s. They are (a) the Professional Development Schools movement (1989), (b) the Report of the Council on the Review of Research and Graduate Education (1991), and (c) a report by the Provost's Committee on University Outreach (1993). The implications of these transformation initiatives to the present study are discussed briefly below.

The first transformation initiative that addressed the need for professional development of professors at MSU is the Professional Development Schools. It all started in 1983, when the Holmes Group decided to explore alternative ways of improving teacher education in order to improve the quality of education in the United States. The goals of the Holmes Group were

1. To make the education of teachers intellectually more solid.
2. To recognize differences in teachers' knowledge, skills, and commitment, in their education, certification, and work.
3. To create standards of entry to the profession--examinations and educational requirements--that are professionally relevant and intellectually defensible.
4. To connect our own institutions to schools.
5. To make schools better places for teachers to work and to learn. (Holmes Group, 1986, p. 4)

In 1988, the Holmes Group used funds from the Ford Foundation to prepare an agenda of creation and long-term support of Professional Development Schools. In the second half of the 1980s, the College of Education at MSU saw the need to upgrade its teacher education program. The process of upgrading those programs led to the establishment of Professional Development Schools designed to provide sites for teaching, research, service, and the preparation of future educators. The Holmes Group (1990) developed six principles to serve as guidelines for the establishment of Professional Development Schools.

The first principle is that the creators of Professional Development Schools base teaching and learning on conceptual understanding. The purpose of this guideline is to increase learners' understanding of concepts and their relationships. Proponents of the Professional Development Schools philosophy also believe that educators should foster skills that promote lifelong learning.

The second principle emphasizes organization of the learning context around the concept of learning communities. Proponents of the Professional Development Schools philosophy argue that learning communities are congruent with the democratic principles upon which American society was founded.

The third principle expects educators to provide all children, irrespective of their social standing and educational background, with educational experiences that will promote those students' success. This principle is intended to discourage practices through which, in most if not all societies, learning has become a privilege of children from the "dominant cultures" (Winitzky, Stoddart, & O'Keefe, 1992).

The fourth principle expects Professional Development Schools to take the professional development of adults seriously. According to this principle, all adults associated with the Professional Development Schools should be models of learning throughout their lives.

The fifth guiding principle of the Professional Development Schools pertains to research and the dissemination of new knowledge and practices. It states that Professional Development Schools should become centers for generating and testing new knowledge and practices. According to this principle, administrators, teachers, and university faculty are expected to create and maintain long-term relationships to accomplish these goals.

The final principle recognizes that change can never become a reality in traditional schools and universities unless their organizational structures are open to and able to change. This guideline calls for both human and organizational transformation in ways that will nurture and promote meaningful change (Holmes Group, 1990).

The number of Professional Development Schools associated with MSU rose to 17 by 1995. That same year, the College of Education reduced the number of

Professional Development Schools from 17 to 9. The major reasons for reducing the number of Professional Development Schools were fiscal constraints and changes in the commitments of the Michigan Partnership for New Direction (which was the main channel of funding). All nine of the remaining Professional Development Schools received some type of support from the College of Education. During 1995-96, eight of the nine Professional Development Schools continued to receive funding from the Michigan Partnership for New Education (MPNE). The College of Education, through load assignment of one professor, and the Flint Community Schools funded the ninth Professional Development School.

In the 1994-95 academic year, external support for Professional Development Schools amounted to $1.5 million. In 1995-96, funding from the MPNE for Professional Development Schools was reduced to $575,000 per year (Judge, Carriedo, & Johnson, 1995). In 1996, the MPNE stopped funding Professional Development Schools completely. In the 1996-97 academic year, MSU, the College of Education, and the Flint Community School District provided funds for Professional Development School work.

The number of MSU faculty employed in the Professional Development Schools increased as the number of schools increased. By 1991-92, the number of tenured and tenure-stream faculty working in the Professional Development Schools rose to 44. In 1993, as the Michigan Partnership for New Directions reduced its Professional Development School funding, the number of tenured faculty working in the Professional Development Schools also declined by more than 50%.

A total of 54 tenured faculty have worked in the Professional Development Schools since their inception in 1989. These faculty members can be categorized into six groups:

1.   Faculty who had already been awarded tenure before they started Professional Development School work.

2.   Faculty who were already in the tenure stream before they started Professional Development School work and were awarded tenure during their Professional Development School work time.

3.   Faculty who were already in the tenure stream before they started Professional Development School work but had not been awarded tenure during their Professional Development School work time.

4.   Faculty who were not already in the tenure stream before they started Professional Development School work but were moved into the tenure stream during their Professional Development School work time and were awarded tenure during that time.

5.   Faculty who were not already in the tenure stream before they started Professional Development School work, were moved into the tenure stream during their Professional Development School work time, but had not been awarded tenure during that time.

6.   Faculty who were not already in the tenure stream before they started Professional Development School work and had not been moved into the tenure stream during their Professional Development School work time. In the 1996-1997

academic year, when the study was commenced, there were two faculty who were not already tenured in the tenure stream before they started Professional Development School work and who had not been moved into the tenure stream during their Professional Development School time.

The fourth and sixth principles have implications for the professional development of university professors. First, in the process of performing Professional Development School work, university professors acquire new knowledge, skills, and competencies that make them experts in the area of Professional Development School work. This is what the fourth principle refers to as the "professional development of adults." Professional development is also experienced by the administrators, teachers, and parents who participate in Professional Development School activities. Thus, Professional Development School initiatives have the potential for maximizing the professional development needs of adults (administrators, teachers, parents, and university professors). Second, the process of organizational transformation also has implications for the professional development of administrators, teachers, parents, and university professors. Organizational transformation calls for new knowledge, skills, and competencies. Forums can be implemented where they can facilitate the acquisition of such skills. Such forums may also help to socialize new faculty on issues of organizational transformation. Thus, participation in organizational transformation has potential for maximizing the professional growth of participants.

The second transformation initiative that pointed to the need for professional development of university professors was the report of the Council on the Review of Research and Graduate Education (CORRAGE) at MSU. In 1991, the CORRAGE declared that

> talented, dedicated faculty members are the sine qua non of a distinguished university. Their intellectual powers and energy, harnessed by their commitment to the mission of the university they serve, help to enable institutions such as Michigan State University to strive and achieve excellence. (p. 76)

The council further stated that

> An institutional commitment to the support and development of faculty is necessary to prevent the waste of resources and loss to the University that occur when promising young faculty members leave. At MSU, this commitment has been weak because of chronic underfunding as well as a traditional assumption that the initiative for development lies solely with the individual faculty member. (p. 76)

The CORRAGE urged the university community to establish an Office of Professional Development to facilitate professional development among university professors. This council also identified women and minorities as target groups for professional development.

The third transformation effort that gave prominence to the professional development of university professors was initiated by the Provost's Committee on University Outreach. In 1992, that committee was charged with the responsibility of "articulating an intellectual foundation for outreach and making recommendations for further strengthening university outreach at Michigan State University" (Provost's Committee on University Outreach, 1993, p. 1). After 18 months of intensive work, the committee published its report.

The Provost's Committee on University Outreach (1993) recognized that "Michigan State's history [is characterized by] a lack of clarity about outreach [that] persists to this day" (p. 13). The committee proceeded to provide a definition of outreach to guide the university's activities into the next century. The committee defined outreach as "a form of scholarship that cuts across teaching, research, and service. . . . [It] involves generating, transmitting, applying, and preserving knowledge for the direct benefit of external audiences in ways that are consistent with university and unit mission" (p. 1).

First, in the process of performing outreach, university professors acquire specialized knowledge, skills, and competencies that make them experts in the area of outreach. Thus, outreach in itself is professional development because, over time, involvement equips university professors with some knowledge, skills, and competencies they did not possess before they became involved in outreach activities. Second, professors experienced in outreach activities can share their knowledge, skills, and competencies with junior faculty in the form of orientation and long-term mentoring. This might facilitate the professional development of junior faculty.

In redefining scholarship, the Provost's Committee on University Outreach (1993) called for unity and balance among the three functions of the university: teaching, research, and service. The report did not mention Professional Development School work associated with MSU. However, the Office of the Vice President for Outreach held a symposium in 1996, the theme of which was Fulfilling

Higher Education's Covenant with Society: The Emerging Outreach Agenda. At that symposium, Rosaen and Wilcox (1996) presented a paper that connected the Professional Development Schools to the outreach agenda. The title of their paper was "The Dilemmas of University-School Collaboration on Research: The Case of MSU's Professional Development Schools." In their paper, Rosaen and Wilcox declared that

> The complex of interrelated functions undertaken by PDSs illustrates at least three important ideas of outreach: outreach cuts across the traditional categories of teaching, research, and service, blending them in new ways; outreach can be a two-way process, benefiting the university as well as its partners or "clients"; and outreach can be a collaborative process, involving both the university and its partners-clients actively in the creation, application, and communication of new knowledge. (pp. 91-92)

The authors maintained that the dilemmas facing Professional Development School practitioners included (a) the pressure of meeting traditional university deadlines, (b) issues of privacy, and (c) dissemination. Like other Professional Development School researchers (Clark & LaLonde, 1992; Dixon & Ishler, 1992; Koerner, 1992; Rushcamp & Roehler, 1992; Winitzky et al., 1992), Rosaen and Wilcox did not focus on the effect of Professional Development School experience on university professors.

Close examination of the report by the Provost's Committee on University Outreach (1993) and the work of Professional Development School practitioners (e.g., Rosaen & Wilcox, 1996) revealed the need for research on the effects of the Professional Development School experience on faculty as they carry out their teaching, research, and service. This study was undertaken to address that need.

Statement of the Problem and Purpose of the Study

Limited information exists on the effect of Professional Development School experience on the professional development of MSU faculty. Book (1996) suggested that researchers should undertake studies on many aspects of Professional Development School work. The researcher's purpose in this study was to explore how Professional Development School experience has affected the teaching, research, and service of tenure-stream and tenured faculty who have worked with those schools.

Traditional teaching, which emphasized "transmitting knowledge and facts," has provoked much criticism. Current educational reformers maintain that university faculty and teachers should strive to build "students' deeper understanding of academic subjects" (Cohen, McLaughlin, & Talbert, 1993, p. xi). The Professional Development School reform movement, for example, focuses on promoting good teaching and student understanding (Cohen et al., 1993).

This researcher was primarily interested in learning how the Professional Development School experience influences the professional lives and careers of university faculty. This study provides exploratory descriptive data regarding tenure-stream and tenured faculty's perceptions of the effects of Professional Development School experience on College of Education faculty in the areas of teaching, research, and service. This researcher concurs with Book (1996) that the exploratory descriptive data generated in this study "could provide a basis for helping to sustain this [Professional Development Schools] reform effort" (p. 207).

Research Questions

The following questions were posed to guide the collection of data for this study:

1.   In what way(s), if any, has the participation of tenure-stream and tenured faculty in Professional Development Schools affected their teaching? This question concerned, among other things, the effect of Professional Development School experience on what university faculty teach and how they teach.

2.   In what way(s), if any, has the participation of tenure-stream and tenured faculty in Professional Development Schools affected the questions those faculty pose in their research and the methods they use to conduct their research?

3.   In what way(s), if any, has the participation of tenure-stream and tenured faculty in Professional Development Schools affected their service practices? The researcher sought to understand the extent to which university faculty's participation in Professional Development Schools has renewed their sense of involvement both within and outside the university.

The researcher also sought to understand the benefits and potential roadblocks of Professional Development School experience in the three major domains of teaching, research, and service.

Rationale for and Significance of the Study

The researcher's purpose in this study was to explore how Professional Development School experience has affected the teaching, research, and service of tenure-stream and tenured faculty who have worked with those schools. The

findings from this study are important because they will add to the empirical data base about how faculty use the Professional Development School experience as a basis for improving their practice. University faculty are an indispensable component of Professional Development Schools. Unfortunately, the influence of Professional Development School work on tenure-stream and tenured faculty remains a neglected and seldom-studied topic. Researchers rarely have asked whether Professional Development School work influences faculty's teaching, research, and service, despite the intention of the Holmes Group that its principle four for Professional Development School work should apply to university faculty, not just to school-based educators. In this exploratory study, the writer draws attention to this important topic, as well as suggesting directions for future research on higher education as it relates to Professional Development School work.

Further, this exploratory study was undertaken to identify issues and problems that the College of Education may need to address. College policy makers may use the findings from the study to improve the working conditions of university faculty who serve in Professional Development Schools (e.g., Book, 1996, p. 205). Furthermore, policy makers and faculty may use the study findings to revise College of Education assessment criteria. The findings from the study might also lead to improvement of the incentive and research systems in ways that encourage and support rather than penalize university faculty working in the Professional Development Schools.

Assumptions

Five assumptions undergird this study. First, the researcher needs to make a distinction regarding the focus of the study. There are two alternatives from which to choose. First, the researcher could choose to study the subjective experiences of people. Second, the researcher could instead choose to study their behavior—that is, not what they think about but what they do. In this study, the researcher attempted to understand the subjective meanings of the effects of the Professional Development School experience on the research, teaching, and service of university participants. The researcher recognizes that separate from the subjective focus of the study, the research itself is potentially subjective for the reasons listed in the limitation section. However, the scientific procedures that were built into the design enhance the validity and reliability of the study methods, and thus address the issue of subjectivity of the research itself.

Second, the researcher also acknowledges the multiplicity of perspectives that might enter the data collection, analysis, and interpretation of the findings. The researcher took precautions in the design and the study to reduce threats to the validity and reliability of the findings. Thus, the differences in perspectives are not as serious a threat to the validity and reliability of the study as they might have been.

Third, the relationship between the researcher and the respondents remained close because the researcher lives within the context of the study. However, this factor did not have detrimental effects on the findings of the study because of the

standard scientific measures the researcher built into the design of the study to enhance the validity and reliability of the findings.

Fourth, the researcher assumed that verbatim language would communicate the values, norms, basic assumptions, and attitudes of the interviewees better than would paraphrases of their responses. Thus, the researcher reports the findings of the study, as much as possible, in verbatim form.

Fifth, the researcher recognizes that there are "many interacting factors . . . probably occurring simultaneously . . . [that make it difficult] to identify cause and effect relationships" (Swartz, 1993, p. 12). Thus, it is not the purpose of this study to determine causal relationships between the Professional Development School experience, on the one hand, and the participants' research, teaching, and service. The researcher hopes that rich descriptive data generated in this study about the participants' perceived effects of the Professional Development School experience on their research, teaching, and service roles will enrich our understanding of the phenomena under investigation (Mike & Silver, 1997) without specifying causal relationships. The descriptive data can be used to develop more causal theories to be tested by future researchers.

Finally, the researcher assumed that he would arrive at conclusions regarding the study inductively.

<u>Delimitation</u>

The population for this exploratory study was delimited to all of the College of Education faculty members who had worked in Professional Development

Schools since their inception in 1989 and were still employed at MSU at the time of the study. A larger sample would have increased the power of the study, but time and financial constraints did not permit using a larger sample. In addition, interviewing students who had been taught by faculty who worked in Professional Development Schools might have contributed to an understanding of the problem. However, students were not included in this study for the same reason mentioned above.

Temporary faculty, graduate students, and members of the MSU community who have rendered valuable service to Professional Development Schools since their inception could have made valuable contributions to understanding the influence of Professional Development School experience on faculty's teaching, research, and service. However, because of time and financial constraints, as well as the complexity of an exploratory study, those individuals were not included in this study.

Limitations

The researcher used a retrospective approach to elicit data from College of Education faculty about the effect of their Professional Development School experience on their teaching, research, and service. One major limitation of retrospective interviews is respondents' failing memory. Some of the interviewees might not have been able to remember and reconstruct the facts as vividly as they would if they had been interviewed when the incidents were still fresh in their minds.

Another major limitation of this study is the influence of values and biases, which might interfere with the presentation and interpretation of facts. Both the researcher and the interviewees might espouse a particular point of view, and this could make it difficult for them to hold their values and biases in abeyance. Such difficulties might have influenced the results of this study.

Some faculty members might have hesitated to share negative perceptions of Professional Development School work because they were still employed at MSU. Even though respondents were assured of the confidentiality of their comments, they might have been afraid that what they said could later be associated with them and negatively influence future promotion and tenure decisions.

Definition of Terms

The following terms are defined in the context in which they are used in this study:

Construct validity refers to operational measures being appropriate for the concepts being studied (Yin, 1989, p. 40).

Experience refers to College of Education faculty members' participation in Professional Development School work.

External validity refers to the extent to which the findings of a study are thought to be generalizable to other settings (Lincoln & Guba, 1985; Yin, 1989).

Holmes Group is "a consortium of education deans and chief academic officers from the major universities in each of the 50 states" (Holmes Group, 1986, p. 3).

In-depth focused interview design is "a process of learning and constructing the meaning of human experience through intensive dialogue with persons who are in the experience" (Liehr & Marcus, 1994, p. 262).

Organizational learning is "the intentional use of learning processes at the individual, group and system level to continuously transform the organization in the direction that is increasingly satisfying to the stakeholders" (Dixon, 1994, p. 5).

Outreach is "a form of scholarship that cuts across teaching, research, and service. It involves generating, transmitting, applying, and preserving knowledge for the direct benefit of external audiences in ways that are consistent with the University and unit mission" (Provost's Committee on University Outreach, 1993, p. 1).

Professional Development School is "a school for the development of novice professionals, for continuing development of experienced professionals, and for the research and development of the teaching profession" (Holmes Group, 1990, p. xv).

Reliability refers to the extent to which an independent researcher would "arrive at the same findings and conclusions [when] conducting the same case study all over again" (Yin, 1989, p. 45), using the same procedures as opposed to replicating the study.

Scholarship is "the thoughtful creation, interpretation, communication, or use of knowledge that is based on the idea and methods of recognized discipline, profession, and interdisciplinary fields" (Provost's Committee on University Outreach, 1993, p. 2).

Service involves "a scholar's effort to generate, transmit, apply, or preserve knowledge for the direct benefit of external audiences in ways that are consistent with the University and unit mission" (Provost's Committee on University Outreach, 1993, p. 4).

Theoretical validity "refers to an account's validity as a theory of some phenomenon" (Maxwell, 1991, p. 291). Maxwell further delineated two types of theoretical validity: that of the concepts used in the theory (which he saw as close to "construct validity"), and that of the relationship among the concepts in the theory (which he said includes, but is not exhausted by, "internal validity"). The meaning of internal validity, as it pertains to causality (see Cook & Campbell, 1979; Yin, 1989), does not apply to this study because of its descriptive and exploratory nature. But this study does postulate a relationship between Professional Development School experiences and MSU faculty members' teaching, research, and service, as perceived by those faculty. Thus, the relational aspect of Maxwell's theoretical validity is involved in this study.

Organization of the Study

The dissertation is organized into five chapters. Chapter I contains the background of the study, a statement of the problem and purpose of the study, and the research questions. The rationale for and significance of the study are explained, and assumptions, delimitations, and limitations are set forth. Key terms used in the dissertation are defined.

Chapter II contains a review of literature relevant to the study. The chapter consists of (a) the history of Professional Development Schools, including the land-grant missions and goals and Professional Development Schools educational reform; (b) the theoretical framework for the study; and (c) a review of literature based on themes emerging from the interviews conducted for this study.

The design of the study is presented in Chapter III. The rationale for using the qualitative approach and an in-depth focused interview design is explained, and the development of the research perspective is presented. The study population is described, and the data collection and data analysis procedures are explained. Issues of validity and reliability also are addressed.

Chapter IV contains a presentation of the findings. The findings consist mainly of selected quotations from the interviews regarding how faculty members' participation in Professional Development Schools has influenced their teaching, research, and service.

Chapter V contains a summary of the study, discussion and interpretation of the findings regarding the main themes emerging from the study, conclusions drawn from the findings, implications for Professional Development School work, and recommendations for further research.

Chapter VI presents a broader interpretation of the findings based on a comparison of the interview data with a hypothetical typical collegial culture of American universities to determine the congruence of the two cultures on the organizational culture dimensions drawn from the literature and the data analysis.

The differences identified led to the conclusion that, apart from the Professional Development School experience, the Professional Development School subculture is a product of (a) aspects of the collegial culture of Michigan State University, (b) features of the collegial culture of the MSU College of Education that have been supportive of this subculture, and (c) the self-selecting nature of the Professional Development School participants.

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CHAPTER II

REVIEW OF LITERATURE

Introduction

The researcher's purpose in this study was to explore the effects of the Professional Development School experience on university faculty's research, teaching, and service. This chapter contains a review of literature on topics pertinent to this study. The chapter consists of (a) the history of Professional Development Schools, including the land grant missions and goals and Professional Development School educational reform; (b) the theoretical framework for the study; (c) the concepts of research and scholarship; (d) a review of literature on themes emerging from the interviews conducted for this study; and (e) a summary of the chapter.

History of Professional Development Schools

The Land-Grant Missions and Goals

Kerr (1931) maintained that land-grant colleges and universities were created as a response to conditions prevailing in the United States in the first half of the nineteenth century. He asserted, for example, that the "great mass of the people were uneducated and provincial [and that] narrow vision, prejudice, and superstition often confronted any new discovery and any untried system of public service or

enlightenment" (p. 7). Kerr observed that interest in industry and education was high and that "higher education was strictly traditional and classical" (p. 8). He maintained that the intellectuals of the time were demanding "a more adaptable and practical educational program" (p. 8). They demanded educational "programs for educating the common people according to the needs of everyday life" (p. 8). These demands culminated in the passage of the Morrill Act of 1862, which provided for the establishment of land-grant colleges and universities in the United States. Michigan State University is one of the land-grant universities and a product of the Morrill Act.

In 1976, Anderson observed that "It is not self-serving for land-grant universities to assert that they have been splendid instruments of bringing education, research, and service to the people. ... There seems to be no need for major reform in either their goals or governance" (p. 5). In their present form, the mission and goals of land-grant colleges and universities continue to be research, teaching, and service. Huitt (1976) concluded that land-grant universities are, more than ever before, committed to the solution of "large and demanding problems of the nation and all mankind" (p. 21).

Professional Development School Educational Reform

The land-grant missions of research, teaching, and service remain unchanged today, despite the changing environment and the problems confronting society. One of the problems facing the nation today is the quality of education. In 1983, the Holmes Group, "a consortium of institutions that educate teacher educators as well as teachers" (Holmes Group, 1986, p. ix), pondered the quality of education in the

United States for 15 months. The Holmes Group emerged from that period of study with "a common agenda, shared understandings, and a broad outline for action commitments" (Holmes Group, 1986, p. viii).

In 1988, the Holmes Group received funding from the Ford Foundation to prepare its second report, entitled Tomorrow's Schools, published in 1990. The Holmes Group declared that its main goals were to

> Make the education of teachers intellectually sound. Make better use of differences in knowledge, skill, and commitment among teachers. Create relevant and defensible standards of entry to the profession of teaching. Connect schools of education with schools. Help make schools better places for practicing teachers to work and learn. (Holmes Group, 1990, p. vii)

The Holmes Group (1990) declared that teachers, administrators, and teacher educators should work collaboratively as partners and peers in creating "fine schools for children that will also be realistic, challenging, and supportive settings for the field studies of prospective teachers and for the rising professionalism of practicing teachers" (pp. vii-viii). The Holmes Group also made a commitment to promote collaborative research about teacher educators and school teachers concerning "the problems of teaching and learning so that exchanges of expertise can refresh and even reshape the curriculum and teaching at the university and the schools" (p. vii). With these commitments in mind, the Holmes Group developed the six principles that guide Professional Development School initiatives to this day. Those principles were described in Chapter I.

It is important to bear in mind that the Holmes Group's agenda concerns educational reform. The Holmes Group believed that the Professional Development

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School agenda would revitalize and renew efforts to improve the quality of education. The agenda was intended to provide "interested people in schools of education and school districts an opportunity to step forward and play a leading role in educational reform" (Holmes Group, 1990, pp. x-xi). Finally, the Holmes Group argued that it was "time for educators to help reshape a reform movement that, for better or worse, often has bypassed the education profession" (pp. x-xi).

Through its agenda, the Holmes Group was calling upon the university and the K-12 communities to focus their research, teaching, and service on the improvement of the quality of education, which has become a national problem. They were reminding universities, especially land-grant universities, to live up to the true spirit of the land-grant mission. They were calling upon land-grant universities to meet the prevailing educational crisis "with the same vigor and directness with which they met the needs of rural America more than a hundred years ago" (Huitt, 1976, p. 18). Judge et al. (1995) observed that "the Professional Development School [is] entirely harmonious with the tradition of public service and utility linked to scholarship embodied in the Morrill Act and therefore with the historic mission of MSU itself" (p. 3).

Theoretical Framework of the Study

Professional Development Schools and Change

One of the major assumptions of the architects of the Professional Development School philosophy was that its implementation would lead to change in educational institutions, their curricula, and instruction. University and school

faculties would collaborate on "research about problems of teaching and learning.

... The exchanges and expertise can refresh and even reshape the curriculum and

teaching at the university and the school" (Holmes Group, 1990, p. viii). In fact, the

sixth principle of the Professional Development School initiative calls for the creation

of new institutions and organizational structures to support the "profound changes

called for by Professional Development School [advocates]" (Holmes Group, 1990,

p. 7). The connection between Professional Development School work and change

is also explicit in the assertion that "the goals of creating a professional development

school include creating a new culture in which school and university work together

through collaborative efforts" (Book, 1996, p. 199).

Criticism of the Concept

Nine years of the implementation of the Professional Development School

concept led to the rise of two major schools of thought: (a) the proponents and (b)

the critics of the Professional Development School concept. This section presents

some issues raised by critics of the concept.

While acknowledging that the Professional Development School philosophy

is a viable means for bringing about reforms of the K-12 educational system, Duffy

(1994) also identified problems associated with the implementation of the

Professional Development School concept. He stated that Professional

Development Schools were identified by high-ranking university and school officials.

He indicated that this practice "disempowered" teachers because "they [were] left

feeling like passive followers. . . . They *feel* threatened [and] that the university is

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setting the agenda for everyone" (p. 597). Second, Duffy charged that the implementation practices did not represent collaboration because seldom "are schoolpeople invited to the university to help professors prepare teachers . . . [creating an impression that] university people have answers for schools [and that] schoolpeople do not have answers for professors" (p. 597). He further stated that the teachers "were not given choices and that the budgets were controlled by the university people" (p. 598). According to Duffy, two factors were responsible for this practice: (a) implementation pressure and (b) the fact that university professors enter Professional Development Schools as experts.

Duffy (1994) suggested strategies for addressing the implementation problems identified above. He maintained that the best strategy would be to shift the focus from the creation of Professional Development Schools to the professional development of K-12 teachers and administrators. He said that, after identifying the schools, university professors should proceed to build a spirit of collaboration to a point where teachers have "little trouble working with professors as equals, as long as professors *treat them* as equals" (p. 600).

Labaree (1995) advanced two criticisms regarding the Professional Development School movement. First, he argued that the school-university collaboration creates a problem of credibility for university researchers. He asserted that university researchers will lose credibility when research findings, contrary to the promises of the architects of the Holmes Group philosophy, fail to cure the problems afflicting the K-12 educational system. Labaree contended that as the Professional

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Development School movement progresses through the stages of "early enthusiasm," "widespread dissemination," and "progressive disappearance," the funding agencies, academicians, teachers, and K-12 administrators will lose confidence in university researchers. He concluded, therefore, that "minimal or equivocal results" will greatly lower the credibility of university researchers.

Labaree (1995) also attacked the Holmes Group promises that the beneficiaries of the Professional Development School movement are the teachers and K-12 administrators. He argued that although the Holmes Group promised "collaboration and reflection" (p. 106) to participating teachers, in reality, "the teachers in the professional development schools will find themselves working closely with . . . education professors, who potentially will be looking to see if the teachers are in fact demonstrating professional (that is, research-based) practices in the classrooms" (p. 106). Consequently, Labaree also argued that the Professional Development School movement provides the university with the opportunity to team up with K-12 administrators to "overcome the idiosyncratic autonomy of the practices fostered by the present organization of schooling" (p. 106). Labaree's conclusion was that "the university-bred brand of teacher professionalization may help bring about what bureaucratization could not--the rationalization of teaching" (p. 106).

Taken together, Duffy (1994) and Labaree (1995) raised important issues pertinent to the establishment and implementation of the Professional Development School philosophy. After nine years of the establishment and implementation of

Professional Development School initiatives, research testing the empirical foundation and validity of their claims is long overdue.

The Organizational-Culture Paradigm

Because the Professional Development School initiative is about fundamental change in the "organizational world view, belief system, and presuppositions underlying the [organization's] operation" (Levy & Merry, 1986, p. 10), the present researcher used the organizational-culture paradigm to interpret the results of the study. Schein (1992) believed that the organizational-culture perspective is the appropriate paradigm for studying organizational members' beliefs, values, perceptions, attitudes, and behavior change. He asserted that "as change agents, we gain a much better perspective if we realize that most organizational change usually involves some changes in culture, often at the subcultural level" (p. xiv).

The researcher believed that using a cultural perspective as the theoretical framework for interpreting the study findings would facilitate "understanding of what goes on inside organizations when different subcultures and occupational groups must work with each other" (Schein, 1992, p. xii). Also, the organizational-culture perspective was used in this study because no long-lasting institutional change can be brought about without changing the institutional culture. According to Schein, the construct *culture* refers to

> a pattern of assumptions that the group learned as it solved its problems of external adaptations and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. (p. 12)

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Theories of Organizational Culture

The rationalistic perspective. The construct *culture* is one of the perspectives of studying organizations. Several perspectives were used to study organizational behavior before the emergence of an organizational culture perspective. The forerunner of the organizational culture perspective of studying organizational life was the rationalistic approach. The major focus of the rationalists was to understand organizational behavior by means of a careful study of formal organizational structure. Later, theorists noted the weakness of the rationalistic approach and suggested improvements. The suggestion led to the rise of the naturalistic perspective.

The naturalistic perspective. The proponents of the naturalistic perspective of studying organizational life argue that the rationalistic perspective ignores the informal forces that drive the organization. They argue that organizational norms and the social dimension also need to be understood in order to fully comprehend organizational dynamics.

The advocates of the organizational culture perspective maintain that the understanding of structures (rationalistic) and the informal dimensions of organizational life (naturalistic) ignore the actual meaning and beliefs of organizational life. They assert that meanings and beliefs have a tremendous effect on the life of the organization.

The humanistic perspective. The humanist believes this is not enough (Schultz, 1995). The proponents of the human resource approach argue that

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organizations must be sensitive to the needs and talents of their members if they want to maximize their talents. They argue that the organizational leaders should seek to establish a fit between individual needs and the organizational goals.

The political perspective. The political theorists believe that all these perspectives are not enough to form a sufficient theoretical framework for studying organizational life (Schultz, 1995). The political perspective insists that, over time, organizational members form coalitions that may be a power to be reckoned with. In studying organizational dynamics, the political theorists insist that organizational researchers should take into account powerful coalitions found within organizations (Schultz, 1995).

The symbolic perspective. Finally, Bolman and Deal (1991) insisted that organizations have a symbolic dimension that must be understood fully to appreciate organizational dynamics. They asserted that any attempt to change organizational life should take into account its culture, stories, symbols, and rituals because these aspects of organizational culture regulate the tempo of organizational change.

Within the area of organizational culture, there are three perspectives competing for selection as frameworks. They are (a) the functionalist perspective, (b) the rationalistic perspective, and (c) the symbolic perspective. According to the proponents of the rationalist perspective, "organizational culture . . . [is] a means or tool for effectively achieving a given objective" (Schultz, 1995, p. 14). They focus on "the calculated elaboration of organizational values, which are analyzed and

evaluated in terms of their contribution to predefined organizational goal-achievement" (Schultz, 1995, p. 15).

The second competing perspective on organizational culture is the functionalist perspective advocated by Schein (1992). The advocates of the functionalist perspective maintain that organizations are constantly required to "adapt to external environments and to integrate its internal processes" (Schultz, 1995, p. 15). They believe that organizational culture enables organizational members to solve problems facing the organization by unlearning old and learning new values and basic assumptions that develop over time and become shared. The functionalists do not "reject that organizational subculture may develop due to special circumstances in the organization" (Schultz, 1995, p. 15).

The third competing perspective of studying organizational culture is the symbolic perspective. The supporters of this perspective believe that "organizational members are devoted to assigning meaning . . . to organizational behavior on which they react" (Schultz, 1995, p. 16). Their main objective is "interpreting organizational culture . . . to understand the meanings of symbols, as they are being created by the members of the organization" (Schultz, 1995, p. 16).

The organizational learning perspective. Another perspective of studying organizational culture is the organizational learning perspective. The proponents of organizational learning assert that "formation, evolution, transformation, and destruction" (Schein, 1992) are inextricably linked to the individual and the organizational learning process. The proponents of this perspective maintain that

the unlearning of the old cultural elements and the learning of new ones begin with the individual. Individuals learn about an organizational culture through direct contact with the culture, by learning new information about an organizational culture, or by rearranging the knowledge they already have about an organizational culture. Dixon (1994) maintained, however, that learning can be organizational in nature. She defined organizational learning as "the intentional use of learning processes at the individual, group and system level to continuously transform the organization in the direction that is increasingly satisfying to the stakeholders" (p. 5). Scholars of organizational culture believe that when leaders of cultural change "are to diagnose and possibly change the culture they have entered, it is, of course, mandatory that they first learn what the essence of that culture is. . . . They need to truly understand the culture before assessing it and possibly changing it" (Schein, 1992, p. 391). The organizational learning perspective of studying organizational culture insists, therefore, that organizational members should take the initiative to develop a culture that supports learning at the individual and organizational levels to facilitate change in organizational culture.

Dimensions of Organizational Culture

The dimensions of organizational culture used to interpret the findings of this study were derived from the functionalist and organizational learning perspectives. In interpreting the findings, however, all three competing perspectives of organizational culture were used because relying on only one of these cultural perspectives could have led to "artificially neglecting alternative frameworks which

could provide supplementary, or even more fruitful explanations" (Schultz, 1995,

p. 16) of organizational life.

The construct *culture* is used quite often in higher education these days. Rice

(1996) referred to the academic culture as "the assumptive world of the academic

professional" (p. 8). He identified seven fundamental assumptions that characterize

the academic profession today:

1. Research is the central professional endeavor and focus of academic life.
2. Quality in the profession is maintained by peer review and professional autonomy.
3. Knowledge is pursued for its own sake.
4. The pursuit of knowledge is best organized by discipline (i.e., by discipline-based departments).
5. Reputations are established in national and international professional associations.
6. Professional rewards and mobility accrue to those who persistently accentuate their specializations.
7. The distinctive task of the academic professional is the pursuit of cognitive truth. (p. 8)

Organizational Subcultures

In 1992, Schein declared that "as organizations grow and evolve, they

sometimes develop into groups that initially define themselves in terms of their

opposition to other groups and form subcultures that are in some respects

deliberately countercultural with respect to the main subculture" (p. 273). This

phenomenon also occurs in higher education. The typical collegial culture does give

rise to subcultures. Austin (1996) found, for example, that the typical collegial

culture (institutional culture) consists of (a) the disciplinary culture and (b) the

departmental culture. Besides the typical collegial culture, Bergquist (1992) noted

the (a) developmental culture, (b) managerial culture, and (c) negotiating culture. Although Austin and Bergquist did not call the groups of culture they identified *subcultures*, they are viewed in this study as subcultures because they originated from a more encompassing typical collegial culture.

Researchers have maintained that when the institutional, departmental, and disciplinary cultures in an institution (Austin, 1996) emphasize the pursuit of the scholarship of discovery and integration, which is called the "collegial culture" (Bergquist, 1992), they reward research more than teaching and service. Institutional, departmental, and disciplinary cultures emphasize teaching; faculty members also tend to emphasize teaching. Faculty members who work in a teaching-oriented culture pursue the scholarship of discovery; they want to ensure that it informs teaching and practice. Judge et al. (1995) confirmed that "the research and development in which [the Professional Development School] is engaged should contribute to the improvement of the experience of all students, in whatever school they may be" (p. 16). Austin suggested that institutions, departments, and disciplines with a strong teaching culture are inclined to pursue the scholarship of integration. She wrote that where "teaching is a primary institutional mission, faculty often spend comparatively more time on research and engage in less-specialized research; research efforts often may connect fields and synthesize or reintegrate previously discovered knowledge" (p. 59).

In this study, the Professional Development School subculture was the focus; it was "defined in relation to an organization's overall cultural pattern, especially with

respect to the culture's dominant values" (Hatch, 1997, p. 228). The analysis of the

Professional Development School subculture focuses on whether its artifacts, norms,

values, and basic underlying assumptions "support, deny, or simply exist alongside

the dominant values of the overall culture" (Hatch, 1997, p. 228). In this analysis,

an attempt is made to compare and contrast an emerging Professional Development

School subculture and its individual elements with three types of subcultures: (a) the

enhancing subculture, (b) the orthogonal subculture, and (c) the counterculture. The

characteristics of these subcultures are presented below:

1. <u>The enhancing subculture</u>. This is a subculture in which the "assumptions, beliefs, and values . . . are . . . compatible with and stronger than those in the dominant culture" (Ott, 1989, p. 46).

2. <u>The orthogonal subculture</u>. This is a subculture that "accept[s] the basic assumptions of the dominant organizational culture but also hold[s] some that are unique" (Ott, 1989, p. 46).

3. <u>The counterculture</u>. This subculture holds "basic assumptions that conflict with the dominant culture" (Ott, 1989, p. 46).

<u>Research and Scholarship</u>

Before presenting a review of the literature on the themes emerging from this

study, a distinction between research and scholarship is provided.

Definition of Research

According to Boyer (1990), the construct *research* originated in England in the 1780s and was introduced in the United States in 1906 by Daniel Coit Gilman. Cave, Hanney, and Kogan (1991) defined research as "a shorthand for any decrease in knowledge generated by the institution, in the form of publication, patents, development work, and the like" (p. 26).

Definition of Scholarship

According to Boyer (1990), "scholars are academics who conduct research, publish, and then perhaps convey their knowledge to students or apply what they have learned" (p. 15). To Cavanaugh (1993), a scholar is "a person with great learning in a particular subject who is skilled in academic work" (p. 110). The definition of a scholar is closely connected with the definition of scholarship given below.

Boyer (1990) maintained that, in "earlier times, [scholarship] referred to a variety of creative work carried on in a variety of places, and its integrity was measured by the ability to think, communicate, and learn" (p. 15). He also asserted that the meaning of the construct *scholarship* is very limited today. Being scholarly "means having academic rank in a college or university and being engaged in research and publication" (p. 15). According to Boyer, therefore, "Scholars are academics who conduct research, publish, and then perhaps convey their knowledge to students or apply what they have learned" (p. 15).

Researchers currently are not satisfied with the restricted meaning of the construct *research*. The debate to broaden the meaning of scholarship beyond research has reached a high level. Boyer (1990) suggested that scholarship be conceived as consisting of four types: (a) the scholarship of discovery, (b) the scholarship of integration, (c) the scholarship of teaching, and (d) the scholarship of application. These four types of scholarship are discussed in the next section.

General criteria for judging scholarship. In higher education, in one sense, quality is synonymous with scholarship. Thus, any work that faculty members do in the areas of research, teaching, and service can be judged as either scholarly or nonscholarly. In recent years, scholars (Boyer, 1990; Rice & Richlin, 1993) have been working hard to unpack the construct *scholarship*. In his attempt to unpack the construct *scholarship,* Lynton (1995) asserted that for faculty work to be judged as scholarly work, the scholars should demonstrate that (a) they have the ability to design an original research and engage themselves in the generation of new knowledge; (b) they have shared what they learned with a relevant audience; and (c) they have added new knowledge to the existing knowledge, developing theories, and conceptual understanding.

Research on Themes Emerging From the Interviews

This section contains a review of literature on some of the themes emerging from the interviews conducted for this study.

Generation of New Knowledge Through Research

The knowledge-generation mission and goal. Research is one of the primary missions and goals of MSU as a land-grant institution. McPherson, Simon, Wilkinson, June, and Huggett (1997) confirmed that "MSU is a national and international source of new knowledge" (p. 2). In its mission statement, last revised in 1978, the College of Education does not directly state that the goal of its research mission is to generate new knowledge. However, several parts of the mission statement do imply that one of the goals of the College's research mission is to generate or discover new knowledge. This is the type of scholarship that Rice and Richlin (1993) called "pure research." It differs from the type of research that does not involve the generation of new knowledge and is called the scholarship of integration, which will be discussed below. The mission statement of the Department of Teacher Education, last revised in the early 1980s, is very explicit about the goal of generating and discovering new knowledge. In general, Professional Development School researchers and practitioners view the fifth Professional Development School principle of "reflection and inquiry" as the embodiment of the research goal of generating new knowledge. Judge et al. (1995) stated,

> Much solid and well-documented research and development [has] been effected in such fields as teaching of mathematics, science, social studies, and literature. . . . Much of this work has found its way into a range of professional and learned journals, as well as presentations at national and regional conferences. (p. 11)

In her review of the Professional Development School literature, Book (1996) found that "research being conducted in these [Professional Development School] settings or about these settings [is] in the very formative stages" (p. 196). This review of literature revealed that MSU, the College of Education, the Department of Teacher Education, and the Professional Development Schools have both an explicit and an implicit consensus about the research mission. Book's review revealed, however, a need to have a common language of articulating the research mission across the various units of the university.

The problem. The process of generating new knowledge has been studied by numerous scholars (Austin, 1996; Braxton, 1996; Braxton & Berger, 1996; Bray, Braxton, & Smart, 1996; Gavlick, 1996; Johnson, 1996; Olsen & Simmons, 1996; Sullivan, 1996). The major concern of many of these scholars is that research-university faculty seem to be paying too much attention to the pursuit of research at the expense of other institutional goals. The critics argue that an overemphasis on the research goal might have a detrimental effect on the teaching goals of the university. However, in general, research has not supported the hypothesis that there is a conflict between research and teaching. For example, Braxton (1996) found no empirical evidence for the argument that research activities of professors interfere with their teaching; only one study supported this hypothesis. The researcher found no literature on the effects of research on professors' teaching in the Professional Development School context.

Researchers who have found that pursuit of the university's research goal does not have detrimental effects on teaching have made several recommendations. Braxton (1996) suggested that academic administrators should confidently communicate to the public and the legislators that the assumed conflict between the research and teaching goals has no empirical foundation, and that university administrators should open a dialogue to explore strategies for helping university professors balance their pursuit of research and teaching. He also suggested that university administrators who support the notion that the research and teaching goals and roles of university professors complement each other should actively seek to appoint faculty who have a strong interest in both research and teaching. Braxton also suggested that institutions whose administrators support the notion that research and teaching do not complement each other should use the findings from his study to formulate policies that allow faculty to engage either in research or in teaching.

The narrow definition and meaning of the construct *research* is the second problem discussed in the literature on research as a process of generating new knowledge. Adam and Roberts (1993) argued that "the words *scholarship* and *research* have become synonymous in referring to the discovery of new knowledge" (p. 45). In this review, the constructs *scholarship* and *research* are used interchangeably. Adam and Roberts argued that the construct *scholarship* ought to mean more than just "original research" (p. 28). These authors charged, for example, that

the privilege given to the . . . monograph in promotions and tenure has led to the undervaluing of other activities central to the life of the discipline—writing textbooks, developing courses and curricula, documentary editing, museum exhibitions, and film projects to name but a few. (p. 25)

According to Adam and Roberts, these faculty activities are currently classified as service, but would be elevated to the status of scholarship following the broadening of the definition of scholarship. Adam and Roberts asserted that the practice of narrowly defining scholarship in history as synonymous with the "monograph is inappropriate and unfairly undervalues the work of a significant portion of professional historians" (p. 26).

Strategies for improvement. The advocates of this school of thought insist that the time has come for academia to replace the construct *research* with *scholarship*. They insist that, in its new form, the construct *scholarship* should be given a much broader meaning capable of embracing the different kinds of scholarly activities performed by faculty. The implication of this line of thinking is that the definition of scholarship will continue to differ from discipline to discipline. Several scholars have advanced different perspectives from which to define scholarship (Braskamp & Ory, 1994; Cochran, 1992; Park, 1996). They have built their perspectives on the conceptual frameworks outlined by Boyer (1990) and Rice (1995, 1996). The two forms of scholarship relevant to research are the scholarship of discovery and the scholarship of integration. Their definitions are discussed briefly below.

The scholarship of discovery. Boyer (1990) defined the scholarship of discovery as a form of research that "contributes not only to the stock of knowledge

but also to the intellectual climate of a college or university. Not just the outcomes, but the process, and especially the passion, give meaning to the effort" (p. 17). Faculty are, for example, engaged in the scholarship of discovery when they "seek to discover and validate general laws of learning [that] provide faculty with information and insights into how, what, and how well their particular students are learning in their specific courses" (Angelo, 1991, p. 8). One of the fundamental questions that researchers engaged in the scholarship of discovery should ask is "What is to be known, and what is yet to be found?" (Boyer, 1990, p. 19).

The scholarship of integration. Boyer (1990) suggested that research be redefined as scholarship of integration. He explained that the scholarship of integration is the form of research in which "scholars give meaning to isolated facts, putting them in perspective, . . . making connections across the discipline, placing the specialties in larger context, illuminating data in a revealing way, [and] often educating the nonspecialists, too" (p. 19). Furthermore, Boyer indicated that scholarship of integration occurs when researchers conduct "research at the boundaries where the fields converge" (p. 19). For example, Adam and Roberts (1993) maintained that scholarship of integration in the area of liberal arts may include "using computer technology to analyze poetry, bringing ethical principles to bear on biotechnology and applying psychoanalytical theory to the study of literature of marketing" (p. 74). Boyer suggested that, to engage in the scholarship of integration, researchers should attempt to answer questions such as "What do the

findings *mean*? Is it possible to interpret what's been discovered in ways that provide a larger, more comprehensive understanding?" (p. 19).

Focus on Applied Versus Basic Research

Anderson (1976) observed that another prominent "feature of the land-grant idea has been that the work of scholars--and particularly their research--must be and at times should be deliberately planned toward *utilitarian* ends" (p. 3). Anderson again emphasized the utilitarian nature of the research mission and goal of the university when he indicated that "the fruits of research should be taken to the people" (p. 4). Huitt (1976) supported the idea of conducting research with a utilitarian end when writing about the relationship between research and public service. He stated that, in land-grant universities, "the performance of research and teaching [should be done] in order to serve the nation's needs" (p. 11). What are those needs? Huitt asserted that new knowledge generated by research in land-grant institutions should help society address problems such as "crime, . . . transportation, health, poverty, discrimination, [and] segregation" (p. 12). He also maintained that the process of applying new knowledge to these problems, in turn, "stimulates research and service projects in the universities" (p. 12).

University professors involved in Professional Development Schools seem to be following this tradition in their research. In applying new knowledge to the solution of educational and societal problems, university professors working in the Professional Development Schools remain true to the principle of lifelong learning. Legislators, government officials, school district personnel, the business community,

and parents are critical decision makers responsible for providing the resources needed for educational reform. Professional Development School participants invite these people to the schools to witness how they are applying new knowledge to the solution of educational problems. University professors also serve on various committees, and they assume the primary task of educating these constituencies. University professors often are the agents of change most responsible for applying new knowledge they have discovered to the solution of many societal problems related to education. These professors continue to apply new knowledge to the solution of societal problems related to education through the "processes of continuing education" (Anderson, 1976, p. 6). Anderson maintained that the "problems to which [new knowledge is] applied have changed and will continue to change, as will the milieu in which the land-grant universities exist" (p. 5).

Transmission of New Knowledge Through Teaching

Mission and goal. Teaching is one of the primary missions and goals of a land-grant institution such as MSU. This mission and goal is explicitly stated in the university's mission statement. In articulating the teaching goal of university professors, McPherson et al. (1997) declared:

> At MSU, teaching and learning are connected to students and professional goals and to faculty expertise and scholarship. Teaching and learning are also relevant to state, national, and international concerns. MSU is an intellectually exciting community where teachers and students share the responsibility for learning. MSU students are expected to take learning seriously--to be engaged learners and critical thinkers with a capacity for informed, independent judgements. MSU faculty link their research and teaching; they are committed to provide a vigorous academic environment that encourages active learning and high-quality performance. (p. 2)

An analysis of the teaching mission and goals of the university, the College of Education, the Department of Teacher Education, and advocates of the Professional Development School philosophy revealed that they are similar and congruent. There is, however, a problem concerning the teaching mission and goals of land-grant universities.

The problem. A review of literature revealed the existence of two main problems associated with the teaching mission and goal of the university. They are that (a) the teaching mission and goal of the university are neglected compared to that of research, and that (b) teaching is narrowly defined. First, many researchers and practitioners agree that there is a problem concerning teaching as a mission and a goal in research universities in the United States. Critics maintain that undergraduate teaching is neglected because many professors spend most of their time on research. Rhodes (1994) advanced a rationale for this state of affairs. He argued that "institutional and professional rewards . . . are apportioned largely on the basis of research accomplishments rather than teaching effectiveness, with a predictable effect on how faculty members apportion their time" (p. 179). He maintained that students select universities based on their knowledge of "well-known faculty experts" (p. 179) announced in the schedule of courses. Rhodes asserted that when the students arrive at the university they are shocked to discover that very few of these well-known faculty members are "deeply involved in undergraduate teaching on a day-by-day" basis (p. 179) because they pay more attention to research than teaching.

Bray et al. (1996) supported the argument that the teaching goal of the university is neglected by university professors. They asserted that "Improving undergraduate education is a major concern of higher education stakeholders: students, parents, faculty members, administrators, state legislators, and members of national associations" (p. 23). Johnson (1996) also emphasized that the quality of teaching is adversely affected by overemphasis on the institution's research goals.

The defenders of research universities do not justify the imbalance between the time apportioned to the research and teaching missions and goals of the university, but instead they argue that research enriches teaching. Rhodes (1994) represents this position in arguing that research activity involves

> faculty members and students at all levels . . . in the process of discovery, in which cutting-edge courses cover materials years away from being part of the standard textbook, in which opportunities exist to participate directly in significant research and scholarly work and to publish results in professional journals even before graduation, in which proximity to experts in other fields can provide new insights and new possibilities for collaborative work and a creative approach to knowledge and to life which may be even more valuable, over the long term, than the specific information conveyed. (pp. 179-180)

Although the merits of the research mission and goal of the university are sound and solid, Rhodes (1994) hastened to remind the academic community that "it is undergraduate teaching, and learning, that is the central task" (p. 181) of the university. He believed that

> undergraduate education is fundamental to the existence of the university: it occupies more time, involves more people, consumes more resources, requires more facilities, and generates more revenue than other activities. Almost everything else universities do depends on it. Other vital functions--graduate education and research, for example--are supported in part by it. Undergraduate education supplies the future generations of research specialists, and it replenishes the supplies of teachers. It transmits many of

the best aspects of our culture. It prepares the nation's future leaders and voters. It is through undergraduate education that the public encounters the university most directly, and it is on undergraduate education that the health of the research university will stand or fall. (p. 181)

Rhodes summarized his argument for an emphasis on the teaching mission and goal of research institutions by saying that "if research universities are to continue as major forces in American life, they need to give undergraduate education the sustained campus-wide attention it deserves" (p. 181).

The second problem regarding the teaching mission and goal of the university is that the definition of the construct *teaching* is too narrow (Boyer, 1990; Davis, 1993; Pfister, 1963). From a narrow perspective, teaching is defined as "the interaction of a student and a teacher over a subject" (Pfister, 1963, p. 10). According to Ramsden (1992), teaching "in its broadest sense include[s] the aims of the curriculum, the methods of transmitting the knowledge those aims embody, the assessment of students, and the evaluation of the effectiveness of the instruction with which they are provided" (p. 9).

Strategies for improvement. Several scholars have advanced strategies for addressing the above-mentioned problems associated with the teaching mission and goal of the university. Rhodes (1994), for example, asserted that the teaching mission and goal of the university can be improved by, first, improving the curriculum in a way that "it excites rather than exhausts, encourages rather than engorges, and nurtures an outward-looking, generous, and cooperative spirit rather than one of narrow self-preoccupation" (p. 183).

Rhodes (1994) maintained that the second strategy for improving teaching effectiveness is to study "the cognitive process of learning and the act of teaching . . . with the same creativity and professional intensity that we now devote to research" (p. 184). Some of the questions that could be studied to improve teaching include:

> How do students learn? How might we experiment with different learning styles? What is effective teaching? How and when should we measure it? Whose opinions should we seek--students', faculty members', peers', alumni's, employees', or all of the above? What can we do to encourage improvement in undergraduate teaching? How does class size affect learning? What support is needed? Are the findings about effective teaching generalizable, or do they vary from discipline to discipline and from place to place? (Rhodes, 1994, p. 184)

The third strategy for improving teaching is being ready to "act upon what we learn . . . [that is, readiness to] adapt, invent, discard, and replace" (Rhodes, 1994, p. 184).

The fourth strategy for improving teaching is being willing to appropriately "recognize and reward" teaching excellence (Rhodes, 1994, p. 184).

The fifth strategy for improving teaching is redefining the construct *teaching* in a way that will broaden its meaning (Boyer, 1990; Braskamp & Ory, 1994; Park, 1996). In 1990, Boyer proposed that teaching should be redefined as the *scholarship of teaching*. He believed, as do the proponents of teaching for understanding, that good teaching occurs when university professors

> stimulate active, not passive, learning and encourage students to be critical, creative thinkers, with the capacity to go on learning after their college days are over, . . . [where] faculty, as scholars, are also learners, . . . [where professors are] not only transmitting knowledge, but also transforming and extending it as well [by means of] reading, . . . classroom discussions, . . .

comments and questions posed by students [and the] professors themselves. (Holmes Group, 1990, p. 24)

Like the Holmes Group (1990), Park (1996) claimed that the scholarship of teaching "views teaching as a collaborative endeavor most likely to succeed where classes are transformed into learning communities" (p. 77). Braskamp and Ory (1994) supported the notion of defining teaching broadly. They indicated, for example, that the definition of teaching should include "instructing in the classroom, conducting laboratories, mentoring interns and advanced graduate students, tutoring students individually, and advising students on such topics as appropriate educational programs and career opportunities" (p. 39).

There is a striking similarity between the definitions of the scholarship of teaching (Boyer, 1990; Park, 1996) and teaching for understanding advocated by Cohen et al. (1993) and the Holmes Group (1990). These definitions are all broad. They also have many points of convergence and few, if any, points of divergence. In this study, therefore, teaching was defined more broadly as a form of instruction that embraces all the essential elements of teaching for understanding and the scholarship of teaching described above.

Several scholars have given examples of how they think teaching could be broadly defined as scholarship. Some have suggested that when teaching is defined as scholarship, it should include activities such as classroom preparation, curriculum development, graduate-student training and education, writing textbooks, and the development of multimedia materials (Adam & Roberts, 1993). Braskamp and Ory (1994) suggested that, like teaching students in the classroom, instruction

workshops, retreats, and seminars should be classified under the scholarship of teaching. Teacher education professors are required to perform many supervisory activities, as well as having responsibilities for mentoring, advising, guidance, and counseling. These activities should be classified under the scholarship of teaching.

Furthermore, some Professional Development School participants develop various learning activities. They are involved in developing and reviewing course materials, teaching materials, curriculum, manuals, and computer software and exercises. Some faculty working in Professional Development School settings may be involved in activities that help themselves or others develop as teachers. They may, for example, assist in the evaluation of their colleagues, conduct research focusing on the improvement of methods of instruction and classroom management. They also may be involved in various kinds of professional development activities. Braskamp and Ory (1994) argued that, when properly documented and evaluated, these activities reveal faculty members' contribution to the scholarship of teaching.

Application of New Knowledge to the Solution of Significant Problems (Service)

Mission and goal. In 1931, Kerr, president of Oregon State Agricultural College, stated that "a major function of any college or university is service to its constituents. In the case of the land-grant colleges, this obligation is toward the entire commonwealth. Their attitude in all relationships is one of helpfulness" (pp. 18-19). Providing public service continues to be a primary value of land-grant universities to this day. Universities continue to be perceived as "great reservoirs of knowledge and skills relevant to the problems our society faces" (Huitt, 1976, p.

12). In 1976, Madsen asserted that "the ultimate success or failure of the land-grant

institution must be judged in terms of their ability to respond to the needs of all the

working people of the United States, whether rural or urban" (p. 46). In 1992, the

MSU Provost's Committee on University Outreach spent 18 months reviewing the

literature and interviewing internal and external constituencies of the university in

order to redefine the service mission and goal of the university. The committee

defined the service mission and goal of the university as *Outreach*. The committee

indicated that the outreach mission and goal of the university should be, among

other things, to provide

> applied research and technical assistance to help clients, individually and
> collectively, to better understand the nature of a problem they confront, . . .
> demonstrate projects that introduce clients to new techniques and practices,
> . . . extend the campus instructional capacity through credit and noncredit
> courses to meet the needs of adult students, . . . [and] provide policy analysis
> to help shape and inform the public policy process. (Provost's Committee on
> University Outreach, 1993, p. vii)

McPherson et al. (1997) recently reiterated the service goal of the university as

follows:

> MSU is dedicated to outreach and public service. University scholars
> translate knowledge into understandable terms. They help develop strategies
> that empower people to use knowledge to solve problems. MSU has an
> interdisciplinary, problem-solving tradition. The rapidity with which complex
> problems arise mandates that the University display flexibility in areas where
> it can have an impact. To best serve in a global economy requires that MSU
> assume the national and international role. Faculty, staff, and students at
> MSU are encouraged to view their work as part of the University's effort to
> illuminate problems related to quality of life in an increasingly diverse world.
> (p. 2)

The mission statement of the College of Education, developed in 1978, does

not contain a single instance in which the construct *service* is used. One faculty

member recalled "an effort in the mid-to-late 1980s in the College [of Education] to address the service role of the faculty on a scholarly basis." The researcher was unable to locate the document. The mission statement of the Department of Teacher Education, developed in the early 1980s, emphasizes the service goal of the department. As pointed out earlier, service is implicit in the concept of Professional Development Schools. This review revealed a disparity in the service mission and goal articulation between the College of Education, on the one hand, and the other administrative units and Professional Development School advocates, on the other hand.

The problem. Much controversy surrounds the service mission and goal of the university. First, some critics have argued that the service mission and goal is not valued as much as are the missions and goals of teaching and research. Consequently, Diamond (1993) observed that "service . . . and creativity are risky priorities for faculty members seeking promotion or tenure at any institution" (p. 7).

Second, critics are not satisfied with the current definition of service. Traditionally, academic institutions have expected faculty

> involvement in department, college, and university committees, councils, and senates; service in appropriate professional organizations; involvement in organizing and expediting meetings, symposia, conferences, and workshops; participation in radio and television; and service on local, state, and national governmental boards, commissions, and other agencies. (Cornett, 1993, p. 49)

These agencies generally define the scope of the faculty service role in the academic world. First, the meaning of the construct *service* in the academy covers an almost endless number of campus activities--[such as] sitting on committees,

advising student clubs, or performing departmental chores" (Boyer, 1990, p. 22).

Second, when used to describe off-campus faculty activities, service refers to

"participation in town councils, youth clubs, and the like" (Boyer, 1990, p. 22).

Professional Development School activities currently are defined as off-campus

service activities. This characterization fits Snyder's (1994) comment that

"[Professional Development School]-type projects are construed as service" (p. 114).

Third, the meaning of service "is so vague and often disconnected from serious

intellectual work" (Boyer, 1990, p. 22). Due to these weaknesses in the definition

of service, "colleges and universities [have] recently rejected service as serious

scholarship" (Boyer, 1990, p. 22). Finally, some critics have maintained that

although service takes a considerable amount of faculty work-load, "rarely has this

type of activity contributed significantly to decisions concerning faculty merit"

(Cornett, 1993, p. 50).

Strategies for improvement. Several scholars have suggested different

strategies for addressing problems associated with the service mission and goal of

the university. Adam and Roberts (1993) suggested that "actions that [would]

elevate the status of . . . service or outreach" (p. 23) would greatly improve

academia's perception of the service mission and goal of the university. Boyer

(1990) also suggested that a redefinition of the service mission and goal of the

university would be helpful. He suggested that service should be redefined in ways

that will make "service . . . serious, demanding work, requiring the rigor—and the

accountability—traditionally associated with research activities" (p. 22).

Park (1996) supported the idea of redefining service because she believed that it "recognizes a dynamic relationship between the intellectual and the personal, between theory and practice" (p. 77). Boyer (1990) suggested that to make service a serious form of scholarship, scholars and service providers should constantly ask the questions: "How can knowledge be responsibly applied to consequential problems? How can it be helpful to individuals as well as institutions? . . . Can social problems *themselves* define an agenda for scholarly investigation?" (p. 21).

Lucas (1994) suggested a third strategy for improving academicians' perception of the service mission and goal of the university. She asserted that department chairpersons must constantly ask the question: "How important . . . is [service] and how much weight . . . should [it] carry in personnel decision making?" (p. 170).

In 1993, MSU redefined the meaning of outreach. The Provost's Committee on University Outreach (1993) argued that "universities exist to generate, transmit, apply, and preserve knowledge. When they do these things for the direct benefit of external audiences, they are doing university outreach" (p. 1). Using Boyer's (1990) framework, the Provost's Committee declared that

> outreach is a form of scholarship that cuts across teaching, research, and service. It involves generating, transmitting, applying, and preserving knowledge for the direct benefit of external audiences in ways that are consistent with university and unit missions. (p. 1)

A review of literature on Professional Development Schools revealed that faculty are involved in the scholarship of application. This is the form of scholarship that Braskamp and Ory (1994) termed "practice and professional service" (p. 42).

The scholarship of application includes professional activities that are designed to link research to service. Judge et al. (1995) described the link between research and service, saying, "The university and its faculty furnish new insights and bring to bear new knowledge upon the resolution of the problems faced every day in the public schools" (p. 17). These authors were referring to the applied research conducted by Professional Development School participants. Braskamp and Ory also noted that the scholarship of application can take the form of disseminating knowledge to various publics. This may involve analyzing policy implications of various research findings and presenting those findings to local, state, national, and international audiences through seminars, conferences, and/or lectures.

Lucas (1994) divided professional activities in the scholarship of application into five major categories. These include service activities such as "writing grant proposals, fund raising, recruiting students and faculty, serving on committees, and providing expertise that assists the work of other institutional units, including libraries, academic and administrative support offices, and support agencies" (p. 170). Lucas proposed that the second category of service activities for university professors should include activities that move the profession beyond institutional boundaries. She indicated that activities falling within this category should include different forms of consultation, such as "serving on committees, task forces, review and advisory boards, and councils; explaining one's discipline or research via mass media; and providing leadership in professional organizations" (p. 170). Lucas identified service activities that reach out into the community as the third category

of such activities. She indicated that these activities should include "contributing to public education through teaching, performance, and presentations; participating in working groups, boards, arts councils, and community events; helping to improve instruction in primary, secondary, and postsecondary schools; and testifying as an expert in legislative and judicial settings" (p. 170).

In sum, although Professional Development School initiatives generally are perceived as service activities, the professional activities of university faculty working in such schools actually fall within the scholarships of discovery, integration, teaching, and application.

Dissemination and Diffusion of New Knowledge

Publications. Professional Development School participants value the practice of disseminating and diffusing the knowledge they have discovered, through publications and conferences. This value is based on the belief that the "vocation of professors in the university is to publish results of their scholarly research" (Pelikan, 1992, p. 121). Professional Development School participants respect and strive to live up to the expectation that every scholar has an "obligation to share with one's colleagues in the discipline the outcomes of the scholarly research in which one is engaged" (Pelikan, 1992, p. 123).

There are many reasons why university professors should disseminate and diffuse the knowledge they have generated, through publication. First, publication provides researchers with an opportunity to remain

honest, by exposing [themselves] to the criticism and correction of other scholars and by inviting them—or daring them—to replicate [their] results if they can and, if possible, to carry those results further or to refute them by more careful or imaginative research. Only the diffusion of knowledge through some form of scholarly publishing can make this process possible. (Pelikan, 1992, p. 124).

Besides facilitating one's progress toward tenure, publishing strengthens one's teaching because it forces researchers "constantly to survey relevant literature and events to incorporate into the next text addition" (Whicker, Kronenfeld, & Strikland, 1993, p. 74).

Seminars, workshops, and conferences. Seminars, workshops, and conferences are different means that university professors use to disseminate and diffuse new knowledge. University professors who make presentations at seminars can help those who are not publishing to pick up ideas that might lead to major research projects. In addition, seminars, workshops, and conferences can let faculty who have not recently published know that established scholars also experience similar difficulties. They can also learn various strategies for dealing with roadblocks to publishing. Seminars, workshops, and conferences are also settings in which faculty can identify people with whom to collaborate on research. University professors write grant proposals to secure funding for their research projects. "Workshops on grantsmanship" are becoming a powerful tool for disseminating and diffusing new knowledge to those dealing with grants.

The Promotion, Tenure, and Merit-Pay System

Many scholars and practitioners believe that the promotion, tenure, and merit-pay-increase system used by academic institutions is out of touch with the current realities of the academic profession (Boyer, 1990; Diamond, 1993; Judge et al., 1995). Boyer wrote, "Today, on campuses across the nation, there is a recognition that the faculty reward system does not match the full range of academic functions and that professors are often caught between competing obligations" (p. 1). Judge et al. (1995) also noted that there is "uncertainty and anxiety about tenure and promotion linked to . . . perceptions of the research undertaken over the past seven years in the [Professional Development Schools]" (p. 10). Book (1996) also observed that

> the promotion, tenure, and merit pay for university faculty typically rely on publications, grants, and professional presentations [and are] not immediately available from the hard work of building relationships which are necessary precursors to conducting research in the collaborative context of a [Professional Development School]. (p. 205)

Snyder (1994) asserted that university faculty working in Professional Development School settings are not well rewarded for the hard work they perform in those settings because academe generally views their work as service. Winitzky et al. (1992) also indicated that the "collaborative research [conducted in the Professional Development Schools] does not carry the stature of traditional research and is weighted accordingly in the promotion, tenure, and merit pay decisions" (p. 9).

Many scholars have been calling for an immediate rethinking and redesign of the academic reward system to bring it in line with the emerging institutional

structure and culture. Diamond (1993) argued that the successful attainment of institutional mission depends on the compatibility of the faculty reward system and the central mission of the institution. He suggested that the reward system should be redesigned in ways that it will "send a clear signal to faculty that what is valued by the institution will be rewarded at all points in the promotion and tenure system" (p. 6).

Diamond (1993) believed that administrators will have to play a leading role in redesigning the university's promotion, tenure, and merit-pay system. He also suggested that faculty must be involved in the process to create ownership of the redesigned system. Gray, Froh, and Diamond (1992) found that more than 23,000 faculty, department chairs, deans, and administrators agreed that the current reward system did not equitably reward research and teaching. They concluded from their study that the majority of individuals in those positions would welcome a redesign of the promotion, tenure, and merit-pay system. Braskamp and Ory (1994) said that the process of redesigning the promotion, tenure, and merit-pay system must begin with the process of redefining and assessing what faculty do.

In the area of research, professors associated with MSU are awarded an extraordinary research/scholarly activity rating when they have

> (a) prepared and published several manuscripts such as books, refereed journal articles, project reports, and chapters; (b) [written] research proposals for external and internal funding; (c) initiated research writing projects; and (d) provided high-quality leadership in extant research projects and organization. (Department of Teacher Education, 1994, p. 3)

In the area of teaching, professors at MSU receive an extraordinary rating for

(a) excellent course evaluations and unusually thorough and thoughtful feedback from students; (b) challenging and up-to-date syllabi, curriculum materials, and instructional strategies; (c) a range of courses taught; (d) high-quality advising of an ample share of the department's M.A. and Ph.D. students; (e) a willingness to serve as a member of doctoral committees both within and outside of the department; (f) high-quality and substantial mentoring of doctoral students who are teaching in the certification program; (g) high-quality and substantial mentoring of master's students; (h) leadership of teacher education teams or of courses within those teams; and (i) published scholarship concerning their teaching. (Department of Teacher Education, 1994, p. 2)

In the area of service, professors at MSU are awarded an extraordinary rating

if they perform service at the international, national, state, local, university, college,

and department levels when they have

(a) provided high-quality leadership on committees, for national and international organizations, for local University-school collaborations or the like; (b) helped author policy documents like standards, benchmarks, position papers, Professional Development School final reports and proposals, etc.; (c) participated in a range of activities across several domains relevant to their interests and expertise; [and] (d) provided leadership in outreach programs in local, state, national, and international contexts. (Department of Teacher Education, 1994, p. 1)

Multiple criteria within each of the areas of research, teaching, and service

are used to determine the level of reward to be given to a particular faculty member.

The peer evaluation committee employs four additional levels below the

"extraordinary" level in each area.

In sum, the literature review showed that the promotion, tenure, and merit-

pay-increase system of academic institutions is too narrow to reward all the

professional activities of university professors. As academic institutions examine the

traditional definitions of research, teaching, and service and embrace a broader

definition, the promotion, tenure, and merit-pay-increase system will also need to be reviewed accordingly.

Socialization of New Faculty in the Professional Development School Culture Through Career-Development Stages

Many scholars have argued that there is a correlation between faculty career-development stages, on the one hand, and faculty attitudes and preferences toward research, teaching, and service, on the other (Baldwin, 1990; Baldwin & Blackburn, 1981; DiLorenzo & Heppner, 1994). The five career-development stages identified by DiLorenzo and Heppner, by Baldwin, and by Baldwin and Blackburn serve as a framework for presenting the literature on this theme.

Beginning assistant professor.

Research. The literature review revealed that assistant or junior professors have a positive attitude toward research. Once appointed, some assistant or junior professors begin immediately to put together a research-development program to guide their progress to the next professional advancement (DiLorenzo & Heppner, 1994). Some beginning assistant professors "avoid becoming . . . consumed by instructional responsibilities [to such an extent that their] professional development and research are neglected" (Baldwin, 1990, p. 32), to give themselves time to engage in scholarly productivity.

Beginning professors in Professional Development School settings face more formidable challenges than do their counterparts not working in such settings. They need more time to establish collaborative relationships, which must precede mutual

definition of research questions. Further, "the research itself must often be extended over a longer period of time (longer than, for example, much of what can be attempted in a library or a laboratory), and the presentation of its results may involve more complex decisions and choices" (Judge et al., 1995, p. 9).

Beginning professors also have to satisfy the interests of multiple audiences. Judge et al. (1995) concluded that "it is surely unreasonable to expect them [beginning professors] to be engaged in the Professional Development School AND at the same time pursue the same kinds of professional lives as those not so engaged" (p. 9). Also, they are pressured by administrators to produce tangible products to show when they are evaluated for tenure.

Teaching. The rate study of 1987 indicated that teacher education faculty spent 60% of their time on teaching (Ducharme & Klauender, 1991). Although teaching excellence does not count more than research toward tenure and promotion, assistant professors generally work hard at "establishing a successful teaching career" (DiLorenzo & Heppner, 1994, p. 486). Boice (1991) found that assistant professors are eager to be good teachers and earn a reputation as such. They learn the subject matter and methods of teaching so that the public will not see them as bad teachers. However, they are unwilling to seek help for improvement when they are not doing well. They look forward to a time when they will be doing less preparation and tend to postpone research until they have gained confidence as teachers.

Boice (1991) found that when some beginning professors fail to become good teachers, they externalize the blame and attribute the cause of their failure to weak

students, heavy teaching loads, and poor evaluation systems. Boice (1993) also found that the beginning professorship is a stage at which many women and minorities feel very "unwelcome, unsupported, unrewarded, and undervalued" (p. 33). His findings also indicated that women, more than men, feel pressured to teach well.

Service. Beginning assistant professors participate in service activities because they are aware that participation will contribute somewhat to their professional growth and advancement. The most common type of service activities they participate in are those that, according to Braskamp and Ory (1994), lead to "disciplinary professional contributions." They "work in professional, scholarly, and disciplinary associations" (p. 50). Hekelman, Zyzanski, and Flocke (1995) found that junior faculty who participate actively in the presentation of papers, attend committee meetings, and assume committee leadership responsibilities are able to develop strong local and international research networks and find colleagues with whom to publish. They learn and advance quickly in the area of research.

Assistant professor plus three years' experience (advanced assistant professor).

Research. After the third year of academic life, some advanced assistant professors still are engaged in research to build the productive research program and record necessary for tenure and promotion. Those who have mastered academic research norms of preparation and submission of scholarly work find life less stressful (DiLorenzo & Heppner, 1994), whereas those who have not done so continue to lead stressful academic lives.

Satisfying conditions for tenure and promotion is a difficult and slow process for assistant professors working in Professional Development Schools. Some experience tremendous pressure from administrators because of their slow progress in research productivity. Judge et al. (1995) reported that "the message recently conveyed from a senior administrator to a successful but not yet tenured assistant professor working effectively in a Professional Development School was devastatingly unambiguous: 'Go away and closet yourself and churn out a few publications'" (p. 9).

Teaching. The attitude of advanced assistant professors continues to be positive because of the desire to establish themselves as "excellent teacher[s]" (DiLorenzo & Heppner, 1994, p. 487). They continue to pursue teaching despite the awareness that teaching alone will not bring them the desired professional advancement in the form of promotion, tenure, and merit-pay increases.

Service. Because the main goal of advanced assistant professors is to achieve promotion, tenure, and merit-pay increases, some channel much of their time and energy into research and teaching because those activities will contribute more to accomplishing their goal than service will. Thus, advanced assistant professors tend to devote little time to service (DiLorenzo & Heppner, 1994).

Associate professor.

Research. Associate professors' attitudes toward research remain strong, even during this stage, because research contributes more to promotion, tenure, and merit-pay increases than do teaching and service. They devote most of their time

to "publishing scholarly work such that a national reputation is achieved, which is an important criterion for promotion to full professor" (DiLorenzo & Heppner, 1994, p. 487). Some associate professors are experienced enough to begin mentoring beginning professors.

Teaching. Most associate professors do not neglect teaching because they are aware that it can contribute to their professional advancement (DiLorenzo & Heppner, 1994, p. 487). Some associate professors are ready to provide mentoring in teaching to beginning professors. They team-teach with younger professors, for example, to give them experience in teaching.

Service. The associate professorship is a stage for accepting additional responsibilities in the area of service. Associate professors take up the challenge of service in their department, university, or the profession (DiLorenzo & Heppner, 1994, p. 489) because they are still eager to make a name for themselves professionally.

Full professor plus five years' experience (beginning and mid-level full professor).

Research. Baldwin and Blackburn (1981) observed that interest in research, which often declines during the associate professor stage, begins to increase during the full professor stage, when productivity in the area of research begins to pick up again. Tien and Blackburn (1996) concluded that intrinsic and extrinsic rewards did not operate individually to motivate full professors to be productive in research after acquiring tenure. They found that, after acquiring tenure, full professors were

motivated to continue to engage in research by individual and social conditions and the values they upheld, together with intrinsic and extrinsic rewards.

Teaching. Baldwin and Blackburn (1981) maintained that the full professorship is a stage of reduced enthusiasm for teaching and for questioning one's academic career. Full professors make choices in terms of whether or not they should continue with their professional career activities or move into other careers.

Service. Once some individuals acquire full professor status, they experience a readiness "to provide service to the profession, university, and department" (DiLorenzo & Heppner, 1994, p. 487). This is especially true for full professors who are not experiencing career goal conflict. However, for many individuals, the full professor stage is a period of "burnout, stagnation, and a search for meaning, [which may be alleviated] through departmental and university administration, mentoring activities for new faculty members, and creative committee responsibilities" (DiLorenzo & Heppner, 1994, p. 487). These experiences often make many full professors unwilling to participate in service-oriented activities or to be very selective.

Full professor—five years to retirement (advanced full professor).

Research. Baldwin (1990) maintained that some full professors in this phase have reached their highest level of productivity in research. Their professional lives are dominated by the desire to leave a legacy and to prepare for retirement. Allen (1993) observed that unproductive university professors usually experience

alienation and retire first. University professors conducting research in laboratories or libraries usually experience much uncertainty about retirement, especially if they are still interested in conducting research.

Teaching. For some individuals, the advanced full professor stage is characterized by mixed emotions, such as feelings of "isolation, . . . a strong lack of interest in institutional concerns, . . . burnout, stagnation, resentment, anger, . . . despair, . . . fulfillment, excitement, . . . relief, . . . disillusionment, and a great sense of loss of identity" (DiLorenzo & Heppner, 1994, p. 487). Those who have acquired national and international recognition are ready to make "meaningful contributions [by] coteaching with new faculty or discussing the grant review process with junior faculty" (DiLorenzo & Heppner, 1994, p. 487).

Service. Despite the personal, financial, and psychological concerns that advanced full professors may experience, they share a common desire to "leave a legacy" (Baldwin, 1990, p. 37) when they retire. This desire generates a positive attitude among many advanced full professors toward participating in different kinds of service activities in which they can share their experience with new university professors and the community at large. Some advanced full professors are willing to guide beginning professors in research and to participate in orientation programs. The interaction between advanced full professors and beginning professors helps the former continue to experience professional growth.

<u>Summary</u>. In sum, the literature on fculty careers and development suggested that university professors working in Professional Development Schools

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might be affected differently by their Professional Development School experiences, depending on their career-development stage, and that, whether in pursuit of research, teaching, or service, junior faculty experience a different kind of effect from Professional Development School work than do full professors. This is, indeed, what was found in this study.

Team-Teaching/Collaboration With Teachers

The final theme emerging from the analysis of data for this study is team-teaching or collaboration between university professors and classroom teachers. The Holmes Group (1990) envisioned Professional Development Schools as "schools [where] university and school faculties should collaborate in research about the problems of teaching and learning" (p. viii). The Holmes Group believed that such collaboration would result in "the exchanges of expertise, [which] can refresh and even reshape the curriculum and teaching at the university and the school" (p. viii). This theme ran through the interview data as well as the literature. For example, Ball, a university professor, and Rundquist, an elementary school teacher, collaborated in the area of mathematics and ended up writing an article entitled "Collaboration as a Context of Joining Teacher Learning With Learning About Teaching" (1993). The authors described how their project deepened their understanding of the construct *collaboration*. They maintained that, at the beginning of their project, they understood that collaboration "implies that different minds and hearts join together in related and common pursuits. Collaboration implies respect and caring, connection and purpose" (p. 39). Ball and Rundquist concluded from

their collaborative efforts that "we have begun to learn what it means to let others in on that process. We have begun to learn how to make the context of our work a context of others' learning" (p. 39).

In Change for Collaboration and Collaboration for Change: Transforming Teaching Through School-University Partnerships, Robinson and Darling-Hammond (1994) discussed the nature and implications of collaboration between public schools and universities. They asserted that collaboration provides faculties from both institutions an opportunity to "interact in a conscious effort to merge theory and practice, knowledge, and skill development" (p. 204). They argued that institutional collaboration provides collaborating institutions with an opportunity to change. The organizations need to change and restructure themselves so that they can support new knowledge that teachers are learning. The authors also asserted that if the collaborating institutions do not change, they will find it hard to "accommodate new practices" (p. 204).

Robinson and Darling-Hammond (1994) also discussed the challenges that collaborating institutions have to meet in order to change. They maintained that some of the roadblocks to collaboration are differences in the "uses of time, differences in norms and work styles, and traditions regarding status" (p. 205). They also identified and discussed 10 characteristics of successful collaboration. They said that, in successful collaboration, institutional members establish goals together, trust and respect one another, share in the decision-making process, have a clear vision of what they want to accomplish, become involved in activities they can

manage, have a leadership that is committed, receive financial support, establish long-lasting relationships, are ready to change when necessary, and share information through communication.

Lucas (1994) focused on collaborative research. She maintained that university professors who are not productive or not excited about research could be encouraged to collaborate with productive faculty. She also suggested that collaborative research be encouraged between university professors and graduate students. Lucas believed that collaborative research can revitalize faculty who have lost interest in research. It can provide such faculty with opportunities and methods to conduct research and produce scholarly writing.

McIntyre and Hagger (1993) directed their attention to collaborative teaching. They asserted that collaborative teaching is very beneficial for learner-teachers. They noted that collaborative teaching provides the learner-teacher with an opportunity to "concentrate on given tasks without having to worry about aspects of the lesson" (p. 95) and gives the mentor a chance to experience the teaching and provide constructive comments. Collaborative teaching also provides the prospective teacher and the experienced teacher an opportunity to plan together and clarify their purposes to each other. Finally, collaborative teaching encourages experienced teachers to "use more ambitious strategies than they normally would because of the availability of a second teacher in the classroom" (McIntyre & Hagger, 1993, pp. 95-96).

Summary

This chapter contained a review of literature on issues related to the creation and implementation of Professional Development Schools. The topics reviewed in this chapter were selected because they provide a context for interpreting the results of the study. As background, the land-grant mission and goals of MSU were presented, followed by the historical origins of Professional Development School initiatives as a strategy for educational reform. Using this context, a theoretical framework for the study was developed and presented. It was argued that the Professional Development School philosophy is a strategy for bringing about profound organizational change and that the best theoretical framework for discussing such changes would be the organizational-culture paradigm.

An analysis of the interview data resulted in the identification of nine elements of the emerging Professional Development School culture. Those elements reflect the values that Professional Development School participants hold and that tend to depict them as a subculture within the larger university culture. A review of literature on each of these cultural elements was presented. That review indicated that the emerging elements of the Professional Development School culture have a theoretical foundation in the higher education literature. These elements are discussed further in Chapter V as a basis for the conclusions and recommendations resulting from the research.

CHAPTER III

METHODOLOGY

Introduction

The major features of the research methodology used in the study are described in this chapter. The chapter includes (a) the rationale for using the qualitative approach to conduct the study, (b) the rationale for using an in-depth focused interview design, (c) development of the research perspective, (d) population and sampling procedures, (e) instrumentation and data collection, (f) data-analysis procedures, and (g) validity and reliability.

Rationale for Using the Qualitative Approach

The researcher used a qualitative approach to explore the influence of the Professional Development School experience on College of Education faculty members' teaching, research, and service. A qualitative approach was selected for this investigation because the study's goals were consistent with the five fundamental assumptions of a qualitative inquiry approach suggested by Creswell (1994). First, the qualitative approach was used because of its appropriateness in studying the subjective meanings and symbols created by organizational members to understand the effects of the Professional Development School experience of

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university professors on their research, teaching, and service. Second, a qualitative research approach was selected because the setting allowed the researcher to interact with the interviewees on a regular basis. Third, the researcher used the qualitative approach because the nature of the research question involved examining the values of the Professional Development School participants. Fourth, the researcher used the qualitative research approach because the data collected were of a nature that could be reported in the original utterances of the respondents. The researcher believed that verbatim reporting would minimize misinterpretations. Finally, the researcher used the qualitative research approach because the nature of the research question and the methodology to be used would allow him to arrive at conclusions inductively. Arriving at conclusions inductively falls within the scope of the qualitative approach.

Rationale for Using an In-depth Focused Interview Design

A review of literature on Professional Development Schools revealed that it is not known whether these schools influence the professional development of tenured university faculty. The researcher decided to use an in-depth focused interview design to explore the participants' perceived effects of the Professional Development School experience on the professional development of tenure-stream and tenured university faculty, specifically, on their teaching, research, and service. An in-depth focused interview design is "a process of learning and constructing the meaning of human experience through intensive dialogue with persons who are in the experience" (Liehr & Marcus, 1994, p. 262). In this study, the term "experience"

refers to College of Education faculty's participation in Professional Development School work.

Chu (1996) maintained that (a) an in-depth interview (Brenner, 1995), (b) the long interview (McCracken, 1988), and (c) the focused interview (Merton, Fiske, & Kendall, 1956) are different versions of the same research method. Thus, the assumptions of the focused interview apply to the design of this study. The researcher assumed that an in-depth focused interview may, first, "enable interviewees to maximize the reported range of evocative elements and patterns in a stimulus situation as well as the range of responses" (Merton et al., 1956, p. 12). Thus, the method was selected because it promised to enable the researcher to access a variety of responses regarding the Professional Development School experience.

Second, Merton et al. (1956) suggested that the focused interview method would enable the researcher to "elicit highly specific reports of the aspects of the stimulus situation to which the interviewees have responded" (p. 12). The researcher selected this method because it enabled him to probe deeper into specific attitudes and values the respondents held about their Professional Development School experiences. The researcher explored, for example, the respondents' attitudes toward the reward system and their beliefs about the benefits and roadblocks of the Professional Development School experience.

Third, Merton et al. (1956) suggested that the focused interview enables the researcher "to describe the affective, cognitive, and evaluative meanings of the

situation and the degree of their involvement" (p. 12). The researcher selected this interview method because of its potential to maximize access to the affective, cognitive, and evaluative domains of the respondents to better under the effects of the Professional Development School experience on their research, teaching, and service—for example, the extent to which their Professional Development School experiences affected their research, teaching, and service.

Fourth, according to Merton et al. (1956), an in-depth interview technique "bring[s] out the attributes and prior experiences of interviewees which endow the situation with these distinctive meanings" (p. 12). The researcher selected an in-depth interview method because he believed it would enable him to gain a deeper insight into the attributes and prior experiences of the Professional Development School participants. For example, when reflecting on the effects of the Professional Development School experience on their research, teaching, and service, some respondents compared the perceived effects with previous experiences.

In short, an in-depth interview method provides the researcher with the opportunity to "put the behavior in context and provides access to understanding [respondents'] actions" (Seidman, 1991, p. 4). In this study, the actions concerned were recalled experiences of university faculty who had participated in the Professional Development Schools.

Development of the Research Perspective

Literature Review

As this was an exploratory study, the researcher followed the guidelines Creswell (1994) suggested regarding the literature review of an exploratory study. He maintained that "in qualitative research the literature should be used in a manner consistent with the methodological assumptions; namely, it should be used inductively so that it does not direct the questions asked by the researcher" (p. 21). This means that the researcher should avoid conducting an extensive literature review at the beginning of a study. The purpose of reviewing the literature at the beginning of a study is to allow the researcher to build a perspective for the study. This perspective should be grounded on existing or related knowledge (McCracken, 1988). The advantage of this type of literature review is that the research process is driven by emerging data rather than preconceived ideas the researcher formed from the literature review.

In this study, the researcher conducted a preliminary literature review. Because not much has been written specifically about the topic of this study, the researcher reviewed primarily related literature. The purposes of this first literature review were twofold: (a) to identify scholars who had written about topics related to this study regarding the effect of Professional Development School work on faculty members' teaching, research, and service; and (b) to highlight related findings and issues that the researcher believed to be important to this study. The preliminary literature review, therefore, was used to anchor the study within the context of

relevant findings from related literature. This literature review helped the researcher form a perspective for the study.

Focus Group Discussion

The researcher used a focus group to further develop a perspective for the study. The rationale for using a focus group, how the focus group was formed, and the role the focus group played in the development of the study are described in this section.

After reviewing the literature on Professional Development Schools and talking to a number of university faculty members who were familiar with current developments in the Professional Development School environment, the researcher concluded that no empirical research had been conducted on the effects of the Professional Development School experience on the professional development of university professors. Thus, the researcher decided to seek university faculty members' perspectives on the subject. The researcher discussed the matter with his doctoral committee chairman, Max Raines, and dissertation consultant, Joyce Putnam. It was decided that a focus group was necessary to guide the design of the study.

The researcher contacted six faculty members individually by telephone and set up appointments with them. In subsequent one-on-one meetings with these faculty, the researcher explained the purpose of the study and asked each professor to participate in the focus group discussion. All six professors agreed to serve as members of the focus group.

Of the six members of the focus group, five were faculty from the College of Education who currently worked in Professional Development Schools. The sixth member was the researcher's academic advisor. The members of the focus group played different leadership roles in the Professional Development Schools. Appendix A contains the names of faculty who served as members of the focus group.

The focus group met on February 24, 1997, for an hour and a half. Initially, the focus group had two main goals. The first was to discuss how the Professional Development School experience had affected the professors' teaching, research, and service. The second goal was to identify issues and suggest related questions that the researcher could take into account when designing the interview protocol. In addition to accomplishing these goals, the focus group members suggested various alternatives for categorizing interviewees and agreed to serve as a recommending body to help in the selection of interviewees.

Gaining Access

The researcher asked the co-director responsible for research scholarship on Professional Development Schools to support this scholarly work. The researcher also provided the co-directors responsible for Professional Development School research and scholarship leadership with a copy of the proposal and the human subjects forms. Joyce Putnam, a Professional Development School leader, acted as a consultant for this study, as well as serving as a member of the researcher's graduate committee.

The Population

The population of the study comprised all 54 College of Education faculty members who had worked in the Professional Development Schools since their inception in 1989 and were still employed at MSU at the time of the study. Professors who had worked in the Professional Development Schools and then left MSU were not included in the study.

Categorization of the Population

Several factors were taken into account when selecting the interviewees from the main population. The 54 university professors constituting the population of this study could be organized into six categories. The respondents were categorized according to the tenure status they held, achieved, or failed to achieve when they started Professional Development School work and afterwards. The six categories were as follows:

1.   Faculty who had already been awarded tenure before they started Professional Development School work (n = 37).

2.   Faculty who were already in the tenure stream before they started Professional Development School work and were awarded tenure during their Professional Development School work time (n = 9).

3.   Faculty who were already in the tenure stream before they started Professional Development School work but had not been awarded tenure during their Professional Development School work time (n = 6).

4.   Faculty who were not already in the tenure stream before they started Professional Development School work but were moved into the tenure stream during their Professional Development School work time and were awarded tenure during that time (n = 1).

5.   Faculty who were not already in the tenure stream before they started Professional Development School work, were moved into the tenure stream during their Professional Development School work time, but had not been awarded tenure during that time (n = 1).

6.   Faculty who were not already in the tenure stream before they started Professional Development School work and had not been moved into the tenure stream during their Professional Development School work time (n = 2).

University professors classified under Category 6 did not constitute part of the sample for this study. It is important to note that the original list that was sent to faculty members had four categories. Due to the input provided by the focus group members, the number of categories was increased to six.

Selection of Interviewees

The researcher compiled a list of university professors who had worked in the Professional Development Schools since their inception in 1989. The researcher used Personnel Office records to identify faculty members who had worked in the Professional Development Schools and were still employed at MSU. The same records were used to classify those faculty members into the six categories described above.

The researcher sent the focus group the list of faculty members who had worked in the Professional Development Schools and were still employed at MSU at the time of the study. The six focus group members were asked to circle the names of professors they believed would be reflective about that Professional Development School experience. The researcher tallied the recommendations from each focus group member and selected as interviewees the professors who were mentioned most often. Eight faculty members were chosen to be interviewed, two from each of the tenure-status groups.

Second Focus Group Discussion

On April 24, 1997, the focus group met. The purpose of the meeting was to document the criteria that members of the focus group used to identify people they recommended for the interviews. At the recommendation of the focus group, the number of interviewees was increased from six to eight. Two interviewees were selected from Categories 1, 2, and 3, and one each from Categories 4 and 5.

When asked to describe the criteria they used to recommend the interviewees, the members of the focus group indicated that they selected university professors who they believed were:

1.   Sufficiently experienced teachers who were familiar with the Professional Development School work—that is, duration of involvement in the Professional Development School work as a criterion.

2.   Articulate about Professional Development School issues.

3.   Inclined to give a variety of perspectives.

4.   Serious about Professional Development School work and showing a genuine engagement with Professional Development School work as opposed to just doing a project there.

5.   Creative contributors in the Professional Development School assignments.

6.   Actively doing more research and/or service.

7.   Reputed to be highly respected by their colleagues.

8.   Known to be reflective about their work (they talked about how it affected them).

Contacting the Interviewees

The researcher contacted each of the proposed interviewees, explained the purpose of the research, and asked whether they would be willing to participate in the study. The researcher informed the potential interviewees that their participation in the study was voluntary and that they could review their own transcripts before they were incorporated into the study. Finally, the researcher promised the interviewees confidentiality while informing them that it was not possible to guarantee complete anonymity in an in-depth focused interview study because their colleagues might recognize some of the experiences the interviewees shared. The researcher did, however, give interviewees an opportunity to change their minds and/or withdraw any statement(s) they thought might compromise their integrity. The researcher sent a letter to these professors, thanking them for agreeing to serve as subjects for the study (see Appendix B).

The Interview Protocol and Data-Collection Procedures

Design and Pilot Testing

The researcher used the focus group's recommendations in developing a pilot interview protocol. The interview guide started with a broad question that allowed the interviewees to provide a variety of responses regarding the dimensions of teaching, research, and service. The second set of questions was designed to probe for additional information that might not have been provided when the interviewees responded to the broad question.

Seidman (1991) suggested that all researchers using an in-depth interview design should pilot their interview questions. The pilot interviews are conducted to collect data for refining the "data-collection plans with respect to the content of the data and the procedures to be followed" (Yin, 1989, p. 80).

The researcher selected two faculty members who would not be among the final interviewees to participate in the pilot. These faculty members, who had participated in the focus group discussion, were selected because of their familiarity with the purpose and perspective of the study. Their recommendations contributed to the development of the final interview protocol and to the clarification of concepts of importance in the study. The researcher believes that their experience and participation in the focus group discussion enabled them to help "develop relevant lines of questioning [and further] conceptual clarification" (Yin, 1989, p. 80).

Each pilot interview was tape recorded and transcribed, and the transcript was then analyzed. The findings from each pilot interview were used to modify the

interview protocol. The final protocol was used to guide the interview process in the study.

Data Collection

In pure in-depth focused interview studies, the researcher's aim is "to ask participants to reconstruct their experiences and to explore their meaning. In such studies, interviewers usually base their questions on what the participants have said" (Seidman, 1991, p. 69). The researcher asked the interviewees to share their experiences in Professional Development Schools and the meanings of those experiences. A semi-structured interview protocol (Borg & Gall, 1989) was used to elicit responses from the interviewees. Care was taken in using the semi-structured interview guide within the in-depth focused interview design because Seidman warned researchers to "avoid imposing their own interests on the experience of their participants" (p. 70).

In beginning the interview, the researcher acknowledged that his analysis of the focus group's discussion and the literature review had provided the foundation for the questions he would be asking. He also explained that the questions might not necessarily represent all of the interests of the interviewees (Seidman, 1991).

The researcher asked each interviewee the first open-ended question and then asked the individual to provide more details (Borg & Gall, 1989) regarding the effects of the Professional Development School experience on his or her university teaching, research, and service. For example, the researcher asked the interviewee to expand on an issue or a point just mentioned, or to provide an example of the

event the participant had just described. The researcher also attempted to paraphrase what the interviewee said and to ask whether that was congruent with what the interviewee intended.

Using a semi-structured interview guide enabled the researcher to build reliability into the research process because it gave all of the interviewees a chance to respond to the same major questions. In addition, the semi-structured interview procedure allowed the researcher to explore the thinking of university professors more deeply and thus to gather specific data from those individuals.

Each interview lasted for approximately one hour. With the participants' permission, the researcher tape recorded the interviews to preserve the responses in their original form. An advantage of tape recording is that the researcher may use the verbatim transcripts to resolve any misunderstandings that might arise (McCracken, 1988; Seidman, 1991).

Data-Analysis Procedures

Transcribing the Interview Tapes

After transcribing the interview tapes, the researcher converted the transcripts into a format that could be read by Ethnograph v4.0, a computer program that is capable of analyzing text-based data. Ethnograph v4.0 numbered each line of the transcript to facilitate the coding process. The researcher listened to the tapes and followed along with the transcripts, making corrections as necessary.

The researcher sent a line-numbered copy of their transcripts to the interviewees for correction. They were asked to return the corrected transcripts in

a preaddressed envelope provided for that purpose. The researcher entered the changes into the computer database. The corrected copy of the transcripts was then ready for analysis.

Ethnograph v4.0 was an important tool used in analyzing the data. Seidel, Fries, and Leonard (1995) discussed a data-analysis form called qualitative data analysis, which consists of three major processes: noticing, collecting, and thinking. Each of these processes is discussed in the following paragraphs.

Noticing

Seidman (1991) suggested that a "researcher must come to the transcripts with an open attitude, seeking what emerges as important and of interest from the text [and] prepared to let the interview breathe and speak for itself" (p. 89). The researcher read the transcripts several times, noticing and marking all "interesting" parts. The process of marking interesting parts of the transcript is called coding. Seidel et al. (1995) suggested that researchers should treat codes as "tools to facilitate discovery and further investigation of data" (p. E3). The researcher developed a code map consisting of various segments.

Collecting

A segment is a piece of text consisting of one or more lines. Each segment may stand as an independent unit or be nested within another segment. Some segments may overlap others. A transcript will contain many similar kinds of segments. The researcher retrieved, compared, and contrasted segments

representing common ideas. This process of collecting interesting parts of the transcript ended with the searching and sorting process. The researcher printed the segments and studied them (Seidel et al., 1995).

Thinking (Discovery)

During the thinking (discovery) process, the researcher identifies sequences, patterns, and contradictions and constructs meaning. The thinking process helps the researcher identify duplications and decide what, if anything, to discard (McCracken, 1988). This process also enables the researcher to identify emerging themes. A product of the thinking process may be the discovery of pattern sequences, processes, wholes, categories, and classes, including some theories (Seidel et al., 1995).

The results of these data-analysis processes are presented in Chapter IV. As much as possible, the verbatim responses of the interviewees are included.

Second Literature Review

As the themes, patterns, and categories began to emerge from the data analysis, the researcher conducted a second literature review on those topics (Creswell, 1994). The purpose of the second literature review was to compare and contrast what authors and researchers have written with the patterns emerging from the interviews. This type of literature review is consistent with the inductive approach recommended by Creswell (1994). Results of this second review of literature were included in Chapter II.

Validity and Reliability

Critics of exploratory qualitative studies want to know the measures that qualitative researchers use to enhance the construct validity, internal validity, external validity, and reliability of their studies (Yin, 1989). The researcher's attempts to improve the quality of the data-collection and data-analysis strategies by enhancing the validity and reliability of the study are described in this section.

Construct Validity

Ensuring construct validity involves "establishing correct operational measures for the concepts being studied" (Yin, 1989, p. 40). The researcher used two major strategies to enhance the construct validity of this study. First, using many sources of information, including different forms of documents, end-of-year reports, and interviews, to corroborate the interviewees' responses enhanced construct validity. The researcher further increased the construct validity of this study by providing the interviewees an opportunity to review the drafts of their transcripts. Yin recommended these two strategies for enhancing the construct validity of a study, namely, (a) using multiple sources of evidence and (b) maintaining a chain of evidence. The following illustrates how the construct validity of the present study was enhanced through the application of these two strategies.

Using multiple sources of evidence. To enhance the construct validity of this study, the researcher used multiple sources of evidence. The sources that were used included participant observation, an in-depth interview, documents, archival records, and artifacts.

The first major source of evidence used in this study was from the participant observation activities. The researcher worked in the Professional Development School settings as a graduate research assistant, building manager, and coordinator. As a coordinator, the researcher attended steering committee meetings for a period of more than two years. The steering committee meetings were attended by representatives of the various Professional Development Schools associated with Michigan State University. The researcher used his notes from these meetings to cross-check some of the assertions made by the respondents. The steering committee members described, among other things, the difficulties and benefits that teachers and administrators encountered when doing their Professional Development School work. Some of the difficulties and benefits identified by the respondents were supported by notes that the researcher had kept during the steering committee meetings.

The second source of evidence used in this study was the transcripts prepared from in-depth interviews. As the primary source of evidence for this study, the interviews were tape-recorded, transcribed, and corrected by the respondents. The contents of the transcripts were corroborated by other sources.

Third, the researcher used documents as the third source of evidence. One of the respondents indicated, for example, that she did not believe that the book she was about to publish would count toward her tenure appointment. A review of the Summary Description of Indicators for Faculty Ratings of 1994 revealed that preparing and publishing a manuscript of a book was classified as an extraordinary

research/scholarly writing activity by the department. This confirmed the assumption that the faculty member was not aware of the contents of this important document. Furthermore, the complaint that this person received a lower evaluation because she had no tangible products to show also was compared with the fact that "initiating research and writing projects" is also classified as extraordinary research/scholarly writing activity. Because the event occurred in the early years of the Professional Development School initiatives, the researcher assumed that the department actually made a positive move to address the complaint. Finally, the Northwestern High School proposal of 1995 contains letters from the 50 teachers, 5 university professors, the superintendent of Flint Community Education, president of the Flint Board of Education, the union president, the Flint Community Council, a member of the Flint Roundtable, and the principal. They all confirmed the positive contribution of the Professional Development School experience on teaching and learning at the K-12 level. All this suggested to the researcher that the benefits the respondents said their students derived from their Professional Development School experience could have some foundation.

Fourth, the researcher used archival records. He used service and organizational records to determine the population of the study and to select respondents for the study. The list, containing the names of tenure-stream faculty, tenured faculty, temporary faculty, and graduate students was later given to members of the focus group, who were experienced in Professional Development School work at MSU. Their confirmation of the list helped to enhance the construct

validity of the study. Finally, the researcher used the artifacts defined by Hatch

(1997) as "the remains of the cultural core left strewn about the surface of a culture

. . . [such] as visible, tangible, and audible remains of behavior grounded in cultural

norms, values, and assumptions" (p. 216). Some of the artifacts of the Professional

Development School faculty's experience are the annual proposals and end-of-year

reports, videotapes, evaluation reports, and published and unpublished work of the

Professional Development School participants. A 117-page artifact entitled

Professional Development Schools Publications and Presentations (Ongoing):

Collateral Evidence in Support of the Report of the 1995 Evaluation (1996) contains

titles of published and unpublished articles on issues that the respondents raised

during the interviews. The document corroborated the assertions that the

respondents made about the nature of research productivity in the Professional

Development School settings. Furthermore, the researcher also conducted a

content analysis of the articles written by some of the respondents (e.g., Gloria and

Evelyn) and could corroborate the assertions they made in the interviews regarding

academic achievement and mentoring. The preceding paragraphs contain

illustrations of the extent to which the researcher used multiple sources of evidence

to enhance the construct validity of the study.

Maintaining a chain of evidence. The researcher also maintained a chain of

evidence to enhance the construct validity of this study. According to Yin (1989),

maintaining a chain of evidence is one of the strategies for enhancing the construct

validity of a study. Several steps were built into the design of the study to ensure

that a chain of evidence was maintained throughout the study. First, the study findings are reported in verbatim form in Chapter IV. The responses of each interviewee are reported separately. The verbatim responses reported in Chapter IV were used to draw the conclusions reported in Chapter V and to present an interpretation of findings in Chapter VI. The researcher identified the name of the person who made a statement when that statement was used to build a case or illustrate a point. The researcher verified the accuracy of the quotations included in the dissertation and ensured that they were associated with the correct respondent. Unfortunately, future researchers cannot be given access to the transcript because the researcher guaranteed the respondents' confidentiality before commencing the study.

Yin (1989) also recommended that a researcher maintain a chain of evidence by reporting the circumstances surrounding the interview. The researcher reported some of the circumstances surrounding the interviews in Chapters I and III. The specifics of time and place were not revealed for fear of revealing the respondents' identities.

Third, Yin (1989) suggested that a researcher maintain a chain of evidence by using an interview protocol during the data collection. The interview protocol that the researcher used to maintain a chain of evidence is included in Appendix C. An independent investigator can use the interview protocol to verify the accuracy of the reported data. Thus, an independent investigator can trace the connection between the research questions and the questions contained in the protocol. For example,

the areas of research, teaching, and service were kept separate throughout the study despite the fact that they are intertwined.

These three steps were built into the design of the study and observed throughout the data collection to maintain a chain of evidence and enhance the construct validity of the study. In short, the construct validity of this study was enhanced by means of using multiple sources of evidence and maintaining a chain of evidence.

Participants' review of the researcher's interpretations. The researcher also asked the respondents to review his interpretations of their perceptions. This strategy involves both construct validity and "interpretive" validity, which Maxwell (1991) related to the traditional, anthropological, and ethnographic concern to capture the "participant's" perspective (p. 188). A copy of the transcript and a copy of the summary of findings presented in Chapter IV was given to the respondents to review what they had said during the interview and to compare the researcher's interpretation with what they had said. Misinterpretations were identified and corrected. In short, the researcher used pattern matching, explanation building, and the participants' review of his interpretations to enhance the internal validity of the study.

Theoretical Validity

As indicated in Chapter I, the construct *internal validity* is not used in this study, since causal relationships between the Professional Development School experience and the professional development/growth of university professors are not

being postulated. But the researcher is exploring a relationship between Professional Development School experiences and faculty participants' teaching, research, and service, as perceived by those faculty. Therefore, the type of "theoretical validity" that Maxwell (1991) defined as involving relationships among concepts in an explanation of some phenomenon is involved in this study. Correspondingly, the tasks of "pattern matching" and "explanation building" were drawn on from Yin's formulation (1989), to enhance the theoretical validity of the relationship findings of the study, as will be explained in the next sections.

Pattern matching. The findings were presented in a descriptive form as Yin (1989) suggested. The literature review conducted at the beginning of the study revealed the patterns characteristic of the typical collegial culture of American universities. An analysis of the interview data revealed patterns of cultural dimensions of the emerging Professional Development School subculture. The researcher compared the patterns of the typical collegial culture of American universities and that of the emerging Professional Development School subculture. The researcher found that the emerging Professional Development School subculture had its own unique artifacts, norms, values, and underlying assumptions, which differed significantly from those of the dominant typical collegial culture of American universities.

Explanation building. The second strategy that the researcher used to enhance the theoretical validity of the study was explanation building. First, the researcher presented the perceptions of the respondents regarding the effects of the

Professional Development School experience on their research, teaching, and service in narrative form, in Chapter IV. The researcher treated each respondent as a case. This was consistent with Yin's (1989) recommendation. Second, the researcher used the narratives presented in Chapter IV to build conclusions presented in Chapter V. The researcher based his conclusions on the comparison of dimensions of the typical collegial culture of American universities and those of the emerging Professional Development School subculture. Third, the researcher conducted a cross-case analysis that led to the development of an explanation of the emergence of a Professional Development School subculture within the dominant collegial cultures of MSU and the College of Education.

Extemal Validity

External validity refers to the extent to which the findings of a study are thought to be generalizable to other settings (Lincoln & Guba, 1985; Yin, 1989). Firestone (1993) discussed three approaches to addressing the generalizability issue in a qualitative study. First, he argued that the "strongest argument for generalizability is usually thought to be extrapolation from a sample to a population" (p. 16). He asserted that when the sample sizes are large, representative of the population, and randomly selected, "inferences from sample to population are strengthened" (p. 16). Firestone argued that generalization, especially extrapolation from sample to population, "is clearly not the strength of qualitative research" (p. 16) because the size of the sample is usually small and the sampling procedures are usually not standardized. The exploratory nature of the questions investigated in this

study did not justify the use of an analytical strategy that could lead to extrapolation from sample to population generalization. Thus, sample-to-population generalizations are not relevant in this study.

The second analytical approach leading to generalization is the case-to-case transfer approach. This is a form of analysis in which the findings from one case can be transferred to another case. This approach requires the researcher to generate a "rich, detailed, thick description of the case" (Firestone, 1993, p. 18), which "allows assessment of the applicability of study conclusions to one's [the reader's] own situation" (p. 18). Chapter IV contains a "rich, detailed, thick description" of the respondents' perceptions of the effects of the Professional Development School experience on their research, teaching, and service. Such descriptions may help the respondents in deciding whether they would like to transfer the findings of the study to other situations. Thus, the findings of this study can lead to case-to-case generalization.

Third, according to Firestone (1993), analytic generalization can be made. This is the form of generalization that a researcher makes when he or she generalizes "a particular set of results to a broader theory" (Firestone, 1993, p. 17). There are certain criteria that a researcher should take into account in the design of the study to ensure analytic generalizability. They are the "selection, setting, history, and construct effects" (Firestone, 1993, p. 19). These factors were taken into account during the design of this study to maximize analytic generalizability. For example, the respondents can be regarded as "critical cases" selected by university

professors experienced in Professional Development School work. The criteria they used to select these respondents were listed at the beginning of this chapter. Second, although the respondents selected are employed by one university, they work in different Professional Development School settings. This condition "maximized diversity" as suggested by Firestone (1993, p. 20). Third, the use of Ethnograph v4.0 facilitated the coding and identification of cultural dimensions of the Professional Development School subculture. The measures stated above were used to strengthen the external validity of the study. Hence, the study findings were used to make an analytic generalization of the findings to an organizational culture theory.

Reliability

The last criterion for judging the quality of a qualitative study is reliability. Goetz and LeCompte (1984) identified two types of reliability: external and internal. "External reliability addresses the issue of whether an independent researcher would discover the same phenomena or generate the same constructs in the same or similar settings" (Goetz & LeCompte, 1985, p. 210). Yin (1989) suggested that researchers should use a protocol to enhance the external reliability of their studies. The researcher did develop and use an interview protocol to guide the data-collection process. The use of the protocol in this study only provided for the potential of enhancing reliability. The researcher did not, however, demonstrate the internal reliability by applying the same constructs in the same setting—that is, interview the respondents again or interview other people who had the same

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characteristics to test external reliability. However, because of the problem of guaranteeing the confidentiality of the respondents, permission will need to be obtained before the data collected in this study can be accessed by scholars other than the researcher.

"Internal reliability refers to the degree to which other researchers, given a set of previously generated constructs, would match them with data in the same way as did the original researcher" (Goetz & LeCompte, 1984, p. 210). Yin (1993) suggested that researchers should use an interview guide to establish a rich database to enhance the internal reliability of their studies. In this study, the researcher developed detailed transcripts, which have been kept in the computer database. The transcripts may serve as a reference for future scholars. Thus, the presence of a rich database from the interviews enhanced the internal reliability of the study.

The researcher designed the data-collection and analytical procedures in such a way that both the validity and reliability of the study were enhanced. The researcher paid full attention to threats to validity and reliability. Methodological procedures employed in the study enhanced the quality of this research.

Summary

The methodology used in carrying out the study was discussed in this chapter. The study population and the selection of interviewees were described, as was the interview protocol. Data-collection and data-analysis procedures were

explained. Finally, the validity and reliability of the study were addressed. The findings from the interviews are presented in Chapter IV.

CHAPTER IV

FINDINGS

Introduction

The study findings are presented in this chapter. The interviewees served as the primary organizers of the findings. In this chapter, the responses of each university faculty member are organized into four categories: (a) research, (b) teaching, (c) service, and (d) rewards. These four organizers were used because they were the basis of the original interview questions. Within each of the first three categories, the responses to follow-up questions are provided as subcategories. At the end of the presentation of each faculty member's responses, a summary is provided, followed by a paragraph highlighting the main themes that emerged from the data. In this chapter, the themes are merely mentioned, whereas they are discussed fully in the next chapter.

The respondents were asked to talk about how their Professional Development School work affected their research, teaching, and service. In the domain of research, the respondents were asked to explain how their Professional Development School experience affected (a) what they defined as research, (b) their choice of research questions, and (c) how they conducted research. They also were asked to indicate how their Professional Development School experience acted as

a (d) roadblock, (e) benefit, and (f) stimulus for professional development/growth in their efforts to meet their research obligations (including scholarship) as university professors. In the area of teaching, the respondents were asked to talk about how their Professional Development School experience affected (a) what they defined as teaching, (b) what they taught, and (c) how they taught. They also were asked to explain how their Professional Development School experience acted as a (d) roadblock, (e) benefit, and (f) stimulus for professional development/growth in their efforts to meet their teaching obligations (including scholarship) as university professors. In the area of service, the respondents were asked to explain how their Professional Development School experience affected (a) what they defined as service, (b) their choice of professional activities they performed, and (c) how they spent their service time. They also were asked to indicate how their Professional Development School experience acted as a (d) roadblock, (e) benefit, and (f) stimulus for professional development/growth in their efforts to meet their service obligations (including scholarship) as university professors. Finally, the respondents were asked to indicate whether they felt well rewarded for the work they were doing in the Professional Development Schools.

LINDA

Effects on Work

Effects on Research

Defining research. Linda said that her Professional Development School experience influenced how she defined the appropriate methodology for her

research in the Professional Development School setting. She indicated that "Professional Development School experience has influenced the way I think about research. She also said that her training "in research was in . . . [the] traditional statistical [methods used in] . . . getting statistical differences and running . . . regression analysis and stuff like that." Linda asserted that her Professional Development School work "convinced me that [statistical research methods] do not begin to be . . . sufficient for describing and explaining or trying to explain teaching and learning in the class." She subsequently switched from statistical methods because "if you are trying to do the Professional Development School work with just a sort of thin slice, where you are only looking at this variable kind of thing, it will fall apart in front of your eyes." She maintained that her Professional Development School experience influenced her to move in the direction of conducting "much more detailed case study . . . and longitudinal work rather than cut short slices, group differences kind of stuff."

Research questions. Linda asserted that her Professional Development School experience affected her choice of what she researched, that is, the topics and kinds of research questions she asked. The general purpose of Linda's research project was to understand "the seniors' and interns' conception of the nature of scientific work is from finding out how central that was in working with experienced teachers." Thus, the major focus of her research was on "helping teachers earlier in their careers get a better grip on important issues about science. This, she believed, was "the central benefit." Linda, therefore, focused on "studying

undergraduates and their learning to be teachers." Some of the questions that Linda investigated included "how they [teacher education students] come to learn about science teaching, and particularly how they come to understand the ways of scientists." Linda maintained that it was important to generate new knowledge about teachers' belief systems because "research literature [and her] personal experience with teachers in schools [revealed that] belief systems about what science is and what scientists do play a really central shaping role in what they try to learn in terms of teaching science and how they interpret curriculum and shape what goes on in the classrooms." Linda also believed that an understanding of teachers' belief systems would enable her to "help them [her TE students] to understand earlier in their [teaching careers] that this belief system is an important part of what you want to change and that you need to be more informed about what science is and what science work scientists do." Further, Linda believed that preservice teachers should understand the teacher's belief system "because what you shape in the classroom will reflect that, and the message your kids get about what science is will be largely the result of what you shape in your classroom." Finally, Linda studied teachers' belief systems to "find out how central [that system is in] working with experienced teachers."

Roadblocks. Linda also was asked to describe how her Professional Development School work had acted as a roadblock to efforts to meet her research obligations (including scholarship) as a university professor. She identified a number of roadblocks presented by the Professional Development School work.

1. [It] will suck up every extra hour, ounce of energy, [and] thought space if you let it.

2. If you really want to do a good job, it will be harder to get chunks of time to write and get publications out.

3. [As] currently structured they are black holes for untenured faculty . . . if you are not really careful and you are not getting good mentoring.

4. [Professional Development Schools] take so much time and energy just getting them off the ground.

5. [It is time consuming because it needs] at least one to two years of laying groundwork in the study groups that I work with in terms of integrating news members, establishing trust, and finding ways of working. [It is difficult to generate] a product to show when I come up for tenure.

6. Sometimes [it] takes a number of years [to produce tangible products].

7. [My previous year's Professional Development School work at the elementary school] has had very few payoffs, for either my undergraduates, myself, or other teachers. I would say that was a waste of my time [because it] did not help me get published.

8. I have sort of [an] ethical conflict about how to write about what goes on in my work at Brooklyn because working with teachers and being a colleague and helping people change their practice is a very personal and sometimes very private kind of work. . . . If I write about it, I will have to figure out how to do it in a way that's so remote that it cannot [be identified within] the context.

9. [Writing about what goes on in the Professional Development School settings is difficult because] there are a lot of dirty little secrets, and people are not going to write about it.

10. I need to find some in-between ways to write [about Professional Development School work].

11. I feel that it is very unfair to expect them to do that [write]. . . . I am not really comfortable to write things without them. I feel it's unfair to add to their burdens of teaching [by asking them] to write with me.

12. [It will take much of junior faculty's time if they are not] getting good mentoring.

13. I just came from a meeting with the department chair about getting tenure, so it is very clear that this [research and publication] is what I need to focus on at the moment.

Benefits. When asked how her Professional Development School experience

had benefited her in efforts to meet her research obligations (including scholarship)

as a university professor, Linda identified four benefits. She asserted that her main

Professional Development School experience:

1. [Enabled me to help] teachers earlier in their careers get a better grip on important issues about science.

2. [Facilitated] videotaping in the classrooms as we teach. I am going to be collecting . . . children's work. So it's possible that we can write up some things about that, and that would contribute to research scholarship.

3. [Enabled me to know] what problems people usually have [in the schools].

4. [Made me realize that my] teaching in the classroom will carry a lot of weight with experienced teachers, who sometimes legitimately have a complaint that they tend to take courses [taught by] people who haven't been in public classrooms for years.

Professional development/growth. Linda believed that her Professional

Development School work acted as a stimulus for professional development/growth

in the domain of research in a variety of ways. She noted that "actually the way that

my working with teachers in the public schools has contributed to research at the

moment . . . grew out of my work in Dearborn over four years in one school, in which

I got pretty clear about what the problems were for experienced teachers." This

work served as a foundation for Linda's research on "the seniors' and interns'

conception of the nature of scientific work is from finding out how central that was

in working with experienced teachers" and how undergraduates learn to be teachers.

Effects on Teaching

Defining teaching. Linda also was asked to describe how her Professional

Development School experience affected how she defined teaching. She asserted

that that experience had forced her to notice, plan for, and think about the ways that

teachers at any level, whether they are seniors or 20-year veterans, are "in quite significant ways different from each other in terms of personality, knowledge, experience, preferred ways of learning, ability to work in a group or not work in a group, comfortable talking with other people, [and] assumptions about what learning ought to look like." Linda maintained that she had been wrestling with a challenge "to figure out ways in my teaching, both of undergrads and in the Professional Development School situation, . . . to think about how to help each individual person to make progress while maintaining [the] group." Linda also wanted to understand how to help "a group [take] responsibility for learning." She was happy that her Professional Development School experience gave her the opportunity to "think harder about knowing my students better, [that is], students of any age; and how important it is for me to understand, from the student's point of view, what learning looks like." Linda concluded, therefore, that her Professional Development School experience helped her "know more about where [the students] are coming from, [which is] really very important to me."

What she taught. Linda said that her Professional Development School experience did affect what she taught. For example, that experience influenced her to select readings that:

1. [Are] practice centered.
2. Focus [on] and highlight one important issue.
3. [Show] what it takes to do elementary science teaching well so that children could learn it with understanding [from] my own teaching experience [and from] my work with Professional Development School teachers.
4. Raise really good issues about the teacher's role in making decisions in how to move the kids along in their thinking.

5. Highlight . . . the struggle the teacher in the article had in trying to decide how she was going to move along. [Indicate] what can [be done] as a teacher to provoke some change in with the children.

6. Give a framework and guidelines for preventing, setting up norms, for establishing monitoring, and working with kids on norms for science work that really will prevent a lot of problems if we can get those in place.

Roadblocks. Linda stated that her Professional Development School work did not act as a roadblock to her effort to meet her teaching obligations as a university professor. She indicated, "I don't think I have run into any cases where it's been a roadblock to my teaching."

Benefits. Linda indicated that her Professional Development School experience benefited her in efforts to meet her teaching obligations as a university professor. She stated that her Professional Development School experience:

1. [Helps me in] knowing about particular problems that come up in elementary science teaching.

2. [Helps me in] thinking about how to help new teachers to be better prepared for [elementary science teaching and] having a pretty deep and rich bag of stories that can be used in my teaching of students.

3. [Gives me an opportunity to teach]. I co-taught with a number of people in the group. I actually come and teach in the classroom and then we debrief.

4. What [team-teaching] does for me in terms of my teaching courses here [at the university] is that it gives me a way to keep my own practice current with children so that I can speak as a teacher of children as well as a university professor.

5. [Gives me a chance to produce] my own anecdotes from teaching children at Brooklyn. [Those] stories carry a lot more weight than "research shows that bla, bla, bla."

6. Gives me a number of public elementary teachers who can talk to my students about their practice in the ways that I am trying to get my undergraduate students to think about science teaching and learning.

7. Helps me to work with teachers in ways that they could be role models and mentors for our students.

8. [Helps beginning teachers] to see me teaching [and] collaborating [with teachers].

9. [Helps me] see what the teachers in Professional Development Schools are struggling with, and that informs what I have to say to my seniors. It helps me kind of preview, "Oh gosh, if tenured veterans are having these kinds of problems, then maybe what we need to do with seniors is bla, bla, bla."

Professional development/growth. Linda described several ways in which her Professional Development School work had acted as a stimulus for her professional development/growth in the area of teaching. She admitted that that experience has "been a growth experience for me" because:

1. It gives me a sort of window on the internship that I otherwise wouldn't get. [I receive] individual feedback [because the teachers I work with] bring up things that they think the interns are really struggling with that they wish somebody earlier or at the same time in the program would give more help with or prepare students better for those kinds of things.
2. [Of the] stand that I take with interns and the kind of community that I try and build with them.
3. [I use it] to show [the interns] a way of working and thinking about planning and teaching that was not very accessible to them from some of our CTs.
4. They work with teachers, and hearing from them about interns is helping me grow as a teacher educator with respect to seniors. It . . . helped me to understand the social-political context in ways that I did not before; [e.g.], I am much more aware of school culture and community issues in schools.
5. It [helps me] bring those issues and do things differently with my seniors and interns because of learning background.
6. The Professional Development School teachers that I work with also provide a support network for me in terms of my work with seniors and interns . . . and they provide some really interesting insights and just general support.

Effects on Service

Defining service. When asked to describe how her Professional Development School experience affected the way she defined service, Linda's response was, "I

think of outreach and service in ways that are informed by the sort of day-to-day experience with what gets in the way of people changing their science teaching practices and what helps them."

Choice of professional activities. Linda also described how her Professional Development School experience affected how she chose the professional activities she performed as service. She indicated, "I try to choose things that I know will have a big payoff in terms of helping other teachers to get the kind of support that I think Brooklyn Elementary School teachers are working on." Linda indicated that she would be writing a proposal because she thought it would "provide the kind of support that would help other teachers change their practice." She also noted, "I choose to be involved with things, for example in NSSI, or with people at the State Department of Education because I think that it is another place that has a big payoff." She said, "If we get people there to understand, and that is part of the puzzle—to get that group to understand—I'm thinking we'll be very helpful to teachers in general in thinking about their own science teaching practice."

Spending service time. Linda indicated that she spent her service time at Brooklyn Elementary School doing Professional Development School work. She also spent her service time disseminating and diffusing knowledge she discovered from Brooklyn Elementary School on the "advisory council or committee for the state in science." When Linda was invited to help develop a professional development videotape, she, in turn, invited collaborating teachers to present the lessons they had learned from their Professional Development School work. Linda reported that the

collaborating teachers (Julia Mack and Gina Ray) "raised a lot of issues about the real nitty-gritty of Professional Development Schools that most of those people didn't have much of a clue about and really pushed them hard to think about what will actually inspire teachers to change their practice, the science teachers." Later, Linda and teachers in the group were invited to "be part of the videotape they were making on professional development for distribution around the state. . . . They are videotaping our science study group for a meeting, and they are videotaping my co-planning sessions; the co-teaching is part of this tape."

As a member of the committee, Linda contributed "stories and issues, and the questions that I bring up at that meeting will help people at the state level who are going to help other people change their practice." She added that the goal must be to make people in the Department of Education understand the kinds of changes they were trying to bring about in schools. Linda also indicated that she became involved in Project 2061 and BBL (a local lunch group of scientists and science educators, mathematics teachers, and math education folks) because "it involves curriculum-analysis procedures that I think will be very helpful to teachers in general in thinking about their own science teaching practice" (this refers only to Project 2061).

Roadblocks. When Linda was asked to describe how her Professional Development School work acted as a roadblock to efforts to meet her service obligations (including scholarship) as a university professor, her initial response was, "I cannot think of anything." In an attempt to explain how her Professional

Development School experience affected how she spent her service time, Linda said

that Professional Development School work

> has been time consuming. [I have] not done enough writing. . . . I am going to need to find ways not to spend so much time on that. . . . I cannot afford to just keep pouring myself out, which is a real struggle. . . . I just have to be a lot smarter about where I put my time in service.

Benefits. Linda indicated that her Professional Development School

experience had benefited her in efforts to meet her service obligations as a

university professor. She asserted that that experience:

1. [Provided me with the opportunity to become] immersed in that context and the problems there and [to know] what it takes for people to change their practice.
2. Emboldened me to speak up in things like state meetings [and] state advisory meetings, or even to go to these professional development meetings.
3. Has emboldened me to feel that I know what I am talking about. And I can make recommendations on various questions that I think people who are not immersed in that context need to hear about.

Linda further asserted that she considered the place where she spent her service

time as a place where she learned "to think about [the] principal ways of doing

professional development and how I am thinking about it at the moment and what

I am playing with in terms of what I think will work."

Professional development/growth. Linda stated that her Professional

Development School work had acted as a stimulus for her professional development/

growth in the area of service. She maintained that:

1. It is [responsible for] providing me insights as to . . . what it takes actually to support teachers in changing their practice.
2. [It] made me realize that I need to get a whole lot smarter [about the] district-level, state-level, and national-level context that supports that

work so that I am much more likely now than I was previously to spend some service time at the district or state level.

3. [It made me] recognize that as one single person working in the Professional Development Schools I can only have this magnitude of impact in the classrooms. . . . If I use that experience to inform other levels, I might be able to have an impact that would support teachers in ways that would mean something more worthwhile than just one person working with five teachers. That is wonderful for me with my teachers, but there are lots of other people that are not getting that kind of help.

Effects on Personal and Institutional Rewards

Personal Rewards

When Linda was asked whether she felt well rewarded for the work she was doing in the Professional Development Schools, her response was "Personally, yes." Linda pointed out that intrinsic rewards made her feel rewarded. She said that she found Professional Development School work "personally very rewarding [because] I love what I do. . . . I love working with teachers and the kids."

Institutional Rewards

Linda indicated that she did not feel "professionally" rewarded for the work she was doing in the Professional Development Schools because she was not satisfied with the extrinsic reward. She asserted:

1. Professionally, I think both within this college and within the university in general Professional Development School work is not valued. . . . I never get any feedback about the work that I am doing from any official. I put it in my annual review and, um, what comes back often is, "It is very good but you are not writing enough."

2. I get feedback on teaching. I get feedback on research articles. There is no systematic feedback or even support system for working in the Professional Development Schools.

3.   I do not have a regular forum for discussing my Professional Development School work.

Summary

In the domain of research, Linda asserted that her Professional Development School experience influenced her to define research in terms of case and longitudinal research methods as opposed to quantitative methods. She maintained that her research focused on the teacher's belief system. She identified and described ways in which her Professional Development School experience served as a roadblock in efforts to meet her research obligations, including scholarship, and four benefits that she derived from her Professional Development School experience. Linda concluded this section by highlighting how her Professional Development School experience acted as a stimulus to her professional -development/growth in the area of research.

In the domain of teaching, Linda indicated that her Professional Development School experience forced her to focus on the implications of individual and group differences for teaching and learning. She outlined seven criteria that helped her select the readings she prescribed for her classes of seniors and interns. Linda did not think her Professional Development School experience had been a roadblock to efforts to meet her teaching obligations. She identified and described benefits. Linda perceived the teachers she worked with as a major factor contributing to her professional growth. She asserted that they formed a support network, from whom she received valuable feedback about seniors and interns. She also believed that

her Professional Development School experience formed the foundation from which she learned the issues and the political context that were critical for her planning.

Linda indicated that her Professional Development School experience helped her perceive service in terms of the daily obstacles that prevent people from changing their teaching practices. Because change of teaching practice was one of her main goals, Linda preferred to perform professional activities that could maximize opportunities for gaining support for change in teaching practice. For example, Linda spent her service time disseminating and diffusing knowledge she discovered from Brooklyn Elementary School to the state advisory committees in science, educating those legislators who, she maintained, had no clue regarding how difficult it is to change science teaching, which is what Professional Development Schools are all about. The service that Linda rendered continued to be directly tied to the knowledge she generated and her "special field of knowledge" (Boyer, 1990, p. 22). Furthermore, Linda identified and described one way in which her Professional Development School experience acted as a roadblock to her efforts to meet her service obligations and five ways in which that experience benefited her in efforts to meet her service obligations. Linda indicated that her Professional Development School experience continued to stimulate her development/growth by giving her insight that, as an individual, the effect of her efforts will remain limited unless she becomes involved in the diffusion and dissemination of knowledge at the state level. Linda was not tenured when she started to work in the Professional Development Schools. The personal rewards she derived from her Professional

Development School experience were important to her. Linda's love of working with the students and teachers continued to make her feel intrinsically rewarded, whereas lack of administrative feedback, general systematic feedback, and a regular forum for discussing Professional Development School work left her feeling that the Professional Development School work was not valued highly in the college.

Taken together, an analysis of Linda's interview responses revealed that her Professional Development School experience enabled her to engage in the scholarship of discovery, in which she generated new knowledge about the role of the teacher's belief system in teaching and learning and used that as a line of pre-teachers' development. Linda's Professional Development School experience also enabled her to disseminate the new knowledge she gained through the scholarship of teaching. When Linda realized the limitations of her individual efforts in institutionalizing change in teaching practice, she realized that she needed to do more at the state level in order to diffuse and disseminate the knowledge she was gaining from the scholarship of discovery. In this way, Linda was able to connect her scholarship of both discovery and teaching to the scholarship of application.

JERRY

Effects on Work

Effects on Research

Defining research. Jerry indicated that his Professional Development School experience did not affect what he defined as research. He said, "I have always had a definition of research that was [mainstream]; it was always compatible with what

I was doing in the Professional Development Schools." He indicated that "the best way to talk about [the definition of research] might be something like what M. Brain has written about design experiments in which you think of research in science education as more like engineering and less like traditional academic research that a lot of people do." He asserted that research in the Professional Development School setting should be defined in terms of its purpose, which should not be "to produce findings of principles [but] to produce examples of well-defined, well-conducted teaching and learning, and to study and understand what is going on there." Jerry asserted that the Professional Development Schools "provide an interesting opportunity to do that." In his research, for example, Jerry generated new knowledge in the form of the Barlow videotape. The theme of the videotape was small groups, group leadership, and group leadership styles. Jerry indicated, "I was getting ideas from [Brooklyn High School] that were informing research in what I was doing in another context."

Research questions. When asked to describe how his Professional Development School experience affected his choice of what he researched, Jerry's response was, "I do not think it has."

How he conducted research. Jerry said that his Professional Development School experience affected how he conducted his research. He indicated that that experience "has made me a little more thoughtful about working with teachers." Jerry also stated that his Professional Development School experience "will have many effects on the research that I am starting now with the London Center."

Finally, Jerry asserted that "the idea of research on professional development having to do with the development of working with professional communities as opposed to studies of changes in individual teachers . . . is based in part on my experience in the Professional Development Schools."

Roadblocks. Jerry described how his Professional Development School work had acted as a roadblock to efforts to meet his research obligations, including scholarship, as a university professor. He indicated that his Professional Development School work:

1. Takes time, which reduces . . . contact with other researchers in other institutions, reduces [my] reading, and the publications I am trying to do.
2. Tends to create . . . interesting but somewhat provincial communities inasmuch as you are spending your time talking with the small groups of other people who are working in the Professional Development Schools and teachers in the Professional Development Schools.
3. [Gives participants] less time to . . . understand what is happening in the field as a whole around the nation and in research.
4. [Has led him to believe that] people will dismiss the research, saying . . . that [it] is fine for the environment of the Professional Development School, but in the real world, it is not going to work.
5. [Provides] the kinds of activities that get national prominence for the university and bring in funding, [but] not necessarily the kinds of activities that help you work productively with groups of teachers in Professional Development Schools.
6. [Makes] it hard to say . . . how useful that understanding has been when it comes to things that kind of count in the research community.
7. Takes a lot of time and reduces the number of things that you publish.
8. [Makes] it hard to convince funding agencies that what you have to say is something that is worth listening to because they cannot understand it.

Benefits. Jerry described how his Professional Development School experience benefited him in efforts to meet his research obligations, including scholarship, as a university professor. He asserted that his Professional

Development School experience enabled him to establish "some productive professional relationships like . . . John Tracy." Jerry also observed that "[the new knowledge] generated in the Professional Development Schools has certainly helped all of us [in the university community] in developing a more complex understanding of teaching and learning in schools."

Professional development/growth. Jerry said that Professional Development School work "tends to take you toward . . . a rich understanding of particular schools and a deeper understanding of how university people and school people could work together to improve students' learning. But at the same time, it takes you away from contact with . . . other developments that are happening in other places around the country." Jerry also talked about ways in which he personally grew as a result of his Professional Development School work. He indicated that that work taught him the importance of "cultural dialogue." He learned that "the university people have an interest in changing the system, and the school people have an interest in keeping things going." Jerry also indicated that his Professional Development School work had taught him the following:

1.   [To function effectively, the university faculty must learn] different languages for talking about what we do, what is important, and so forth, and learning how to go back and forth between those two cultures and the different languages that we use.
2.   What it takes for somebody to change.
3.   In lots of cases, you cannot construct a sufficiently powerful argument [for change to help teachers see] how it is that they can be doing something differently [and that] they are open to evidence about students learning inasmuch as they see possibility for change and inasmuch as they do not. They either deny it or ignore it. . . . [University faculty, as change agents, must take the trouble to ask] how . . . one [can] create conditions for people to see the possibility of

getting better in ways that influence them and as a result pay attention to the evidence that is there.

4. When teacher cultures start to change, [the] long-term change threatens the existing arrangements about teachers and the status hierarchies in the schools, puts new people in positions of prominence, and encourages new kinds of talk. Some people will find this very interesting and rewarding, and other people will find it very threatening. So I have become more aware of the inevitability of conflict and more thoughtful about when it's possible to avoid the conflict and when it's necessary to go ahead and have it.

Effects on Teaching

Defining teaching. When Jerry was asked to describe how his Professional Development School experience affected how he defined teaching, his response was, "I guess it has evolved over the years. . . . I do not know what my definition of teaching is."

What he taught. Jerry reported that his Professional Development School experience provided him with the opportunity to team-teach. "The opportunity to team-teach created a whole new set of . . . possibilities that were not there when I was teaching by myself. . . . The last three times I taught the methods course, I was team-teaching [and] the course was organize[d] around the fact of team-teaching." The collaborating teachers helped Jerry "teach the methods course [at the university], teaching secondary students how to teach science." He asserted that the team-teaching experience "created a whole new set of possibilities that were not there when I was teaching by myself." Jerry said that there was some "conversations," "stories," and "collaborative syllabi" development that would not have taken place the way it did if he had not been team-teaching. Finally, Jerry

concluded, "I would not have had the teachers to team with if it were not for my presence at the Professional Development Schools."

How he taught. Jerry also was asked to describe how his Professional Development School experience affected how he taught. His response was, "Not anything that I can think of at the moment. You know, as I said, the fact that I am working with a teacher or I was working as a teacher affected all of those."

Roadblocks. Jerry maintained that his Professional Development School work did not act as a roadblock to efforts to meet his teaching obligations as a university professor. In response to the question, Jerry declared, "I do not think it does."

Benefits. Jerry described how his Professional Development School experience benefited him in efforts to meet his teaching obligations as a university professor. He stated that that experience "has made my methods courses much more connected to the reality of the schools and students' regular experience." Jerry indicated further that when he taught master's-level courses, his Professional Development School experience affected his teaching because "it made me more connected with their concerns and the purposes that they bring with them when they come into class." Jerry also identified the credibility that his collaborative team-teaching experience gave to his teaching as an added advantage. He commented,

> I would say that they [teachers] were resources in the classrooms in multiple ways. You know, as participating teachers, they always have credibility with the students in some respect that I lack as a university person. And so, students hear it coming from them, hear it differently coming from me.

The final advantage that Jerry's teaching derived from collaborative team-teachers was that they "served as [role] models for students in that they would serve in the process, doing planning and teaching, as an example; then the students will have to plan and teach their units. And the teachers that I was teaming with will be the role models that teaching's based on."

Professional development/growth. When Jerry was asked whether his Professional Development School work had provided professional development or growth for him in the area of teaching, he responded, "I do not think I have anything to add to what I have already said."

Effects on Service

Defining service. Jerry said he was not sure whether his Professional Development School experience had affected how he chose professional activities he performed as service activities. He commented, ·

> I do not think it has affected them very much. I have always been interested in longer term relationships with the smaller groups of teachers rather than short-term inservice projects. So it has been consistent with my interests, and it has perhaps reinforced those interests. And it has not fundamentally changed them.

Jerry claimed that his Professional Development School experience affected the way he reported his service activities for his annual evaluation. He maintained that he "coordinated the secondary teacher education component." He also explained that

> the assignments my students do and the ways they think about their work in schools are built around my academic learning program, which was connected with my work in the Professional Development Schools. The

whole idea of a sustained field-based teacher education program is based on the work with Professional Development Schools, although we were working on that before there were any Professional Development Schools.

Jerry summarized the effects of his Professional Development School experience on the choice of his professional activities as follows:

> My general ways of thinking about how students develop into teachers are certainly based on the conversations that I had with teachers, partly through Professional Development Schools [and] through the teacher education programs. The coordination of my work has been affected by the . . . continuing presence of Professional Development Schools.

The second activity that Jerry performed as service was

> working with school districts to improve science teaching in those districts, . . . [and] that has certainly been affected by my experiences in the Professional Development Schools. . . . It is the same kind of sustained work with teachers that I have done in the Professional Development Schools. It is [also an] attempt to see how you can make that work on a districtwide basis.

Third, at the time of the interview, Jerry was providing his professional service and disseminating new knowledge at a research center. The focus of the work was "professional communities and how they work and operate, especially professional communities that include both teachers and researchers." He claimed that "the general approach traces back to the way that I did at Madison." He also stated, for example, that

> I was just making a presentation on Friday, where I was using a framework for talking about my own research, which was derived partly from Madison High School. The Barlow video that is referred to there is a video that came from my research at the middle school level. And I was presenting this to a group.

Spending service time. Jerry was asked to describe how his Professional Development School experience had affected how he spent his service time. He responded that he did not think the experience had affected how he spent that time.

Roadblocks. Jerry indicated that his Professional Development School work acted as a roadblock to his efforts to meet his service obligations as a university professor in the following ways:

1. Outside [funding] agencies, especially the NSF, . . . are currently not particularly interested in the Professional Development Schools as a model for the kinds of service activities they want to fund, activities that will reach a lot of teachers with clearly identifiable programs with clear theme[s].

2. The professional development work we do [does] not have the experience and credibility for those sorts of programs that will help get funding from the NSF.

Benefits. Jerry stated that his Professional Development School experience had benefited him in efforts to meet his service obligations as a university professor. "It certainly makes my service efforts intellectually richer and more interesting than it would have been in the ways that I have talked about," he said. Jerry also indicated in another part of the interview that his Professional Development School work provided him with an opportunity to learn "what it takes for somebody to change."

Professional development/growth. When asked whether his Professional Development School work acted as a stimulus for his professional development/ growth in the area of service, Jerry responded, "I do not think I have anything to add to what I have already said."

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Effects on Institutional Rewards

Jerry maintained that he felt well rewarded for the work he was doing in the Professional Development Schools. He reported that, when he was doing his Professional Development School work, "I felt that my work was respected and rewarded in ways that [were] commensurate with the effort I was putting in." Jerry further stated that his Professional Development School experience

> is raising some difficult issues for the university. . . . I cannot tell if the university has yet achieved very good resolutions to those issues. I think that . . . the question of how nontraditional forms of scholarship can be evaluated or rewarded is difficult for any institution like the university [and that] we are grappling with it, and it seems to me that we [have been] generally . . . pretty fair to professors who were chosen to work in the Professional Development Schools. . . . They may not always think so, but we cannot simply reward people for spending a lot of time in the Professional Development Schools. You cannot escape the need to be productive just because you are in the Professional Development Schools. . . . I think we have struggled with that, and we still are. What does productivity mean for the Professional Development Schools?

Jerry further argued that professors who seek employment at this university know that it is a research institution. He asserted that when professors are employed at a research institution, they are given

> less intense teaching loads. . . . The tradeoff is that we are expected to produce new knowledge that is useful to the world as a whole. Traditionally, the measures of your success in producing new knowledge have been publication in journals and other forms and success in getting funding from outside agencies to . . . continue doing research and service activities. If you come to a research university, the tradeoff you are accepting is that you are supposed to be productive in developing and disseminating new knowledge. It is always very hard to know exactly what that means. But, in general, it has meant publications and funding. And inasmuch as Professional Development School activities lead directly to publications, funding is not a problem . . . for people who are doing activities that are beneficial to the field in various sorts of ways, like providing me with a richer understanding of what it means for teachers to learn or for providing models for students who are learning to

teach. . . . Whether that is productive enough to justify the continued investment in Professional Development Schools I think is still an open question.

Finally, Jerry agreed that

The Professional Development Schools have raised issues on the part of those who are working in the Professional Development School settings that certain expectations and standards should be met for rewarding [faculty] work. That is an emerging issue in the Professional Development Schools that needs to be looked into very seriously because it is not like the normal kind of work that was rewarded traditionally in academia.

Summary

Jerry maintained that the focus of his research in the Professional Development School setting was to develop good examples of teaching and learning. He mentioned the Barlow video as an example of a product from his research. Jerry said that his Professional Development School experience influenced his choice of research, as well as having some influence on how he conducted research. For example, he said his Professional Development School experience influenced his research on professional communities and the London Center. He identified the establishment of "productive relationships" and the understanding of complex issues affecting teaching and learning as the main benefits he derived from his Professional Development School experience. Jerry mentioned eight ways in which he thought his Professional Development School experience acted as a roadblock in his effort to meet his research obligations. He observed that although his Professional Development School experience tended to broaden and enrich his experience locally, it also tended to impoverish him

internationally. Also, it reduced his time to associate with other scholars. He also thought that his knowledge of bringing about school reform and cultural change had improved dramatically as a result of his participation in Professional Development School work.

The Professional Development School experience had not affected how Jerry defined teaching because he did not know what his definition of teaching was. He indicated, however, that the experience had affected what he taught by providing him with teachers with whom to team-teach and to develop "collaborative syllabi" and "stories." Jerry was not aware of any ways in which his Professional Development School experience acted as a roadblock to his teaching; instead, he believed that the experience strengthened the connection between his research and the day-to-day realities of the classroom. This, he asserted, made his teaching more credible to experienced teachers.

In the domain of service, Jerry could not say how his Professional Development School experience affected how he defined service. He did, however, describe the usual activities that he listed as service when asked to complete an evaluation form. He indicated, for example, that he coordinated the teacher education component. Because Jerry had been interested in long-term relationships with smaller groups of teachers before working in the Professional Development Schools, he did not think that his experience in those schools had affected his choice of service activities or how he spent his service time.

Jerry suggested that his Professional Development School experience acted as a roadblock to his effort to meet his service obligations as a university professor. This was because of these schools' inability to attract funding.

Although Jerry did not see how his Professional Development School experience could have contributed to his professional growth in the area of service, he pointed out that he had benefited from the experience. He believed it had contributed to his intellectual enrichment, especially in the area of managing facilitating change.

Jerry was already tenured when he started to work in Professional Development Schools. He believed he was extrinsically rewarded for the work he was doing in those schools.

Taken together, Jerry's interview responses suggested that his Professional Development School experience enabled him to generate new knowledge through the scholarship of discovery. He cited the Barlow video as one of the products of that scholarship. There is no evidence in the data that Jerry used that video in his scholarship of teaching. However, there is evidence that he used the Barlow video in the dissemination and diffusion of his findings through the scholarship of application.

MARY

Effects on Work

Effects on Research

Defining research. Mary recognized that her Professional Development School experience affected how she defined research "quite a bit." She indicated that the experience influenced her to define research in terms of "research for teaching [rather than] research on teaching." Mary believed that scholars in Professional Development School settings should strive to contribute by discovering new knowledge that would add to the solution of today's problems of teaching and learning. To Mary, this meant that the scholarship of discovery in Professional Development School settings should focus on questions emerging from "real problems of practice that are surrounded by real issues and dilemmas."

Research questions. Mary asserted that her Professional Development School experience affected her choice of research questions to study. She described the criteria that guided her choice of research questions, saying, "I try to have them [questions] come from things that teachers are doing in their classrooms." She also indicated that the questions she researches "grow out of . . . things [that] are happening in the building and as a whole affect what we might take on as a project." For example, in one project, Mary studied "teaching and learning in science and social studies and the role that writing and talking might play [and how] to support experienced teachers in their continuing professional development." The major purpose of the project was to generate new knowledge on "the ways that

teachers can begin to engage in documenting kids' learning at [Brooklyn Elementary School] that would speak to these people who are saying you are not proving it. Without trying it myself, . . . I feel that is one way to learn more about it."

Mary and her colleague designed their project in a way that kids "pick up a topic they have learned about in science and teach . . . someone else about that topic." The focus of the analysis was on questions such as "What are kids learning from engaging in that experience? What have they learned about science, and what are they learning about . . . language processes they are using, whether it is reading, writing, speaking, or listening, in order to do their teaching to someone else?" Mary described the nature of the assessment analysis by saying that it "is a very complex assessment task right there because it is not just what have they learned about science or how clear was their presentation. It is trying to look at the interaction of all those things." Throughout the project, Mary and her colleague struggled "to ask a research question that mattered to other people besides the two of us." To emphasize this point, Mary pointed out that "learning how to ask a research question that matters to other people besides the two of us [and reporting the results in] an article [that] other people read . . [and] learning more about what that connection looks like . . . is very important."

Another project that Mary and her colleague developed aimed at studying co-teachers. They wanted to understand "the extent to which becoming a co-teacher is really a very educative experience for a new and beginning teacher." The project on co-teachers generated knowledge on the following questions:

1. How do children perceive me as a co-teacher in the classroom? Do they see me as a real teacher, or am I something else to them?
2. [A co-teacher] was having management problems when she was teaching. . . . [She] wanted to think more about what persona she comes in with as [a] teacher in the classroom, how that connects to how kids respond to her, and how it may or may not connect to management issues that she is having.
3. [Another co-teacher who] was also having management problems wanted to look at the social interaction in her classroom and think about how she might foster a different kind of social interaction, which might result in fewer management problems for her.

In describing the data-collection and data-analysis procedures, Mary stated, "We ended up looking at the videotape together and thinking together about what kinds of issues arose. We ended up writing a paper together, where the two of us began to look at what kind of sense she was making of the information she got." She observed that the project "has enriched my understanding of the role that inquiry might play for a beginner."

The last type of question that guided Mary's research concerned program evaluation. Mary was prompted to develop a scholarship-of-discovery project by findings in Professional Development Schools and MSU: The Report of the 1995 Review, which reported, among other things, that the Professional Development School participants were "terribly deficient in proving . . . to other people" that they were doing a good job. Mary asserted, "The assessment question has more to do with the larger issue of how these Professional Development Schools are going to prove to other people" that they are doing a fine job. Mary joined "four faculty members from MSU and four from three other universities around the country who are involved in developing sample materials that would . . . show other people

possible approaches for documenting scholarship in our outreach or service work."

Mary believed that this project would "help people understand what scholarship of service is, compared to just service." Mary had been generating new knowledge that she believed would help the Professional Development School participants effectively "prove to other people" that they were doing a good job.

Roadblocks. Mary described a number of ways in which her Professional Development School experience acted as a roadblock to efforts to meet her research obligations and scholarship as a university professor. She reported that:

1. [It is] hard . . . to collaborate with teachers [because they] have so many other responsibilities. . . . [It is] difficult for them to get blocks of time and concentration to do data analysis in the same way that a professor can clear a whole day or a whole week [and say, "I am really going to dig into this"].
2. [I] ended up . . . taking [more of a lead on] writing than I thought I would.
3. I did not really understand about the culture of teaching [in schools] compared to the culture of the university, where it is difficult for teachers to find the time even where they are assigned reallocated time during the school day.

Benefits. Mary thought that pursuing research within the Professional Development School context brought many benefits to her. Mary and her colleagues generated new knowledge "grounded in the real problems of teaching and learning." They were able to reflect on the connections between teacher education—their field of specialization—and Professional Development School work. This was possible because the Professional Development School experience forced the university professors to stay current.

Professional development/growth. Mary said that her Professional Development School work acted as a stimulus for professional development/growth in the domain of research. She indicated that "probably the biggest [stimulus] is formulating questions that are grounded in real problems of practice and then figuring out ways to pursue those questions that do not just make it a research project but make it part of how one practices." This meant that her Professional Development School experience helped her "figure out how teaching is research, rather than how to do research on teaching. To perform the act of teaching itself includes the act of researching. But [we do] not just call it that. I mean, the literature is full of everybody saying they are researchers now." Mary maintained that her Professional Development School experience enabled her to ask, "How can I engage in research in a way that is rigorous and systematic and valid to the outside audiences and [that does] not just romanticize that all teaching is research but seriously takes that as a serious question, 'How can that role happen?'"

Effects on Teaching

Defining teaching. When Mary was asked to describe how her Professional Development School experience affected what she defined as teaching, she indicated that teaching should be defined in terms of the extent to which students are at the center. She also indicated that her Professional Development School experience "deepened [my] understanding of what [I have] always tried to do . . . [that is, focus on] a student-centered curriculum." Mary asserted that John Dewey's educational philosophy had been the foundation of her teaching philosophy since

she started teaching. She had found that Dewey's educational philosophy was consistent with the philosophy of many teachers she collaborated with in Professional Development School settings. She stated, "Generally I have ended up working with people who have adopted a social constructivist's approach to teaching and are trying to be responsible to learners. . . . [Professional Development School] gives me an opportunity to continue to think about that." Mary maintained that focusing on a student-centered curriculum meant seeking answers to questions such as:

1. How much [must a teacher] lead and how much [must a student] follow?
2. Can I allow choices for the students but not overwhelm them?
3. How can I connect subject matter with what the students already know?

What she taught. Mary asserted that her Professional Development School experience affected what she taught. In particular, the experience influenced her to select reading materials that are "user-friendly . . . [that is, ones] that speak in a teacher's voice [and that are] concrete." The three criteria that Mary had used in selecting reading materials for her class were that the article must:

1. Show what a teacher does in the classroom [and not] just make a global kind of statement.
2. [Help the teacher] with figuring out better what speaks to teachers [and is] helpful and meaningful.
3. [Arouse students'] thinking about how they can make their own decisions about what to do in the future.

Mary also selected an article written by Jeannette Throne, published in the Harvard Educational Review, because it

1. Brings big issues in a form that gives concrete cases of how she thinks about a particular child's learning in relation to what . . . you need for phonics [and] what you need for whole language.
2. [Shows how] you can draw from more than one approach to satisfy a particular learner's needs.
3. Provides theory, it grounds what it says in research, and it gets very concrete. [The author] has some particular decisions that she has made by the end of the article.

How she taught. Mary also indicated that her Professional Development School experience influenced how she taught. That experience provided her with an opportunity to team-teach at both the K-12 and university levels. Mary described her K-12 team-teaching experience by saying, "I began teaching with [my K-12 teacher] every day. One day I would teach a lesson, one day she would, [and] some days we would do it together." She continued, saying that during that year

> this teacher and I taught two groups of writing . . . while the next-door neighbor taught two groups [of] social studies. Amy Evans taught science to one of the groups, and another grad student in our group taught science in the next-door neighbor's classroom. . . . In the meantime, there was a third-grade teacher in our project who, rather than collaborate so closely with us, was part of our study group. [She] talked with us about what she was doing in the classroom, but we did less actual . . . classroom work with her.

Mary described her team-teaching at the university level as follows:

> The teacher joined me in teaching methods classes for language arts over a two-year period, where she was released from her own classroom to come to campus and be part of . . . two language arts courses [that] were methods classes in the teacher education program prior to the new programs that were started. . . . She was entering my classroom in the same way I had entered hers, and she was part of what I was trying to accomplish in the course [at the university].

Mary maintained that "this classroom teacher helped me think about [teaching] from the teacher's perspective."

Roadblocks. The only roadblock that Mary identified in her Professional Development School work was that "[it] is very time consuming."

Benefits. Mary also identified a number of benefits she derived from her Professional Development School experience. She said the experience:

1. [Helped me to] know the classroom . . . better.
2. [Provided me with] a much better view of what was going on in the classroom than I would have, had I not worked in this [Professional Development School] project.
3. Gives me a way to keep my own practice current with children so that I can speak as a teacher of children as well as a university professor, which carries a lot of weight with my undergraduate teacher education students.
4. Gives me current stories and issues to talk about in class.
5. [Helps me] to know the curriculum, which . . . enables me to do some things with my teacher education program that I would not normally be able to do because it is actually a lot to ask a teacher to take 8 or 10 people for a morning [for a field group visit].
6. [Reminds me that] I am as obligated to inquire into my students' learning, to think about what it is that they are getting from my coursework or not, [and] how I should be changing my teaching.
7. Enabled me to develop closer [give-and-take] relationships with teachers in the schools.

Mary summarized the benefits she derived from her Professional Development School experience by indicating that "they [teachers] are willing to reciprocate, [and] that is very helpful for my practice."

Professional development/growth. Mary indicated that her Professional Development School experience acted as a stimulus for professional development/ growth in her pursuit of the scholarship of teaching. Specifically, that experience gave her the opportunity to:

1. Try out structural models that I have not used before in my own personal classrooms.
2. Continue thinking about what it means to reach all children.

3.   [Gain] access to kids and their thinking so I can continue to understand that more.

4.   [Learn] first hand about elementary education.

Mary concluded that entering "that level in education [and] spending more time at the [elementary level] has been a place to get experience for me."

Effects on Service

Defining service. Mary indicated that her Professional Development School experience helped her realize that the current definition of service, which means "someone going out and applying expertise, does not quite work when we are here [in the Professional Development School setting]." Mary proceeded to define her Professional Development School work as "the scholarship of service." To Mary, her Professional Development School experience

> was service [in] that I was in her [teacher's] classroom helping her and myself understand this learner's development and enrich her understanding of it. It was scholarship in that we were conceptualizing and writing about it, and it was enhancing my teaching because I was able to use these materials in my teaching.

She defined service as "engaging in a mutually defined work that has [or] may have different appeals and different benefits for each of us."

Choice of professional activities. Mary indicated that her Professional Development School experience affected how she chose the professional activities she performed. For example, she chose to perform a service activity that was directed at redefining the meaning of service. Early in 1997, Mary joined four university professors from MSU and from other universities around the United States to address the limitation of the definition of service. Mary and her colleagues agreed

to start documenting outreach activities. She asserted that she was "developing sample materials that would . . . show other people possible approaches for documenting scholarship in our outreach or service work."

The questions that Mary and her colleagues were trying to answer in this project included: "What is scholarship in service work? What would it look like? How would we help other people understand it?" In addition, they asked, "How does inquiry cut across all three of these questions?" This is a fundamental question that forms the foundation of the scholarship of application. As Mary explained, "I'm thinking of my own work as understanding more about where inquiry enters into learning to teach for experienced and prospective teachers."

Mary provided a rationale for participating in this service activity. She said that, currently, university faculty are "generating knowledge about teaching and learning . . . disseminating that knowledge . . . in the form of conference presentations, writing, and communicating what [goes on in] teacher education courses." She bemoaned the lack of recognition after university professors discover new knowledge in the Professional Development Schools and disseminate it through teaching and other forms. She believed they should receive recognition because they are using valid ways of disseminating knowledge. Instead of receiving recognition, university professors' efforts "end up being [recorded as service], and I go out, I talk about communication and help people, [and] I leave." Mary believed that their project would make a valuable contribution to solving the thorny issue of recognizing and rewarding university professors for the scholarship in their service

contribution. Thus, Mary's project is a typical example of how university faculty, working in the Professional Development Schools, responsibly apply new knowledge to solve consequential problems for the benefit of faculty and academic institutions.

Spending service time. Mary indicated that her Professional Development School experience affected how she spent her service time. She said she spent that time doing Professional Development School work and that she considered her Professional Development School experience as service. She stated,

> I consider my Professional Development School work service in the sense that I spend time with people on curriculum development, exploring instructional models, helping them figure out how to assess. In one way, I can call that research, my own research. In another way, it is providing ongoing learning for professionals.

Mary also spent her service time on a project called "Documentation of Outreach Activities." Mary and her colleagues were spending their service time "wrestl[ing] with the idea of how faculty members get recognition for service outreach work. And what does it take, how do we help understand what is scholarship and service compared to just service?" Finally, Mary spent her service time "disseminating . . . knowledge . . . in the form of conference presentations."

Roadblocks. Mary described how her Professional Development School work acted as a roadblock to efforts to meet her service obligations (including scholarship) as a university professor. She stated,

> I had to struggle with how I represent my work, . . . let's say for my annual review or whatever, because it is all so intertwined, and I intertwine it on purpose. Then on the form that we are asked to fill out, we are asked to fill it out in three separate ways--teaching, research, service--so I have to come out with various ways of helping people see that everything is connected, and is connected for really important reasons.

<u>Benefits and professional development/growth.</u> Mary asserted that her

Professional Development School work acted as a stimulus for her professional

development/growth in the area of service. She described three ways in which that

experience stimulated her professional development/growth. According to Mary, her

Professional Development School experience:

1.   Helped me understand better approaches to working with prospective
      and experienced teachers around practice. ·
2.   Has affected what I think teachers need to know and then how I would
      go about helping them to do that.
3.   [Provided an opportunity] to really help [some teachers] become
      interested in some things [and get] their commitment to making it
      connect [or] grow out of their practice and, if they do not have
      questions, helping them develop some rather than coming in with my
      own agenda that I just tell them what to think, because I feel quite
      convinced that I can tell them all at once.

<u>Effects on Personal and Institutional Rewards</u>

<u>Personal Rewards</u>

Mary felt well rewarded for doing her Professional Development School work.

She declared, "I enjoy it very much. . . . I feel like I gained a lot professionally from

it."

<u>Institutional Rewards</u>

Mary explained, "I felt that it was a risk [to do Professional Development

School work because I was not sure] whether the <u>instruction</u> would recognize the

value or the strength of my work. I didn't just barely get by." She remarked that "in

the long run I do not feel like the institution has let me down terribly. . . . I got tenured

and I was promoted. So it is not as though, you know; I took the risk [that I will

produce research papers] and it did not go well according to the university's traditional notion of how fast professors should produce research reports." She concluded, "I eventually did produce them in a time frame more suitable for my collegial relationship." Mary commented later that it would be inaccurate to interpret this section as communicating the message that she struggled to get tenure. She said, "the 'struggle' was in taking the risk that I could help others see the multiple ways scholarship enters my work—research and teaching."

Mary also indicated that she did not feel well rewarded for the work she was doing in the Professional Development School because "it is a struggle to be formally rewarded for the complex kind of work that I do." She cited as an example her own struggle to get tenure as a result of her Professional Development School work. She stated,

> While I feel like my work is enriched by asking the [research] questions with the teacher, it can be constrained as well . . . because . . . it has taken me four years to get to the level of inquiry I wanted to be at with the current project, [and] I . . . felt that progression and evolution just has to be given the time that it takes.

She continued,

> I am . . . less productive in the sense of cranking out articles and getting work published and all that stuff because this . . . will take time and energy, and I do not have control over the time line in the same way I might if I went into another site. This is my time period for doing this project. I am going to start here. I am going to finish there.

Mary acknowledged that "it is a struggle to be formally rewarded for the complex kind of work that I do. . . . When it was time for me to come up for promotion and tenure I did not have [the traditional number of tangible products to show

because] I had a lot of publications in progress." It was not possible for her to publish her work (a) "because of the nature of the work, I just could not crank it out fast enough"; (b) "Sometimes it was because I did not have enough time"; and (c) "Sometimes it was because the relationship was not ready for me to write about it yet." Consequently, when her advisors asked Mary to turn in an "in-progress kind of report," she refused because she believed that the "relationship would not stand this." In response, the directors accused her of "going native, [that is], becoming too much part of the school culture and losing sight of my responsibilities." Mary maintained that "my grading for my annual review went down that year because I was not producing research, because producing research in this culture apparently means it is in the journal. It does not count when you say, 'Here I am in this long-term process.'" Mary asserted that she understood "the institution's point of view, [but] all I have is words and promises."

Mary finally produced articles, "got tenure, [and got] promoted [at the same time]." However, she still thought that "it is too risky for assistant professors to engage in that kind of collaborative work, which is time consuming and so on, riskier than not doing it [or] taking a more traditional approach." Mary concluded, "It is difficult to be rewarded within the structure of the university that casts things out in academic years. You have to be evaluated at regular intervals, and that interval may not match where you are in your work. And I see that as a challenge for the institution as well as for me."

Summary

This section contained a summary of the responses from Mary's interview transcript. She maintained that her Professional Development School experience had slightly affected how she defined research in terms of the extent to which she was committed to studying problems connected to teaching and learning in the classroom context, as well as student and program evaluation. The main roadblock that Mary confronted was that teachers had too many responsibilities and very little time to do collaborative writing with her. She indicated that she had to do most of the writing alone. The major benefits she derived from her Professional Development School experience were that research remained grounded in the context, she had teachers to reflect with, and she stayed current with developments in the real world of the classroom.

Mary maintained that her Professional Development School experience helped her focus her curriculum on the students. She described several criteria that guided her selection of the reading materials she assigned for her classes. She maintained that her Professional Development School experience made team-teaching at both the K-12 and graduate levels possible. Mary mentioned the time-consuming nature of her Professional Development School experience as the main roadblock in attempting to meet her teaching obligations. However, because that experience provided her with the opportunity to stay current, continue to learn, know the classroom curriculum better, and develop reciprocal relationships with teachers, Mary believed that she was benefiting from it. Mary, like other participants in the

study, said the ability to try out different models of teaching and the exposure to elementary education had contributed to her professional growth.

In the area of service, Mary thought that her Professional Development School experience influenced her to define service as an activity in which participants with different interests mutually define the work they want to do together and the benefits they both can derive. When she found that the current definition of service was limited, Mary joined other faculty members in a project that focused on documenting service activities and figuring out how university professors could be rewarded for performing such work. She was spending some of her service time working on this project. Mary indicated that struggling to present her service work in such a way that it was intertwined with research and teaching was a major challenge and at times a roadblock. Mary thought her service work contributed to her professional growth, which helped her improve her approaches to helping both prospective and experienced teachers and to helping others commit themselves to studying their practice.

Mary, who started her Professional Development School work without tenure, identified the joy of working with children as the major intrinsic reward for her Professional Development School work. Because of the struggle she had experienced in achieving tenure, Mary advised that it would be "risky" to expect junior professors to become involved in Professional Development School work "unless the university reward structure is revised to match the demands of the work."

Taken together, Mary's interview responses revealed that she attempted to keep her research, teaching, and service connected. The second theme that emerged from her data concerned career faculty development stages. The third theme pertained to reward for and recognition of university professors' work.

MARCIA

Effects on Work

Effects on Research

Defining research. Marcia indicated that her Professional Development School experience affected what she defined as research. Before working in such schools, she had conducted studies that were comprehensive in nature. Since her involvement in Professional Development Schools, however, she had learned the significance of conducting studies directed toward informing a particular population. Consequently, Marcia resolved that "I will never do research again that does not inform the population of participants in some way." Thus, Marcia's Professional Development School experience influenced her to define research in terms of the population that would benefit from the study findings.

Marcia described the nature of the questions she explored in her research. She said,

> I started thinking about what if those speculations and discussion sections are wrong. What if those speculations are made negative by the author's or the researcher's experiences, their culture, their world view, and their biases, or even the biases and the world view of the people who have already done research. What if everybody is just like caught up into something [and researchers] explained everything the same way. . . . [I thought] there might

have been some idea, some missing piece that the researchers themselves have not thought of.

These questions led to a critical analysis of existing findings and assumptions. This form of scholarship is called the scholarship of integration.

Marcia reflected on the existing knowledge and synthesized it to derive new meanings and to "provide a larger, more comprehensive understanding" (Boyer, 1990, p. 19) of the existing knowledge. Marcia described several examples of her research that constituted a scholarship of integration. She studied the "norms [of] instruments" and found that they did not "pay attention to reading levels of the assessed." They did not take into account the "wide range of reading levels ... from third grade to college within the same room." She argued that if research findings do "not go along with the current philosophies or if your research questions are not quite right, ... even if your findings are significant statistically, even if you test some of the ongoing assumptions and you find nonsignificance but meaningful research, it is difficult to get it published." Marcia also presented "data on black racial identity among the students [showing a] significant relationship . . . between black racial identity and academic achievement. . . . But that did not go well because people wanted to focus on Afro-centric curriculum. And that is supposed to be the be-all and end-all."

Research questions. Marcia indicated that her Professional Development School experience affected her choice of questions for her research. She asserted, "When I started up with my Professional Development School work, [I was] only

concerned about academic performance and attendance. In my heart of hearts . . .
I did not care . . . about anything else." The purpose of Marcia's research was to

> understand the cognitive and noncognitive factors that contribute to academic
> persistence and academic success among all university students of
> predominantly white environments, and particularly affluent African minorities.
> I have compared those who are successful, the most successful, across race,
> ethnicity, and gender to . . . see [if] there [are] any racial differences; I mean,
> is this a real thing?

Marcia found that "there was no significant relationship between GPA and the

students' academic success. . . . [GPA] is so meaningless. [For example], math

competency has nothing to do with grades. . . . People inflate grades, so they have

no meaning. So, GPA has become meaningless."

Marcia noted the importance of understanding the realities of the world of

research and publication to her graduate students at the university. She maintained

that no matter how statistically correct their research might be, if their findings run

contrary to the current philosophies, it might be hard or impossible to publish the

work. She indicated that when students choose to study questions challenging

people's underlying assumptions, they should anticipate that their findings might

never be published. Marcia was content that her students were well prepared to

face such challenges. They know how "to question even the basic premise of the

theory, to raise a question about that. In fact, [she said], I think my students are now

better prepared to be critical thinkers."

The theme of the scholarship of integration continued to manifest itself in

Marcia's research when she expressed her thinking about the GPA. She maintained

that researchers usually ask students who are not doing well in class to provide

reasons why they think they are not doing well. She noted that, in response, such students usually externalize the problem and blame someone else. When their assertions are tested, the results might be different. Marcia tested some of the current beliefs about the GPA and concluded that students' GPAs were meaningless because there was no significant relationship between GPA and academic achievement.

Roadblocks. Marcia mentioned several ways that her Professional Development School experience acted as a roadblock in an effort to meet her traditional research and scholarship obligations as a university professor. The roadblocks she cited were as follows:

1. I have not got one . . . national conference addressing my Professional Development School research. . . . That means it . . . does not help me to the degree of the work that I put into it.
2. I should by now have more than [I do]; I should have many publications. But it is slower [because] the editors would like to hear what goes along with what is going around. And that is my frustration with the process.
3. It is very slow to get the stuff published.
4. Every year I send in a proposal to the . . . Association . . . addressing the work at the Professional Development Schools for symposium, addressing all levels of the work. . . . It is turned down every year. I [send in] two or three more in another area that does not have half . . . of what the professional development symposium would have had, and it is not accepted.
5. It is so time consuming to do Professional Development School work.
6. [My field] does not particularly care about school work. So I am hindered in that my field, my discipline, is not respectful of folks who [go] into schools and do this kind of work.

Despite these difficulties, Marcia, who had accepted a position as co-editor of a journal in her field of specialization, was "hoping that some of the work will be published in that [journal] since I am the editor and I am working with data."

Benefits. Marcia also thought that her Professional Development School

experience had benefited her in efforts to meet her research and scholarship

obligations at the university. She described the benefits as follows:

1. It has done fantastically in terms of presentations at local conferences.
2. [I] get reliable results.
3. I am better prepared to be a critical thinker and introspective about what I am trying to do with this.
4. I am willing to take the risk to ask this question and to test it and recognize that there may not always be the most productive outcome in terms of getting it published or presented but still worthy of addressing.
5. It really forces me and my students to keep [our] priorities straight. [We always ask], are we really interested in finding that answer to something, or do we only want to answer the questions that for a time seem to be the hot thing to do [or] the most acceptable thing to do?
6. I have had five research teams go to a conference to present. Some of them had to do with Professional Development School experience.
7. I teach the way I teach. [I allow] the students [to] ask cutting questions, questions that the literature has not addressed yet. And because of asking those questions, they need more guidance from me to formulate them and evolve them. . . . And, so, it has changed how I teach because no matter what I am teaching, I am asking them to develop proposals of different thoughts; to test what they are doing; to test what they believe to be true as opposed to automatically saying, "Yes." I am just . . . being overworked. But the students are very excited, and we all . . . have been affected.
8. It did help my work in the schools when I came up for tenure. . . . My work looks really good on paper. I mean, it is so unique. And what I describe is tying together teaching, research, and service. And it is well integrated when I start to write about it. It presents me in a way that really . . . stands out from most of my colleagues. So, on the one hand, a Professional Development School activity has slowed my productivity, but it has been the Professional Development School activity that has informed all the other areas of my professional activities in a way that it makes me look good above my colleagues. It looks good to do what I have done. . . . I met the reviewers of my materials. [It helped me] know that I was valuable, that I have something to offer the institution that not everybody did. So, even though I may not feel as valuable . . . in terms of my colleagues because they seem to be doing something totally different, or a different track, . . . it really put me in good standing, I think.

9.   It helped me to produce a large number of publications and presentations.

Professional development/growth. Marcia reported that her pursuit of the scholarship of integration within the Professional Development School setting had resulted in her own personal growth. She stated,

1.   My being is built from that [Professional Development School experience]. . . . It does come from my pushing and stretching in ways that I had not been stretched and pushed except by the Professional Development [School] activity.

2.   I accept nothing anymore . . . at face value. . . . The whole world was saying high school GPA [was significant] for black students, and the whole world was saying it was GPA you focus on. [I don't believe that.] Well, I just do not believe what people say anymore. I do not believe the literature anymore; I want to test it out. So I went to the schools. I am so glad that I did it this way. . . . Maybe I was already becoming this way, but if people wanted to think that psychological adjustment contributed to GPA and the reason that kids worked, doing well because they were under so much stress . . . it made sense what they were saying.

Effects on Teaching

Defining teaching. When asked how she thought her Professional Development School experience had affected what she defined as teaching, Marcia started by describing her traditional definition of teaching. She said she perceived teaching as an activity in which she had "to tell a case-study that is coming out of a journal." Marcia asserted that, in this traditional form of teaching, a university professor had "to go to the literature and . . . make . . . citations." Marcia's major criticism of this concept of teaching was that "research is not tied to what you are really presenting in classes [and that] you really are relying on other folks' work to explain your points."

Marcia maintained that her Professional Development School experience helped in drastically changing her traditional perception of teaching. She said that, in her current paradigm of teaching, acquired from her Professional Development School experience, "I am talking about real-life work." She asserted that it is possible to define teaching this way because her teaching is connected to her service. Marcia stated, "When you are doing the service [and are] actively involved in a real-life situation, [your] teaching is informed by the immediate and the most present as opposed to something that happened [to be] cited in 1995." According to Marcia, her current paradigm of defining teaching makes teaching "much easier. The students pay more attention [and] are all part of the process."

What she taught. Marcia also indicated that her Professional Development School experience affected what she taught. Although she knew that she had to teach culture, Marcia's view of culture was narrow because it was "something that I did not learn during my training program." Marcia also indicated that her Professional Development School experience had "broadened my ideas of what culture means, [with] the class being a critical component of that socioeconomic status, and what it means to have different ethnicities within the same racial groups in a culture."

Further, Marcia's Professional Development School experience had deepened her understanding of various issues that she taught. She stated,

> My teaching has changed significantly in that now I know what I am talking about when I talk to the students who will be going into the schools as school counselors. I know the culture of the school. I know the craziness. I know the disorganization. I know the issues that contribute to some of that. I know

the success stories. I know kids who are succeeding; the teachers who are okay, what they have to do to be okay and succeed; and some very challenging environments.

Another effect of Marcia's Professional Development School experience on what she taught was related to the training of counselors. Marcia confessed that "[assessment] was something that I had taken for granted, and I no longer do that" because of the Professional Development School experience. That experience made Marcia realize the importance of equipping prospective counselors with a model of assessing the organizational culture of the institutions with which they wished to work. She stated,

> I recognize that there is a unique culture in each building. And instead of coming away with . . . lots of conclusions, I come away with a model of how students in the graduate programs might go into the schools and do some assessments, make an assessment of what they are working with, what they need to do to get them about their role as school counselors.

Furthermore, Marcia found in her research that most research instruments "do not pay attention to reading levels." Marcia taught her students that administering a test to "a population that has a wide range of reading levels, that may go from third grade to college within the same room, [which is different from] working with a university-level population."

Marcia also observed that her Professional Development School experience influenced her to change the content of what she taught in class. She indicated that her Professional Development School experience "basically changed . . . the content of the presentations during class, my lectures during class, and how I set up

experiences within the classroom to bring to light what I most recently found out in my . . . Professional Development School site."

Marcia claimed that her Professional Development School experience had not affected the readings that she selected for her classes. She said, "The readings that I have selected have not changed very much . . . [because] a lot of time the literature is not even there." Marcia still used the mainstream literature in her teaching. She stated, "I interject the literature that I reviewed in presenting what I am learning, as I am in the Professional Development Schools and talking with the teachers." Marcia insisted that she still made sure that her students "are always informed as I have been informed, [by the mainstream literature], and [this] is what makes it a rich [learning] experience about the issues as they evolve." Marcia asserted that her Professional Development School experience gave her a chance to enrich her teaching by giving the students "anecdotal [reports and] empirical results of the findings that I just analyzed. They get the newest work right there before them, addressing this population. They get the questions that they might ask."

Marcia further indicated that her Professional Development School experience changed her perception of the nature of work that school counselors do and what she needed to teach prospective school counselors. She said that, when she entered her Professional Development School setting, "I thought [that the work of] a school . . . counselor [was to] counsel the kids, . . . work with the school psychologists with assessments, and try to get resources." Instead, her Professional Development School experience made her aware that "school counselors do not do

what they are trained to do; it makes no sense to have a profession that is engaged in behaviors in which they are not trained. In fact, that is not part of the profession at all." Marcia indicated that her awareness changed her practices of admitting prospective school counselors and what she taught prospective school counselors. She said that her Professional Development School experience influenced her to:

1. Change the way I do admissions.
2. Let them [colleagues and students] know that there is a person who comes into . . . school counseling that is like this [looking for promotion and not counseling students].
3. [Help students to] practice what they learned from the program.
4. [Help students] to be the most effective, and give them a model for institutionalizing some kind of change in the system.

Marcia also taught doctoral students about "the political incorrectness and correctness of findings." She asserted, "I make sure that they understand the implications of some research questions that do not go along with the current way of thinking."

How she taught. Marcia's Professional Development School experience influenced how she taught. "I tend to be experiential . . . with whatever class I am teaching," she said. Marcia mentioned a number of characteristics of her experiential teaching. She stated that, in experiential learning, students

1. Do the role-plays.
2. Give feedback to each other . . . to hear and listen to the viewpoints of many people.
3. Critique themselves.
4. Do a summary paper . . . to compile all of those things that they need to consider.

Marcia also indicated that her Professional Development School experience influenced her to make her teaching "much more present oriented." She described her present-oriented form of teaching as follows:

> [Students] always want to know the end of the study. So, as I am teaching, [I] tell them what is happening within the Professional Development Schools [and] with the data analysis. . . . They keep on saying, "What happened, you know, what should have happened?" And I never tell them what should have happened. I let them tell me: "What do you think should have happened? What would you have liked to happen?"

Marcia believed that the present-oriented form of teaching

> is just a richer learning experience for them because vicariously they are going through the process, increasing the ability to be analytical and distant in a safe way. So they are not involved; what they say really does not matter. So they can sit back and speculate about how they would have liked things to have gone.

This form of teaching resulted in a "rich discussion of many facets of what should have happened . . . and how they might have gone about making it happen."

Finally, Marcia indicated that her Professional Development School experience revealed to her the importance of having a teaching strategy. She stated,

> What I have learned about Professional Development Schools [is that] it is not enough to have a strategy. You have to have a rationale and you have to present the rationale in a way that most of us can hear it. And then you have to be comfortable with the outcome of not everybody agreeing or liking it.

She maintained that the teaching strategy she developed enabled her to involve students in "thinking about how to have a broad, full picture of what they are thinking about, how to go about analyzing it in a way that they can feel comfortable. How do they develop a voice around it?"

Roadblocks. Marcia identified several roadblocks that she encountered as she was performing her Professional Development School work. According to Marcia, such work:

1. [Requires] a personal commitment to do the most, ... recognizing that you are asking students to challenge themselves in ways that they would not have challenged themselves in another class.
2. Is frustrating—to know the ideals, to put them into practice, and to give them teaching values.
3. Is time consuming because I [have to] go to Troy. I come back. I am on the phone constantly, trying to figure out what is going on.

Benefits. Marcia indicated that her Professional Development School experience benefited her in efforts to meet her teaching obligations as a university professor. Some of the benefits she described are as follows:

1. It has changed my teaching. ... I have been altered as a teacher.
2. I have [been] altered ... professionally.
3. I think my students are more informed [in] different [ways].
4. I am better prepared to be [a] critical thinker and introspective about what I am trying to do with this.
5. [Students] really are challenged more by being in my presence because they are getting some of my chances of being challenged, too. ... They have to think in a different way.
6. I am challenged more because I am trying to get them to think, to even consider another way of thinking.
7. I am always kind of pushing them just a little bit ... not to think one way, but to consider other ways of being.

Professional development/growth. Marcia asserted that her Professional Development School work acted as an impetus for professional development/growth for her in the domain of teaching. She stated:

1. I have [been] altered personally, professionally.
2. Sometimes I get tired and say to myself, "I will not go back to the old way."
3. I know what needs to be done [and] the enormity of the task of doing it consistently semester after semester.

4. I know the frustration of moving people from one cognitive development level to another because that is what I am doing.
5. I developed some patience.

Effects on Service

Defining service. Marcia indicated that her Professional Development School experience had affected how she defined service. She started by describing her traditional notion of service, which she had brought into her Professional Development School setting. Before she started to work in that setting, Marcia's definition of her service work was focused on:

1. [Helping] students [become] competent in understanding the implications of being black.
2. Black adults, and most of those black adults were either living in a poverty situation or are middle-class adult African Americans.
3. Something had to be wrong with teachers. I was clear about that. I thought that if teachers were to teach effectively, of course, students will be fine.

Marcia indicated that her Professional Development School experience had changed most of her traditional views about service. She described her enlarged definition of service, saying:

1. Now I want them [students] to understand about the biases that they have—even more so, about being black and the developments they do being adolescents.
2. Now, I see it is critical that they understand some of the developmental issues of what it might be like to be an urban African [as compared to] someone who is a middle-class African American.
3. I also see the importance of paying attention to most family dynamics of service delivery and their ability to conceptualize what might be going on and to move out of this whole idea of the black.
4. I have broadened that considerably to include class, developmental stage[s], family dynamics and origin, and a lot of other things.

5. Some of it has to do with the school, just the structure of it, the way the hierarchy was set up, the organization of the day, or the lack of organization.
6. I think school counselors ought to be doing what they are trained to do as opposed to being, in general, administrators on their way up to different levels. So those are some issues. That has been informative for me, and it has informed me greatly about what I need to do when I come back to the classroom.
7. Parents need to be involved. It is critical that parents form a working relationship with the school for the improvement of the education of their children. Not this whole village's children, but their children.

Choice of professional activities. Marcia indicated that her Professional Development School experience had not affected how she chose the professional activities she performed as service. "I do not choose them. . . . In part of [the] services [that I perform], I do not make choices. Those are just sort of assigned to me." However, Marcia agreed that her Professional Development School experience had affected somewhat how she chose her professional activities because she did not choose professional development activities. She said that "it has made a difference in how I choose. See, I am still in all the committees, probably in more committees than most of my colleagues, in addition to my Professional Development School work."

Marcia, however, noted a change in attitude toward colleagues in those professional activities that she performed as service. She suspected that this change in attitude could have been the outcome of her Professional Development School experience. She declared that when she was in meetings with colleagues,

I am just willing to take on whomever. And, somehow when I am in the meeting and they are just saying stuff that does not make sense, my question becomes, "How do you know that is true?" So this mind set that maybe it is the Professional Development School that has evolved from questioning the

obvious sort of shifts over into my other service. . . . But I am a very different person on those committees because I do not accept the obvious. So my service in terms of the academic environment has shifted, but it remains non-outcomes-based. I become more patient with people becoming frustrated with me ask[ing] for evidence.

Spending service time. Marcia maintained that her Professional Development School experience influenced how she spent her service time. She stated, "I spend a lot of time trying to compile the data for all the stuff. Working with all the students, talking with Jane on the phone, driving over there, having meetings where I come away thinking, 'Why am I even here? What is the reason for this?'" Marcia concluded that the time she spent doing her Professional Development School work was "extensive." Admission was one of the things she did during her service time. She said the Professional Development School experience "changed the way I do admissions. I inform my colleagues about it. I inform the students. I let them know that there is a person who comes into the [profession] that is like this. Here are the pros and cons for being this way. What I want you to do is this. This is another way to practice what you have learned from the program."

Roadblocks. Marcia described a number of ways in which her Professional Development School experience served as a roadblock to her efforts to meet her service obligations as a university professor. She mentioned the following as roadblocks:

1.   [Professional Development School experience] overextended [me, and it is] horrible. . . . I am tired, tired, tired.
2.   [I am] frustrated sometimes [because] there is no extrinsic payoff.
3.   There is no particular respect for [Professional Development School work].

4. Everyone sees me working all the time. Students do not tend to see me unless they are doing research with me [because] I am busy.
5. While I am doing all of these activities, [my colleagues] may be writing papers [or] sitting and chatting with the students about something. I do that, too. It is time consuming.
6. There is no extrinsic reward. I do not get any big paycheck.
7. When it comes down to annual evaluations, my service does not seem any greater. I get the same rating and sometimes lower than folks who are not doing this.
8. My teaching load is not lowered even though . . . right now I have . . . 3-1 teaching load; my committee load is always higher than the rest of the faculty.
9. I still work. . . . I do work a lot of time with the students; I sign up for independent studies with the students that are very time consuming and individual learning.
10. I think it is so extremely time consuming that I do not think anybody should do this for more than four or five years in a row.

Marcia suggested that university professors "need a break to rest, or else there is going to be some incentive, some special notice because it is clearly tiring."

Benefits. Marcia indicated that her Professional Development School experience benefited her in efforts to meet her service obligations as a university professor. She maintained that it had been "a rich experience for me professionally." Also, she thought the experience had made her "a better teacher, . . . a better researcher, [and] a better service provider."

Professional development/growth. Marcia maintained that her Professional Development School work had acted as a stimulus for her professional development/ growth in the area of service. She described the following professional development and growth patterns that she noticed in herself:

1. I raise questions that other people did not raise [in the past].
2. I present the obvious, and I am able to generate alternative views much more effectively than I ever was before.
3. As I stretch my students, I am stretched as well.

4.   My role has changed on committees. I used to be a reflective person during committee [meetings], and now I am much more active because I see that people get stuck in what they think. If there is a power differential, they can reinforce or provide reinforcement for folks to keep thinking the way they may, and there is evidence for them to do that.

Effects on Personal and Institutional Rewards

Personal Rewards

Marcia indicated that she felt intrinsically well rewarded for the work she was doing in the Professional Development Schools. She stated that intrinsic motivation is "the only reason I am doing this [Professional Development School work]."

Institutional Rewards

In another regard, Marcia pointed out that she did not feel well rewarded for the work she was doing in the Professional Development Schools. The source of her dissatisfaction had to do with extrinsic rewards from her work in those schools. She maintained that she was not feeling well rewarded because:

1.   Professional Development School [work] is service.
2.   The personnel committee is not valued.
3.   Service is not respected in the academic community.
4.   The people who are involved [in the evaluation of Professional Development School activities] do not know what it is. . . . They chop it up as just service.
5.   When I am among my colleagues, service is one of the most disrespected [areas]; some of it is ignorant; some of it is they have been socialized not to respect it.
6.   I work hard on the professional development activity, no matter how many students I take. . . . Since arriving here, I have been in the middle of my faculty in terms of research, practice, and scholarship in terms of the ratings. And I know there are people above me who would not dare go to Professional Development Schools. And I know that there are people who are right at the middle plane who are not at

the Professional Development Schools with me. So, when you have people who, across the range, [are] not at the Professional Development Schools, you just feel like . . . it is not helping at all. My service is. I do not think it is something that the university is going to do anything [about].

Summary

This section contains a summary of the main findings from Marcia's interview. Marcia maintained that her Professional Development School experience influenced her to define research in terms of the extent to which it was directed toward a specific population. Her research questions and tests focused on current beliefs and assumptions about a specific population. She asserted that testing current beliefs often led to findings that were "politically incorrect." The major obstacle was at the national level. The advantage of questioning current beliefs and assumptions was that she was compelled to study them within the real context. This forced her to ask cutting questions, which led to reliable findings. Marcia maintained that her research in the Professional Development Schools had contributed to her professional growth in that it helped her become very critical.

In terms of teaching, Marcia asserted that her Professional Development School experience provided her with "real-life work" experiences, which she used to make her teaching more challenging and interesting. She found that students were very attentive in class when her teaching was based on her current research. Contrary to prevailing beliefs and assumptions, Marcia taught that there was no significant relationship between GPA and academic ability; that some assessment instruments yield unreliable results because they do not take students' reading levels

into account; and that students, teachers, administrators, counselors, and parents share the blame for low student academic achievement because they are not doing what they are supposed to do. Role playing and encouraging constructive feedback were Marcia's main teaching strategies. Besides the frustration associated with the realities of changing one's practice and the time-consuming nature of the work, Marcia described a number of benefits that she had derived from her work. She believed she had personally and professionally changed as a teacher as a result of her Professional Development School experience.

In the domain of service, Marcia asserted that her Professional Development School experience broadened what she traditionally had regarded as the scope of her service work. Instead of just studying teachers, Marcia added students, parents, administrators, counselors, and the school structure to the list. Marcia indicated that she spent most of her service time doing Professional Development School work, analyzing and synthesizing research. She also worked within the form of traditional meetings, in which she noticed that she had become both critical and patient. Although her Professional Development School work was too demanding and was not valued by her colleagues, Marcia had found that the experience enriched her as a "teacher, researcher, and service provider." The ability to question the obvious and generate alternative views based on empirical findings was the characteristic of professional growth she had derived from her Professional Development School experience.

Marcia started Professional Development School work as an untenured professor. She said that the only reason she was still doing such work was that it provided her with intrinsic rewards. In general, lack of administrative and colleague support and evaluators' limited knowledge of Professional Development School work were the major obstacles to her deriving extrinsic satisfaction from this experience.

Taken together, several themes emerged from the analysis of Marcia's interview data. Her research is an example of the scholarship of integration. The work raised important questions about time geography—that is, the distance between the primary work site and the Professional Development School site. It also raised issues about culture, diffusion, and dissemination of research findings to different publics, career faculty developmental stages, and faculty reward and recognition.

RICHARD

Effects on Work

Effects on Research

Defining research. When asked whether his Professional Development School experience had affected what he defined as research, Richard stated, "I don't think it's had a big impact on how I . . . define research." However, he went on to indicate that his Professional Development School experience "had an impact on what particular research initiatives I take and how those have come [into] place."

Research questions. According to Richard, his Professional Development School experience affected his choice of what he researched. He reported the influence of his collaborating teacher on a seminar paper he wrote: "I don't think I

would have chosen [that] kind of research." He stated, however, that "I haven't decided whether that is part of the Professional Development School experience or not." Richard also asserted that the Professional Development School experience had influenced him to study team relationships. He said the team-teaching relationship "has affected my research agenda. I'm looking to do my research and help people appreciate what the [math] department had achieved [as well as] examine some mechanisms that led to this achievement."

How he conducted research. Richard did not know whether his Professional Development School experience had affected how he conducted his research. He reasoned, "I'd done research before I came here, and I've been doing research of different kinds. I don't know if the Professional Development School work . . . has pushed me to do research in a particular kind of way." He had always wanted to write about "the process of working with those teachers and some of the things that we did." He had already written about other aspects of team teaching.

Roadblocks. Professional Development School work acted as a roadblock to Richard's efforts to meet his research obligations (including scholarship) as a university professor. He said, "I've focused so much on writing a book about my research and teaching that I haven't been writing a lot of articles."

Benefits. Richard did not believe that his Professional Development School experience had benefited him in his efforts to meet his research obligations (including scholarship) as a university professor. He could not identify the benefits he was deriving from that experience. He said, "It is an activity [that] took place in

a Professional Development School." Richard thought it was very hard to single out the Professional Development School as a cause of any effect to the total exclusion of other factors because his actions were a product of the interaction of many factors.

Professional development/growth. When asked whether his Professional Development School experience acted as a stimulus for his professional development/growth in the area of research, Richard's response was "No, I can't help you with that one." His earlier comments, however, indicated that one Professional Development School activity had had an effect on his professional development/growth in the area of research. He stated, "The research that I did out in Brooklyn High School is very important to my personal development. I'm sure [it] has had an effect on how I think about advisement in all sorts of ways, [although only one] of my students' work is directly connected to things in Professional Development Schools." The student he was advising was "studying one of the teachers in the Professional Development School because [the teacher had] made the most significant changes [in her] teaching." Richard insisted, despite this remark, that "it is hard to say how my Professional Development School experience and my life in the Professional Development Schools . . . act as a stimulus [to my] advising this person in that project, but she certainly could not have the site for that project without the Professional Development School."

Effects on Teaching

Defining teaching. Richard said it was difficult for him to say whether his Professional Development School experience had affected how he defined teaching. His initial response to this question was "Really not substantially." He did admit, though, that "I think Professional Development Schools are one of the strongest components of MSU's undergraduate teacher education program." Richard also observed that "I see that Professional Development Schools are allowing future teachers to get involved and learn about teaching in a context where people are thinking hard about teaching." He stated that although "there are some specific things that I have been working very hard in, in this Professional Development School, related to teaching, . . . it is very hard to say that the Professional Development School experience has had [an] impact on how I define the nature of teaching." Thus, Richard did not indicate that his Professional Development School experience had affected how he defined teaching.

What he taught. Richard's Professional Development School experience had affected what he taught. He pointed out that the collaborating teacher with whom he worked had had an effect on how he conceptualized his course. He said, "He pushed me really hard to have a rationale for my courses." Further, "The teaching that I was doing at the high school also had a big impact on what I thought was important to teach in that course." Richard also commented that he found "most of the teaching [at the doctoral level] had been less threatening than in Professional Development Schools."

How he taught. Richard said it was hard for him to tell whether his Professional Development School experience affected how he taught. However, his work in those schools was "strongly affected . . . and shaped by other experiences that have happened." He maintained that his Professional Development School work with the mathematics department at the high school was "influenced by work I had done in California before I came here." He further argued that it was, therefore, "hard to say this particular aspect on campus is fundamentally changed by the [Professional Development School] experience."

Roadblocks. Richard did not believe that his Professional Development School work had acted as a roadblock to efforts to meet his teaching obligations as a university professor. His response to the question was, "I can't imagine a way it's a roadblock."

Benefits. Neither did Richard believe that his Professional Development School experience had benefited him in efforts to meet his teaching obligations as a university professor. In the last couple of years, he said, his Professional Development School work had not benefited him "so much individually but more as a program." It was Richard's contention that the Professional Development School experience benefited the teacher education program more than it did him.

Professional development/growth. Richard indicated that his Professional Development School work acted as an impetus to professional development/growth for him in the domain of teaching. He reported, "The teaching I did at the high

school was very deep professional development, [and] I was thankful for the opportunity."

Effects on Service

Defining service. Richard maintained that his Professional Development School experience had not affected what he defined as service. He stated, "I still have no clue to what service is, and so I remain clueless. This is a way of thinking that when I came to MSU I started hearing about. . . . I still don't know what service is exactly."

Choice of professional activities. Richard did not know whether his Professional Development School experience had affected how he chose the professional activities he performed as service. He identified writing articles and consulting on projects as some of the professional activities in which he was involved. He indicated, however, that he did "not know that the Professional Development School work per se" had affected how he chose those activities. Richard pointed out that he had always had "a very strong prejudice against doing the one shot in service work on professional development work that's not sustained, [and] I've had that prejudice for quite a long time." Although the Professional Development School experience had reinforced that attitude, Richard argued that he could not attribute its presence to that experience.

Spending service time. Richard indicated that his Professional Development School experience could, to a degree, have influenced how he spent his service time

because he "spent some of the time with the people and colleagues at the Professional Development School."

Roadblocks. When Richard was asked whether his Professional Development School work had acted as a roadblock to his efforts to meet his service obligations (including scholarship) as a university professor, his response was "None."

Benefits. Richard acknowledged that his Professional Development School experience had benefited him in his efforts to meet his service obligations (including scholarship) as a university professor. He stated, "I've been meeting some of my obligations through my work in the Professional Development School."

Effects on Personal Rewards

When Richard was asked whether he felt well rewarded for the work he was doing in the Professional Development Schools, his response was, "I find the work rewarding." Richard said he preferred to use the expression "feeling supported" rather than "feeling rewarded." He maintained that "[I] still feel supported and valued, [and] what I need to say above and beyond that is that I feel rewarded."

Summary

Richard's Professional Development School experience had affected his choice of what he researched. Reflecting on the topic on which he wrote a seminar paper, Richard asserted that he would not have selected that topic if he had not been working in the Professional Development Schools. Further, his Professional

Development School experience had influenced the collegial relationships that formed the foundation of his team-teaching experience. He admitted that the amount of time that he spent doing his Professional Development School work seemed to have contributed to low productivity, in terms of publishing articles. Despite that roadblock, however, Richard thought that his Professional Development School experience had contributed to his advisement. His advisee was doing research on a teacher who had changed his teaching practice. However, Richard did not feel comfortable attributing the advisement experience solely to the Professional Development School work. In the area of research, Richard did not think that his Professional Development School experience had affected how he defined research, the choice of what he wanted to research, or how he conducted research. He believed that his Professional Development School experience probably had benefited the college more than it did him.

In the domain of teaching, Richard indicated that his Professional Development School experience had affected what he taught. He pointed out that the collaborating teacher he worked with had influenced how he conceptualized his course. That teacher influenced him to have a rationale for the course and affected his thinking about the course. He argued that although his method of teaching had been strongly affected by the Professional Development School experience, he could not attribute the changes in his methods of teaching solely to that experience. Finally, Richard admitted that his Professional Development School experience had led to his professional growth in teaching, although it was difficult for him to say

whether that experience had affected how he defined teaching. Neither could he identify how his Professional Development School experience had acted as a roadblock to efforts to meet his teaching obligations or benefited him individually in efforts to meet those obligations.

In the area of service, Richard indicated that he spent most of his service time with his colleagues at the Professional Development School settings and that his experience in those schools was helping him meet some of his service obligations. Richard did not believe that his Professional Development School experience had affected how he defined service because he did not have any idea how to define service, how the experience affected his choice of professional activities to perform as service, or ways in which that experience had acted as a roadblock to efforts to meet his service obligations.

Finally, Richard was not comfortable in asserting that his Professional Development School experience made him feel well rewarded. He preferred to say that he felt supported in doing his Professional Development School work.

Taken together, Richard's interview responses indicated that he recognized the effect of the Professional Development School experience only on the choice of research topics, team-teaching relationships, and advisement. In general, Richard's perceptions of the effects of that experience on his research, teaching, and service were not positive. However, the themes of team-teaching and reward stand above the rest of the themes focused on in this study.

EVELYN

Effects on Work

Effects on Research

Defining research. Evelyn indicated that her Professional Development School experience had not affected what she defined as research. She stated, "I do not think that it has because I do not think I had a particularly narrow view of research. It has just been a very fruitful setting to do research, but it has not changed my definition of research."

Research questions. Evelyn stated, "I launched a research program based on the 'problem' presented to me by Carol." She "saw Professional Development Schools as a place to investigate the questions that [she] was already interested in." Evelyn insisted that her Professional Development School experience "did not change the questions that I ask." She described a Professional Development School setting as "a fruitful place to investigate the questions." She described the Professional Development School as a place where she was "doing research and scholarly activities."

An analysis of Evelyn's transcript showed, however, that the research questions she asked had emerged from the Professional Development School context. For example, her description of the beginning of her mentoring project and its major research questions showed that it had emerged from the Professional Development School context. In this regard, Evelyn explained,

> In 1991, a teacher came up to me in the summer institute of the Professional Development School . . . that was run by the Professional Development

Schools for teachers involved in the Professional Development Schools, and she asked me if I would help her with the problems that she had with student teachers. She was really frustrated that in the spring time the student teachers would take over her classroom for independent teaching, and she would have to step aside and watch everything fall apart that she worked hard to build in her classroom all year.

Evelyn mentioned the rationale for deciding to explore the problem with the teacher. She said, "I was really interested in the problem because I thought that any program that asked the teacher to turn the classroom over, to allow her to stand aside and watch everything fall apart, was not a very sensible program." The goal of Evelyn's mentoring research project was to investigate the "teachers' practical knowledge and how they could share the knowledge with their student teachers." The data that were collected in the project led to the development of 10 or 12 videotapes of the teachers' interactions with the interns across the year.

How she conducted research. Evelyn indicated that she had conducted a "big study of mentoring in three counties, and . . . the Professional Development School was one of [the] settings for that research." She had conducted "collaborative research with these teachers." Evelyn noted that because "my methodology is shaped by the questions I ask," the Professional Development School experience had not influenced how she conducted her research so much as the questions. She maintained that the new knowledge generated from this project influenced

> the way that we designed the internship component of the new program, and
> started the team that I am in charge of, . . . the role of the cooperating
> teacher, . . . the way that we describe the internship curriculum, . . . the kinds
> of standards that we developed, . . . the learning activities that the interns
> engage in, . . . [and] how we conceptualized the internship component of the

new program. . . . [It] is one huge way that my Professional Development School work has influenced . . . teaching [and] research.

Evelyn's mentoring research project also revealed that "Professional Development School work has continued to affect teachers in their practice and be a source of scholarship and scholarly writing. I really like collaborative research for teachers, and those teachers are very important collaborators in that research."

Roadblocks. When Evelyn was asked whether her Professional Development School experience had acted as a roadblock to efforts to meet her obligations as a university professor, her response was a succinct "No."

Benefits. Evelyn described some of the ways in which her Professional Development School experience had benefited her in efforts to meet her research obligations (including scholarship) as a university professor. She reported:

1. I have this long-standing collaborative relationship with these teachers now.
2. I have a school that is an example of the kind of place that I would like to have more interns placed in.
3. I have teacher colleagues that I can talk to, learn with, and learn from.
4. [I have] written several chapters, which are published.

Professional development/growth. Evelyn was asked whether her Professional Development School work had served as a stimulus for her professional development/growth in the domain of research. She answered, "I do not have anything else to say, more than what I have already said."

Effects on Teaching

Defining teaching. Evelyn agreed that her Professional Development School experience had affected how she defined teaching. She stated, "My understanding

of teaching and of the kind of knowledge and expertise that it entails has deepened

from my research on teaching with my Professional Development School colleagues,

but I do not think my conception of teaching has changed."

What she taught. Evelyn indicated that her Professional Development School

experience had affected what she taught. She reported that "I often use the cases

that I wrote in my Professional Development School work, or I show the videotapes

as examples of how an experienced teacher can help a novice learn to teach." She

also stated, "I have used the cases that we have written for people to analyze."

Evelyn further indicated that she used the videocases

> in . . . my undergraduate teaching and my doctoral teaching. I have used a
> videocase that I made of a Professional Development School teacher helping
> novices learn to teach. That videocase I have used in my doctoral seminar
> on learning to teach,· and in my undergraduate course with interns on
> classroom research.

Evelyn also reported that teaching mentoring in her classes had forced her

to "read the theoretical materials on learning that have influenced my conceptual

work on mentoring." She explained that she selected the readings from the

"sociocultural perspective on learning to help me conceptualize the work that

mentoring teachers do." She also indicated that the models she derived from her

data "fit with these models of learning, which have not been applied to teacher

learning." Evelyn said that she sometimes invited mentor teachers "to serve as a

panel to my doctoral courses."

How she taught. Evelyn indicated that her Professional Development School

experience had not affected how she taught. She stated, "I do not think it has

affected how I teach, but it has given me a whole lot of new resources to use in my teaching."

Professional development/growth. When Evelyn was asked whether her Professional Development School work had acted as a stimulus for her professional development/growth in the domain of teaching, her initial response was, "I cannot think of any [way it has]." Furthermore, she said, "I co-taught with this Professional Development School teacher but often co-teach with colleagues, and I am always interested in thinking about teaching. I do not think I did anything special because of my Professional Development School work that I normally [would not] do."

Effects on Service

Defining service. When Evelyn was asked whether her Professional Development School experience had affected the way she defined service, she observed that the questions seemed to rest on assumptions that she does not hold. She continued,

> Many people assume that many professors who live in the ivory tower and do not work on problems that have much meaning to practitioners might need to be in a Professional Development School to see that there is a different kind of question to ask, a different kind [of] audience to serve, [and] a different kind of research to do. . . . I always had respect for teachers and their knowledge and thought that research that was relevant to practice was going to be valuable. I did not need to be in a Professional Development School to learn that.

Evelyn emphasized that

> A lot of what I did prior to the conception of Professional Development Schools was pretty much like Professional Development School-related work. I did research in teacher centers. I always collaborated with thoughtful teachers. I spent [a lot of] time [in] schools. I did not have a narrow definition

of research. . . . All those things were part of my professional development work identity before there were such things as Professional Development Schools. So, for me, it was not such a dramatic change either in thinking or practice.

Furthermore, Evelyn pointed out that "I think my Professional Development School is a good example of what the university would call outreach and what the university values and tries to promote." She also indicated,

I always saw my Professional Development School as both an arena of service and a laboratory for scholarship. I was doing both, [but] not always at the same time. I did not feel like it was taking me away from research. It was also a place where I was doing research and scholarly activities and service and creating a context for the teaching. I mean, there is no way that this teacher education program would succeed unless we have better placement sites for our interns.

Choice of professional activities. Evelyn indicated that her Professional Development School experience had affected her choice of the professional activities she performed as service. Listed below are the activities she chose:

1. [I served on the] National Committee on New Teacher Induction and Mentoring for an organization called the Association of Teacher Education of Educators.

2. [I was] invited . . . to do a workshop for the commission and other interested people about those tapes based on my mentoring tapes, which feature my Professional Development School colleagues.

3. I am very involved in the National Seminar for German Educators.

4. [I] reviewed . . . the mentoring literature for the ERIC Clearinghouse, which is a national clearinghouse for research on teacher education. So I did a digest on mentoring.

5. [I am involved on the] committee at the Michigan State Department of Education to plan a statewide conference on the new teacher induction teacher mentoring legislation that Best has.

6. [I organized a] keynote panel for this conference. [It consisted of] the three teachers from the Professional Development School where I have been working for the last five years, and together we made this presentation. . . . We all told stories about mentoring and being mentored from our experience. That was the keynote presentation. And I think that is a good example of service to the state of Michigan

that directly grew out of my Professional Development School work and indirectly involved the teachers that I worked with.

7.   [I researched the] funded international study on mentoring and the Professional Development School since it was one of the sites in our study. It has continued to influence the conceptual work that I am doing on mentoring. So there is a lot of overlap.

Evelyn stated, "I did not specifically refer to my Professional Development School work, but my Professional Development School work and my larger research shaped my ideas about mentoring and influenced that." Evelyn's interview transcript indicated that when she met with various audiences, a major theme in her service work was talking to teachers about "working with student teachers, . . . [about teachers'] practical knowledge and how to share that knowledge with their student teachers."

Benefits. Evelyn's Professional Development School experience had benefited her in efforts to meet her service obligations (including scholarship) as a university professor. She asserted that:

1.   I sit on that commission, and the ideas that I bring to the discussion grow out of my research and experience in this Professional Development School, as well as my broader study.

2.   [I used the videotapes developed in the Professional Development School settings at] an international conference on teacher education.

Effects on Personal Rewards

Evelyn believed she was well rewarded for the work she was doing in the Professional Development Schools. She said, "I love it. Also, they are very hard at times. They are very demanding and very exhausting, but very regenerative. I am very satisfied."

Summary

In general, Evelyn did not believe that her Professional Development School experience had affected what she chose to research and how she conducted that research. She could not identify any way in which her Professional Development School experience had acted as a roadblock to efforts to meet her research obligations; however, Evelyn did assert that her Professional Development School experience had benefited her in efforts to meet her research obligations in that the schools became a valuable research site and provided her with valuable research colleagues. She had, over the years, established long-standing collaborative relationships with teachers, from whom she continued to learn.

Although Evelyn did not think Professional Development School experience had changed how she taught in significant ways, she was able to identify some effects of that experience. She asserted that the research she conducted in her Professional Development School setting "deepened" her knowledge about teaching and learning to teach, as well as her expertise as a teacher educator. She also stated that the videocases she had produced from her Professional Development School work had been an important resource in her teaching and mentoring both locally and internationally.

In the domain of service, Evelyn believed that her Professional Development School had turned out to be an excellent site for conducting outreach work. She listed a number of local and international organizations where she did professional

service. Evelyn reported that her Professional Development School work and research had greatly influenced her ideas about mentoring.

Finally, Evelyn, who started her Professional Development School experience as a tenured professor, indicated that she felt supported and personally rewarded for the work she was performing in the Professional Development School settings.

WINNIE

Effects on Work

Effects on Research

Research questions. An analysis of Winnie's interview transcript revealed that when she started to work in the Professional Development School setting in 1989, she had a research agenda in mind. She said, "I think that I certainly did go in with a research agenda. I certainly had things that I was curious about, but not in terms of having a research question and having a written proposal and having gone to the UCRIHS for human subjects approval." It was not until four and a half years later that Winnie was able to establish and focus on the following collaborative research questions:

1. How do the [problem-centered curriculum materials] contribute to student learning?
2. How do they contribute to the teacher's own learning?
3. How do the [problem-centered curriculum materials] contribute to changes in teachers' practice?
4. How can assessment be linked to curriculum and teaching?
5. How can [assessment] be a stimulus to teacher learning and teacher change?
6. How do [curriculum materials] really contribute to [teachers'] own learning and to their changes in their own practice?

7. How can these performance-assessment tasks and these professional development materials help us focus, support, and learn about teacher change?

8. How can an innovative curriculum contribute to teachers' change?

In a later interview, Winnie added that the event just described "was a new outreach activity and [that] many faculty were navigating unchartered waters." Furthermore, Winnie remarked, "These questions did not all emerge at the same time."

How she conducted research. Winnie described how her Professional Development School experience had affected the way she conducted research. Although Winnie came into the Professional Development School setting with a "research agenda, she developed the questions collaboratively with the teachers." The effects of the Professional Development School experience on how Winnie conducted research manifested themselves in the collaborative-relationship-building process. Winnie characterized the tension that followed her attempt to develop collaborative research:

> There has been a real tension, at least for me, in the Professional Development School work between engaging in some collaborative activity with teachers around helping them transform their own classrooms and engaging in inquiry with them about practice.

According to Winnie, the problem was that

> the teacher on the team that we were working with was someone who was simply not curious, someone who did not have any questions. . . . An effort to engage in some sort of inquiry project with her went noplace, and after about a year and a half we had a parting of the ways.

In a later interview, Winnie indicated that this incident took place early in her Professional Development School work. The problem had a negative effect on Winnie's research productivity. Winnie told the teacher that

1. A lot of university resources are being spent. You and I are working together. I do not know what we are accomplishing. You do not seem to have any particular questions that you are curious about.

2. When I asked, "Are you curious that some kids in your class really seem to grasp mathematical ideas rather quickly and others keep struggling, struggling?" she said, "No, no, I just think that some people are not naturally good at math and some people are. That is the way things are."

Winnie ended her collaboration with that teacher and established new relationships. She stated, "The next three years [after that] . . . some of the most productive inquiry activity [happened, and that was because I was working] with three teachers who really were curious, who were intellectually curious." She added, "That was a place where we really began to experiment with some problem-centered curriculum materials, and we were asking questions about how those materials contributed to a number of things. Winnie further commented, "We have used Professional Development Schools as one of our sites for some of this development work," the development of assessment materials.

Winnie reported a positive effect of her assessment project. She said she was co-authoring a casebook that would be published early in 1998. "It is a casebook on using assessment to reshape teaching. One of the cases in the casebook came from a classroom in one of the Professional Development Schools."

Effects on Teaching

Defining teaching. When Winnie was asked to indicate how her Professional Development School experience had affected what she defined as teaching, her initial response was, "It is hard to point to Professional Development School work."

One of Winnie's primary goals was to help students understand that teaching is both "a technical . . . and an intellectual activity." She asserted that to view teaching as a technical activity, she taught students how to establish a set of activities they were going to teach, identify the assignments they were going to give the students, and determine how they were going to conclude their lesson. Winnie commented that viewing teaching as a technical activity was the first step toward defining teaching.

According to Winnie, the second step toward defining teaching was to view "teaching [as] by and large . . . an intellectual activity." In planning teaching as an intellectual activity, the teacher must ask and answer the following questions: "(a) What do I know about this thing that I am going to be teaching? (b) What am I unsure about? (c) Do I need to learn some more myself, and if so, (d) Where and how can I learn that?" Winnie maintained that teaching becomes an intellectual activity when the teacher is interested in knowing "what teachers themselves learn in the process of using materials that I give to them." She also asserted that teaching becomes an intellectual activity when the teacher is "coming to grips [with] what you know yourself about the topic or the concepts that you are teaching."

Further, Winnie claimed that for teaching to become an intellectual activity, teachers must be clear about their role during the teaching process. She insisted that teachers should listen carefully to students and be ready to "help them get unstuck without telling them."

What she taught. When Winnie was asked to indicate how her Professional Development School experience had affected what she taught, her initial response

was, "In truth, I am not sure that . . . Professional Development School work has led to these particular decisions about the curriculum." She asserted that the "choices I make about the curriculum [were] pretty much grounded on the . . . standards [established by another organization and] not the work in Professional Development Schools."

How she taught. When Winnie was asked to describe how her Professional Development School experience had affected how she taught, she responded, "It is not a very direct link." She indicated that one of the Professional Development Schools

> became an important site for us to try some of these assessment tasks. And we try a task; we get a sample of student work. We get feedback from the teacher about whether the task went well or whether the kids had trouble understanding what they were being asked to do. Our designers would revise the task. We tried it again in another classroom.

Winnie used the assessment materials to teach her university students to analyze students' written work. She explained that the process had affected how she taught in this way:

> One of the things that I do with my own students is I use some of these assessment tasks with them. I have them look at pieces of student work, and what we do with [it], that is, I ask them, "What do you think students understand, and what is the evidence? What do you think students are having some difficulty with, and what is the evidence? And if you were the teacher of these students, how would you use this information to decide about the next instructional work?"

> Winnie had several goals that she wanted to accomplish through this process.

She maintained that her main goals were to help students:

1. Begin to come to grips with what makes a good assessment task.
2. Analyze students' written work.

3. Think about how students' written work can help them think about their teaching.

After explaining the nature of her externally funded project, Winnie repeated that "my teaching and Professional Development School activity and funded development research I have had are all kind of linked and in some ways less direct than saying that this stuff in Professional Development School shapes this stuff in teaching." She continued,

> What I want my students to begin to do is to analyze student work: to find out what claims they would make about student understanding, what they would use as evidence of the claims they would make, and then how they can use their own analyses of student work to decide where they are going to go next in instruction.

Roadblocks. When asked "In what way(s) does your Professional Development School work act as a roadblock to your effort to meet your teaching obligations as a university professor?" Winnie said, "I do not think it has been a roadblock. . . . It is very time consuming; . . . [but] it has consumed less of my time over the last probably two to three years than it did in the first five years." She reiterated, "I would not call it a roadblock, but I would say that working in the Professional Development Schools is enormously demanding on one's time."

Benefits. In general, Winnie indicated that "if I can categorize the way in which my Professional Development School work helps me think about teacher preparation, . . . one has to do with curriculum." Winnie identified several specific benefits that she derived from her Professional Development School work; they are cited below:

1. [The assessment materials enabled her to conceptualize how she could assist] students' thinking about elementary curriculum.

2. [The curriculum materials enabled her to share with teachers] how these new curriculum materials reveal things to them about their students that they had not really ever known before or been able to observe before.

3. [The curriculum materials enabled her to use] the experience of teachers in the Professional Development Schools [as] examples that [she] can bring to prospective elementary teachers.

4. [Her Professional Development School experiences led her to encourage] students to think about what it is they can learn about teaching, no matter what kind of situation they are in.

5. [Her Professional Development School experiences helped her] own students see that teaching is very complex work [and] that even with very outstanding materials, . . . good curriculum alone would not carry the day.

6. [Professional Development School work enabled her to show her students that] teaching is quite an uncertain enterprise [and] that there are plenty of things that they can do to prepare for teaching.

7. [Professional Development School work helped her develop a network that] supports [her] own teaching.

Professional development/growth. Winnie also described several ways in which her Professional Development School experience had contributed to her professional growth in the area of teaching. She expressed the benefits and growth in terms of lessons learned. Winnie indicated that her Professional Development School experience had helped her realize that:

1. Teachers . . . are being asked to use curriculum materials of a kind they have never seen before [and] to invent a kind of practice that they have not experienced. They did not experience it as students with their own teachers, [and] had not experienced it in their own practice. So they are having to invent or develop new ways of being teachers.

2. [Collaborating teachers are struggling to change] certain pieces of their work like curriculum and . . . their own teaching practice, at the same time that they are being held to some accountability measures that are totally misaligned with this new direction in which they are heading.

3.	[Teachers are making changes, but] the organizational structure[s] do not change [fast] enough to give teachers the time they need either individually or collectively to work on these sorts of things.

4.	[A] lot of resources (e.g., time) [that were] available for teachers . . . in Professional Development Schools were not invested on issues that [would] contribute to the intellectual [or] social development of the students.

5.	The ways in which policy decisions or lack of policy decisions work against some of the things that we are trying to do.

Effects on Service

Choice of professional activities. Winnie described the effects of her Professional Development School experience on how she chose the professional activities she performed as service. One of the most recent professional activities with which Winnie was involved was working with a team of leaders in mathematics education. She asserted,

> We are currently working with a team of leaders [in mathematics education] . . . around the state who are going to use [assessment] these materials in some professional development. They are going to be doing it in their own local regions. . . . Next year we will be working with a select group of probably middle school teachers using what we developed in our projects so that assessment becomes a point of departure in our professional development.

Spending service time. Winnie indicated that her Professional Development School experience had influenced how she spent her service time. She maintained that, in the last five years, her service time had been devoted to "working with teachers in classrooms and . . . after-school study groups, [and] leading or facilitating study groups on collaboration days." When Winnie realized that spending a lot of time with a few teachers and students would not bring about large-scale change, she decided to reorganize the way she spent her service time. She commented, "I now

spend very little time in the real classrooms." Rather, she spent some of her time

facilitating teams of teachers during collaboration days and working with graduate

assistants, who, in turn, worked with teachers in the classrooms.

Roadblocks. Winnie's Professional Development School work had acted as

a roadblock to her efforts to meet her service obligations (including scholarship) as

a university professor. She identified the following roadblocks:

1. I think we now have an administration that values that kind of [work] less.
2. The case I need to make now is very different from the case I probably would have had to make [during the previous] College of Education [administration].
3. The close elbow-to-elbow, shoulder-to-shoulder work with teachers . . . has not resulted in the kind of scholarly productivity that is traditionally valued in the academy [because] I am really writing for a practitioner audience and less so for a research audience, [which] runs counter to traditional research activity in the university.
4. It is not at all clear to me how the work that I have been doing . . . in Professional Development Schools is going to be acknowledged and rewarded in this tenure process.
5. The fact that I am going to have a book holds less value even though I think it has the potential to make a much larger influence on practice than the research article in [the] Journal for Research.
6. The work . . . has not resulted in the sort of research activity or research writing that would go in, say, the Journal of Research.

In a later interview, Winnie added, "I have argued that what I do is scholarship."

Professional development/growth. Winnie indicated that her Professional

Development School work had acted as a stimulus for her professional development/

growth in the area of service. She described the growth in the form of lessons

learned, stating:

One of the things that I have learned in the Professional Development School work is that, while the really close shoulder-to-shoulder work of a university person with a practicing teacher certainly helps us help university teachers

[through] research in both our research and service activities, it is not a model that is going to result in changes on the scale that we really need to think about.

This lesson affected how Winnie spent her time in the classroom with teachers. She and her colleague were:

> working with 70 leaders. The expectation is that those 70 leaders will each work with about 20 teachers. If those 20 teachers work with . . . 125-150 students, there is a very large cascading effect. And that is, I think, the scale of work we need to be thinking about. That is a very different scale. That means that [my colleague] and I can influence 70 leaders, who then influence . . . 1,400 teachers; 1,400 teachers, say, even times 100 students. It is a pretty large cascade.

Winnie concluded that her work in

> Professional Development Schools has been absolutely instrumental in being able to develop these wonderful case materials that we have. But the scale of work has to move beyond one university person working with one or two classroom teachers. It has to move [to] a university researcher working with a large number of teachers, who then go back and work with classroom practitioners. So I think that has been one of the ways in which this work has helped me think about the dimension of service, particularly the scale of service.

The second form of growth that Winnie had experienced was clarity regarding what she was interested in studying. She stated, "It has helped me to get clearer about what it is I really care about and what I am really interested in studying." She indicated that the questions she was interested in investigating were:

1. How [can] using new curriculum materials . . . shape [teachers'] own learning and shape their change?
2. How does a teacher's own knowledge of [the subject] change by using new curriculum materials?
3. What did these materials actually help them to learn about the content?
4. How can alternative assessment tasks develop teachers' own knowledge of subject matter?

Winnie concluded,

> At this point, . . . the service work that I want to do has to be in some sort of context that is going to have a larger impact or still supports this sort of cascade. I am more interested in working with leaders or mentors or staff developers who themselves then can go back to local school settings, local districts, and work with teachers. So my interest in the day-to-day classroom work with teachers has subsided. Now I want to work with a different tier of practitioners.

Effects on Personal and Institutional Rewards

Personal Rewards

Winnie felt rewarded for the work she was doing in the Professional Development Schools. She stated,

> I feel rewarded [because] much of our ability to do work on the . . . assessment project and the ability to . . . have cases on the assessment, service and instruction projects comes out of the close work in schools. So I think the work has produced the sorts of products that are really going to help to move reform forward.

Institutional Rewards

Winnie, however, expressed some concerns regarding the extent to which her Professional Development School work could reward her. She indicated that, as far as she was concerned, "*tenure* is the ultimate reward" she expected to receive from the university. However, she was uncertain whether her Professional Development School experience would help her gain tenure that fall because she knew that current college administrators did not value that work as much as the previous college administrators had. She also knew that she was writing primarily to the "practitioner audience" and less to the "research audience," as expected by the

college administrators. Finally, Winnie believed that the book she was about to publish would not contribute very much toward her acquiring tenure because, as long as her work was not published in tier-one refereed journals, it would carry less weight.

Summary

Winnie entered the Professional Development School setting ready to conduct research, but she allowed the questions to emerge from the context. Her attempt to establish a collaborative research relationship with the first teacher had been terminated after one and a half years because the teacher was not curious enough to engage in research. Over the next three years, Winnie established a collaborative relationship with several other teachers. That Professional Development School had served as a site for developing assessment materials. Furthermore, assessment materials had been used to write a casebook, which she believed would influence teaching.

When asked to describe how her Professional Development School experience had affected how she defined teaching, Winnie indicated that she viewed teaching as both a "technical activity" and an "intellectual activity." She maintained that teachers who view teaching as a technical activity help students reflect on the learning materials. Winnie was not sure that her Professional Development School experience had influenced what and how she taught. She asserted that the link between her Professional Development School work and the curriculum-assessment materials of her project was "indirect." Winnie used the materials to teach her

students to assess students' work. She reported that her Professional Development School experience had acted as a roadblock in efforts to meet her teaching obligations because it was time consuming. She believed that that experience had helped her conceptualize how to help students reflect on the "elementary curriculum." She also shared with students and teachers what she was learning from her research projects, and she developed working relationships with teachers who were eager to support change in teaching practice. The lessons she learned about the enormity of the process of change and the awareness of the change that teachers are expected to go through to change their practice were some of the greatest contributions toward her professional development and growth.

In the domain of service, Winnie believed that her Professional Development School experience had influenced her choice of the professional activities she chose to perform. She indicated that, when she started to work in a Professional Development School, she spent more time working with students and teachers in the classroom. When she learned that her influence was going to remain small, she spent more time with a team of leaders in mathematics education. Winnie maintained that working with a team of leaders in mathematics education would spread the findings of studies to a much wider audience. She was concerned that college administrators did not value Professional Development School work. Knowing that the current model of working shoulder-to-shoulder with teachers in the classroom was going to result in fundamental changes in teaching practice had enabled Winnie to grow professionally. She also asserted that her Professional

Development School experience had enabled her to discover what she "really wanted to study."

Winnie derived intrinsic rewards from her Professional Development School experience because it provided her with a valuable site for conducting her assessment materials. She expressed uncertainty about the extent to which her Professional Development School experience would lead to tenure because (a) the present administration did not value Professional Development School work, (b) she was writing mainly for practitioners rather than for the research community, and (c) the book she was going to publish would not carry as much weight as would an article published in a respected journal.

Taken together, Winnie's interview responses yielded several themes. These were themes of (a) integrating research, teaching, and service into the scholarships of research, teaching, and service; (b) establishing collaborative relationships; and (c) reward and tenure. These themes are explored further in Chapter V.

<u>Conclusion</u>

The university professors who took part in this study expressed a wide range of beliefs, values, and assumptions about the effects of their Professional Development School experience on their research, teaching, and service. Taken together, the study findings indicated that the professors' Professional Development School experience had both positive and negative effects on many aspects of their research, teaching, and service. The findings indicated that the school culture the university professors sought to reform was having a reciprocal influence on the

university culture, giving rise to a new subculture called the Professional Development School culture. In the next chapter, the researcher will identify and describe some of the elements of the emerging Professional Development School culture. In addition, conclusions drawn from the study findings, as well as recommendations and implications for future policy and research, are presented.

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AN EXPLORATORY STUDY OF THE EFFECTS OF PROFESSIONAL
DEVELOPMENT SCHOOL EXPERIENCE ON THE RESEARCH,
TEACHING, AND SERVICE OF PROFESSORS AT
A LARGE MIDWESTERN UNIVERSITY

VOLUME II

By

Titus Tshiduhulwana Singo

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Educational Administration

CHAPTER V

SUMMARY AND DISCUSSION OF FINDINGS

Introduction

This chapter contains a summary of the study, a discussion of the findings regarding the main themes emerging from the study, conclusions drawn from the findings, recommendations for Professional Development Schools, and implications. Because the findings were reported in detail in Chapter IV, only information relevant to the themes or values of the emerging Professional Development School is discussed in this chapter.

Summary of the Study

The researcher's purpose in this study was to explore how Professional Development School experience affects the research, teaching, and service of tenured and tenure-stream professors who have worked with those schools. The researcher's primary interest was to learn how that experience had influenced the professional lives and careers of those faculty members. It was hoped that the descriptive data generated in this study would add to the empirical database about the extent to which university professors use their Professional Development School experience as a basis for changing their practice in these areas. It was further

hoped that the study would lay a foundation for research on this seldom-studied topic. Finally, the researcher hoped that the study findings would reveal important areas for improving the working conditions of university professors serving in Professional Development Schools.

Because the study was exploratory in nature, the researcher developed a research perspective and protocol from the literature review and from a content analysis of transcripts of two focus group meetings. Two university professors experienced in Professional Development School work pilot tested the research protocol.

Of the 54 tenured and tenure-stream faculty comprising the study population, the researcher interviewed eight individuals; one later withdrew from the study, leaving a total sample of seven tenured and nontenured professors. A semi-structured in-depth interview method was used to collect the data. Ethnograph v04, a computer program designed to facilitate the analysis of qualitative data, was used to analyze the data and to identify themes and trends in those data.

The study findings were presented in Chapter IV. The results of each interview were reported separately, organized according to the structure of the interview protocol. The findings were reported, as much as possible, in the interviewees' own words. This is consistent with the rhetorical assumption of the qualitative paradigm of conducting research, which emphasizes the use of personal and informal language in reporting the findings.

As mentioned in Chapter II, an organizational-culture paradigm was used to interpret the data. An analysis of the findings, from an organizational-culture perspective, yielded eight values or "beliefs about what is considered to be important" (Jenks, 1990, p. 46). Values are defined as "a special class of beliefs held by members of an organization that pertain to what is 'desirable' or 'good' or what ought to be. . . . [They may be] positive or negative: positive values are desirables, whereas negative values are the undesirables" (Narayanan & Nath, 1993, p. 448). Values influence the direction of one's behavior (Jenks, 1990). They determine "the general types of activities that the person will find appealing [and] a person's motivation to obtain specific outcomes" (Arnold & Feldman, 1986, p. 28). Human beings tend to be motivated to do things they value highly and avoid doing things they value less.

An analysis of the findings from this study yielded eight characteristics that define the Professional Development School subculture. As indicated in the literature review, values, together with artifacts, beliefs, norms, and premises, form an organizational culture. The organizational culture that this researcher sought to understand is the Professional Development School culture, which is emerging within the context of MSU, as a land-grant university, and of the MSU College of Education. Although the characteristics of the Professional Development School subculture may not be new to the academic community, they are important because their identification broadens our understanding beyond the assumption that "PDS-type projects are . . . service" (Snyder, 1994, p. 114). The generalization that

Professional Development School work is service is misleading because the pursuit

of the service dimension of Professional Development School work is inextricably

linked to the missions of research and teaching. The eight characteristics of the

emerging Professional Development School subculture also help support several

assumptions made by other scholars regarding Professional Development Schools.

The following extract presents some such assumptions:

> If university faculty conduct the field-based, applied research called for in the Holmes agenda and valued in the public schools, our research productivity and the perceived stature of the journals we publish may decline. It will take time for teachers to develop understanding of research, and every step taken collaboratively, from framing research questions, to data collection and analysis, to writing up the findings, will take longer. . . . Such collaborative research does not carry the stature of traditional educational research and is weighted accordingly in promotion, tenure, and merit pay decisions. (Winitzky et al., 1992, pp. 8-9)

While the findings of this study strongly suggest that Professional

Development School participants generated new knowledge and shared it with

different audiences, the study findings did not indicate whether the research

produced in the Professional Development Schools is leading to a decline in "our

research productivity and the perceived stature of the journals" (Winitzky et al., 1992,

p. 8). That was not the purpose of this study. The study confirmed, however, that

applied research was the dominant research strategy used in the Professional

Development Schools; that establishing collaborative relationships was a time-

consuming undertaking; that the Professional Development School collaborative

activities (research, teaching, and service) are not highly valued by the rest of the

academic community; and that the current reward structure is not supportive of Professional Development School initiatives.

There are eight characteristics that differentiate the emerging Professional Development School subculture from the typical collegial culture of American universities. They are:

1. <u>Emphasis on groundedness and collaboration in research</u>. The Professional Development School subculture shares with the typical collegial culture an emphasis on the generation of knowledge, but it differs from the typical collegial culture in its valuing of groundedness in the school context and collaboration.

2. <u>The pursuit of knowledge as a means to an end rather than an end in itself</u>. The emerging Professional Development School subculture is distinctive from the typical collegial culture of American universities in the sense that the members of the emerging Professional Development School subculture tend to foster a purposeful pursuit of new knowledge to solve problems emerging from the Professional Development School context rather than generating new knowledge for its own sake.

3. <u>Stronger connection between research and teaching</u>. One of the characteristics of the emerging Professional Development School subculture that differentiates it from the typical collegial culture of American universities is that there is a stronger link between the generation of new knowledge through discovery and the scholarship of integration and teaching.

4.   <u>Emphasis on the scholarship of application.</u>   The emerging Professional Development School subculture is characterized by a stronger emphasis on solving the significant problems and generating new knowledge through the scholarship of application than the typical collegial culture of American universities.   In this respect, the emerging Professional Development School subculture is consistent with the land-grant culture.   As we shall see in the next chapter, however, the emerging Professional Development School subculture differs subtly from the culture of land-grant universities.

5.   <u>Greater emphasis on collaborative dissemination and diffusion of new knowledge.</u>   On the surface, the value placed on the dissemination and diffusion of new knowledge in the emerging Professional Development School subculture is consistent with the typical collegial culture of American universities.   However, a close examination of dissemination and diffusion in the Professional Development School subculture shows that these functions are carried out in collaboration with teachers and other school-based participants.   It is this collaborative approach that distinguishes the Professional Development School subculture from the typical collegial culture of American universities.

6.   <u>The norm of collaboration rather than autonomy and individualism in research and teaching.</u>   The typical collegial culture of American universities is characterized by a norm of autonomy and individualism that is not found in the emerging Professional Development School subculture.   This is true specifically in the areas of research and teaching.

7.   <u>Mismatch between the Professional Development School values and the promotion, tenure, and merit pay systems</u>. The Professional Development School subculture differs significantly from the typical collegial culture of American universities and even from the culture of the MSU College of Education. This distinctive characteristic of mismatch between the Professional Development School subculture and the promotion, reward, and merit pay system results from (a) an emphasis on collaboration with practitioners; (b) a focus on problems of practice as they are seen in the school context; and (c) an orientation to practitioner audiences that is somewhat out of phase with the criteria for promotion, tenure, and merit pay employed in the MSU College of Education. The combination of these three factors slows down the research productivity of the Professional Development School participants, leading them to write about different kinds of problems from those to which research journal publishers are primarily oriented. (Thus, they cause conflict with the criteria for promotion, tenure, and merit pay that are employed in the MSU College of Education.)

8.   <u>Retardation of the career development of the participating university Professional Development School professors</u>. The mismatch between the criteria for promotion, tenure, and merit pay and the Professional Development School subculture tends to retard the career development of the members of the Professional Development School subculture.

These eight dimensions are discussed later in this chapter as characteristics that distinguish the emerging Professional Development School subculture from the

typical collegial culture of American universities. Evidence supporting the emergence of these characteristics and the strength of the similarities and differences is presented under each characteristic in the next section. Literature in higher education is cited to provide a basis and a context for the characteristics, especially those of the typical collegial culture of American universities.

Discussion of the Findings

This section is devoted to a discussion and interpretation of major findings from the study. The discussion is categorized according to the eight characteristics emerging from the Professional Development School culture identified above.

Emphasis on Groundedness and Collaborative Research

Rice (1996), Pelikan (1992), and Newman (1976) have all identified the task of generating new knowledge as one of the primary responsibilities of academic professionals. The respondents in this study were first asked, "In what way(s) has your Professional Development School experience affected what you define as research?" All but one respondent (Evelyn) indicated that their Professional Development School experience had influenced what they define as research. Linda indicated that her Professional Development School experience helped her realize that the most appropriate method for generating new knowledge in the Professional Development School setting is the qualitative paradigm (e.g., case studies). Jerry, on the other hand, declared that his Professional Development School experience influenced him to generate new knowledge that is better grounded in the K-12

context. Mary perceived them as settings for generating new knowledge about "research for teaching" rather than "research on teaching." Marcia asserted that her Professional Development School experience influenced her to generate new knowledge on a specific population, whereas Richard thought his experience influenced the nature of research initiatives he undertook in the Professional Development School setting.

The responses to this question suggest that Professional Development School experience influenced the respondents to define research in different ways. Research can be defined in a variety of different ways, yet the respondents conceptualized research as "original research." According to Adams and Roberts (1993), when research is defined narrowly as original research, many scholarly activities of university professors that contribute positively to teaching and learning or the solutions of problems confronting society are not recognized or rewarded because those activities may not necessarily fall within the scope of the "originality" definition. It seems that defining research narrowly as "original research" may create problems for university professors working in Professional Development Schools because the current reward structure may influence them to devote less attention to the pursuit of their teaching and service obligations. Hence, Diamond's (1993) warning that focusing on a narrow definition of research is detrimental to teaching and learning is relevant here.

Second, the respondents were asked, "In what way(s) has your Professional Development School experience affected your choice of what you research, that is,

the topics and kinds of research questions you ask?" In response to this question, the respondents identified foci of their new-knowledge generation. These included (a) the teacher's belief system (Linda); (b) students, program assessment, and co-teachers (Mary); (c) challenging the underlying assumptions about her students' academic achievement (Marcia); (d) collaboration (Richard); (e) mentoring (Evelyn); and (f) curriculum development (Winnie). The respondents developed research questions collaboratively with teachers. They intended to generate knowledge that would be of immediate use in solving problems encountered by teachers in the classroom, the school building as a whole, and society. These responses strongly suggest that the university professors interviewed in this study derived their research questions from the classroom and school contexts. Thus, the findings support the proposition that Professional Development School participants used applied research to meet their research obligations.

Third, the respondents were asked, "In what way(s) has your Professional Development School experience affected how you conduct your research?" The respondents indicated, among other things, that the Professional Development School experience provided an opportunity to reflect on the methods and procedures of working with both experienced and inexperienced teachers (Jerry). It "forced" Winnie to work with a teacher for 18 months who was not intellectually curious. On the other hand, Richard and Evelyn said that it was hard to isolate their previous Professional Development School experience from current Professional Development School effects. The responses to this question were somewhat

confusing and difficult to interpret because the respondents gave different types of responses than expected. Winnie, however, showed how her Professional Development School experience influenced how she conducted research. Taken together, some interviewees also learned, first, that, despite all the planning, collaborating teachers sometimes agree to participate in collaborative research simply because they are afraid to refuse. Second, Winnie, who worked for 18 months with a teacher before discovering that the teacher was not intellectually curious, also learned the importance of recruiting collaborating partners who were interested in research. She indicated that, if she was to do it all over again, she would assess the research interests of collaborating teachers before investing too much time in developing the relationships. This, she believed, would save university professors time and frustrations.

Fourth, the respondents were asked, "In what way(s) has your Professional Development School work acted as a roadblock to your efforts to meet your research obligations (including scholarship) as a university professor?" The respondents discussed many ways in which their Professional Development School experience had acted as a roadblock to efforts to meet their research and scholarship obligations in the area of generating new knowledge. These roadblocks included (a) the time-consuming nature of Professional Development School work, (b) the difficulty of collaborating with teachers, (c) an inability to produce the traditional quantity of research products in a timely way, (d) the difficulty of getting published, (e) the difficulty of writing about certain issues (e.g., "the dirty little secrets of . . . the

Professional Development Schools" observed by Linda, (f) increased isolation from university colleagues and the research community, (g) the fact that Professional Development School work was not valued, (h) lack of funding, (i) the differences in school and university cultures, and (j) the difficulty of finding a forum for presenting politically incorrect findings.

Fifth, the respondents were asked, "How has your Professional Development School experience benefited you in your efforts to meet your research obligations (including scholarship) as a university professor?" The responses to this question increase our knowledge of the benefits the university community derives from its investment in Professional Development Schools. The benefits include (a) identifying relevant problems and issues for research, (b) connecting research to the context of teaching and learning, (c) gaining credibility in the learning arena, (d) establishing collaborative relationships, and (e) increasing research productivity. The responses provide empirical support to the assertion that "there have been many positive 'Professional Development School' effects on . . . university faculty" (Judge et al., 1995).

Sixth, the respondents were asked, "In what way(s) has your Professional Development School work acted as a stimulus for professional development/growth in the domain of research?" Some professors acknowledged that their Professional Development School experience had acted as a stimulus for their professional development and growth by enabling them to (a) engage in research at different levels with teachers, (b) facilitate change (Jerry), (c) focus on research for teaching

rather than on teaching (Mary), and (d) improve their critical-thinking skills. These responses suggest yet another major benefit of the Professional Development School experience. *It is a catalyst for the professional development and growth of university faculty participants.* The knowledge and skills they acquire from this experience become a vehicle for conducting research on change in teaching practice.

Pursuit of Knowledge as a Means Rather Than an End in Itself

The findings from the literature review suggested two major purposes of generating new knowledge. The first is "concerned with the establishment of new knowledge or facts and the development of fundamental theories that will not always be immediately applicable" (Notter & Holt, 1994, p. 30). This is the purpose of generating new knowledge, called basic research. The second purpose is to "find solutions to practical problems [facing the society]" (p. 191) "that can be applied in the field [to resolve problems] without much delay" (p. 30). This is the purpose of generating new knowledge, called applied research. An analysis of a variety of responses suggested that university professors working in Professional Development School settings valued applied research. Their research was based on questions derived from the Professional Development School contexts in the areas of (a) the teachers' belief systems (Linda), (b) mentoring (Evelyn), (c) underlying assumptions about assessment instruments (Marcia), and (d) curriculum and assessment materials (Winnie).

The participants used the applied research strategy to collect the data. It seems that the collaborative nature of the Professional Development School relationships that emphasized mutual benefits made the use of applied research strategy in the Professional Development School settings inevitable. According to Putnam et al. (1996), urban schools regard faculty who use the basic research strategy in their settings as "opportunists" because their research does not offer solutions to the practical problems facing them in teaching and learning. Urban administrators are now unwilling to invest the limited time that they have working with university professors on basic research which produces findings that cannot be applied to resolve problems related to teaching, learning, and organizations. Putnam et al. (1996) found that urban educators' experiences with traditional researchers led them to believe that since no long-range investment is made to improve urban problems, basic research leads to publication and promotions, not resolution of problems. Thus, the emerging Professional Development School subculture emphasizes, more than the typical collegial culture of American universities, the purposeful pursuit of new knowledge to solve problems emerging from the Professional Development School context rather than just generating new knowledge for its own sake.

Stronger Connection Between Research and Teaching

The second area of investigation was teaching. Several questions were asked to elicit the respondents' ideas about the extent to which the Professional Development School experience affected their teaching. The following analysis

focuses on the extent to which the respondents extended the knowledge they generated through teaching. One of the major challenges facing the academy today is whether knowledge generators (researchers) should be held responsible for the extension of new knowledge through teaching (Newman, 1976; Pelikan, 1992).

First, the respondents were asked, "In what way(s) has your Professional Development School experience affected what you define as research?" Several respondents indicated that their Professional Development School experience influenced how they defined teaching. That experience (a) helped Linda view teaching as an activity that takes into account the individual differences (age, viewpoint, learning style) of all students in the classroom; (b) helped Mary consider teaching as a student-centered, curriculum-oriented activity that engages students in active learning; and (c) helped Marcia perceive teaching as an activity in which real-life experiences, examples, stories, and anecdotes must be used to generate excitement in teaching and develop and foster critical-thinking skills in students and faculty. Marcia admitted that using present-oriented teaching strategies supported by current empirical evidence improved her students' attention span. In addition, Richard said (without any elaboration) that his Professional Development School experience had broadened his understanding of the construct of *teaching*. Winnie, on the other hand, asserted that she defined research as both a technical and an intellectual activity in which the teacher is always striving to learn more.

Second, the respondents were asked, "In what way(s) has your Professional Development School experience affected what you teach (e.g., the curriculum,

content, readings you select for classes)?" Respondents gave a variety of answers.
They said that their Professional Development School experience helped them
address issues and norms that they believed would guide teachers on their road to
becoming full-fledged effective teachers (Linda), and that it created an opportunity
to team-teach and develop collaborative stories and syllabi that they used to make
teaching exciting (Jerry). For Marcia, the experience deepened her understanding
of the societal and organizational dynamics that hindered or facilitated students'
academic achievement, especially that of African American students. It led her to
realize that challenging current underlying assumptions was a key to identifying
ways of improving students' academic success. The experience helped Richard
develop a rationale for his courses, and it provided Evelyn with opportunities to
develop videotapes that could be used to improve undergraduate and graduate
teaching.

Taken together, the thoughtfulness that the university professors showed in
working to relate their research to their teaching suggests that they valued teaching
and were constantly seeking ways to improve their teaching of undergraduate and
graduate students. They were seeking ways to "build bridges between the teacher's
understanding and the student's learning" (Boyer, 1990, p. 23); they were "scholars"
who were constantly learning (Boyer, 1990, p. 24). The responses showed that
these university professors perceive teaching as a means of transforming and
extending knowledge, as well as transmitting it (Boyer, 1990). These responses are
congruent with what Boyer called the "scholarship of teaching." Cochran (1992) also

stressed the importance of building bridges (connection) between research and teaching.

Third, the respondents were asked, "In what way(s) has your Professional Development School experience affected how you teach?" Three respondents agreed that their Professional Development School experience affected how they taught. The experience helped Mary reflect on teaching and learning from the teacher's perspective. It facilitated Marcia's use of experiential and present-oriented teaching strategies. Winnie reported that her Professional Development School experience provided a setting in which to develop and test new curriculum materials and to teach critical-thinking skills to students. Jerry and Evelyn, on the other hand, could not say whether their Professional Development School experience had affected how they taught because they could not separate the effects of that experience from earlier experiences. Evelyn, like Mary, agreed that the Professional Development School experience provided an opportunity to engage in team-teaching and to reflect on teaching and learning.

Fourth, the interviewees were asked, "In what way(s) does your Professional Development School work act as a roadblock to your effort to meet your teaching obligations as a university professor?" Linda, Jerry, Mary, and Richard did not believe that their Professional Development School experience acted as a roadblock in the area of teaching. Only Marcia and Winnie identified some roadblocks. Marcia thought that her Professional Development School experience required time, personal commitment, and the ability to cope with frustration in the change process.

Like Marcia, Winnie found that time for traveling, obtaining resources, and planning Professional Development School work reduced time to focus on teaching. Their responses support statements in the literature about many difficulties that Professional Development School participants experience in their quest to change teaching practice (Book, 1996; Judge, 1995).

Sixth, the respondents were asked, "How has your Professional Development School experience benefited you in your efforts to meet your teaching obligations as a university professor?" The respondents asserted that their Professional Development School experience (a) increased their awareness of problems and issues in the area of teaching (Linda, Jerry, Mary, and Winnie); (b) grounded their teaching in the real classroom contexts (Linda, Jerry, and Mary); (c) broadened their understanding of teacher-preparation methods (Linda); (d) maximized opportunities for team-teaching (Linda, Jerry, Mary, Richard, and Evelyn); (e) provided them with role models (Linda and Jerry); (f) maximized opportunities to develop videotapes, stories, and anecdotes (Linda, Mary, and Winnie); and (g) developed their critical-thinking skills.

The literature review indicated that the teaching benefits that university professors derive from their Professional Development School experience have not been systematically studied in the Professional Development School settings. For this reason, Book (1996) suggested that "there is a serious need for research questions to address the impact of restructuring efforts on student learning" (p. 197). The implication of understanding the benefits that university professors derive from

their Professional Development School experience is that the knowledge of the benefits enables us to conceptualize what university students are learning from the Professional Development School initiatives.

Finally, the respondents were asked, "In what way(s) has your Professional Development School work acted as professional development/growth for you in the domain of teaching?" The majority of respondents indicated that their Professional Development School experience had had a significant effect on their professional development and growth. Only two (Jerry and Evelyn) of the seven respondents could not tell whether that experience had acted as professional development/ growth for them in the area of teaching. For analysis purposes, the responses were grouped into seven major categories. They are that the Professional Development School experience helped the professors (a) receive feedback from teachers, (b) understand the sociopolitical reality of changing teaching practice, (c) develop strategies and mobilize support for changing teaching practice, (d) experiment on change in teaching practice, (e) identify role models, (f) gather K-12 teaching experience, and (g) develop capacities for critical thinking. These responses suggest that the Professional Development School experience contributed, in a significant way, to respondents' development in the domain of teaching. The experience provided university professors with what Heppner and Johnson (1994) called "opportunities for improving teaching" (p. 415). The responses are consistent with Zimpher and Sherill's (1996) finding that opportunities for professional growth

in the Professional Development School settings are not systematically organized to provide new faculty with orientation and mentoring in teaching.

There is, therefore, a much stronger connection between the generation of new knowledge through research and integration in the emerging Professional Development School subculture than there is in the typical collegial culture of American universities.

Emphasis on the Scholarship of Application

There is a close connection between Professional Development School work and the land-grant mission of public service (Judge et al., 1995). This mission is based on the assumption that colleges and universities are "great reservoirs of knowledge and skills relevant to the [solution of] problems in our society" (Huitt, 1997, p. 12). As indicated in Chapters I and II, Professional Development Schools were established as a response to the "concern with the quality of education in the United States" (Holmes Group, 1986, p. vii) and the "concern for the quality of teacher education in America" (Holmes Group, 1990, p. vii). Thus, the success or failure of Professional Development School endeavors must be judged against the extent to which they contribute to solving the K-12 educational problem and the improvement of the education of educators. In other words, how do Professional Development School participants apply the new knowledge they gain from the Professional Development School experiences in the solution of problems regarding "concern for the quality of teacher education in America" (Holmes Group, 1990,

p. vii)? The respondents were asked several questions to elicit answers to this and related concerns.

First, the researcher asked the question, "In what way(s) has your Professional Development School experience affected the way you define service?" The researcher expected to hear some technical definitions of service from the respondents. Instead, Jerry and Richard asserted that they did not know how to define service. They were unable to tell how their Professional Development School experience affected what they defined as service. After saying that she did have a narrow definition of service when she started to work in the Professional Development School settings, Evelyn now characterized service as outreach, without further elaboration. This characterization of service as outreach is consistent with the recommendation of the Provost's Committee on University Outreach (1993), Boyer (1990), Adam and Roberts (1993), and Park (1996).

Linda and Winnie described how their Professional Development School experience affected how they defined service by providing some illustrations of their service work. Linda talked about her contribution to the video that the state developed to provide professional development for teachers in the Michigan Department of Education, while Winnie showed how she worked with teacher leaders because the process has cascading effects. Only Mary provided a definition of service. She defined service as "engaging in mutually defined work that has [or] may have different appeals and different benefits for us."

In summary, (a) a majority of the respondents had difficulties explaining how their Professional Development School work affected what they defined as service; (b) some respondents used illustrations to show how their Professional Development School experience affected how they defined service; and (c) only one respondent, Mary, advanced a definition of service and associated the definition with the construct of *scholarship.*

Taken together, the responses suggest two things. First, the Professional Development School participants had trouble in explaining how their Professional Development School experiences affected their definitions of service. Second, current definitions of service may be so narrow that faculty do not see the connections between their work and outreach activity. Their inability to define service supports the call from the literature review that service (Boyer, 1990) must be redefined. This is important because if Professional Development School participants are to contribute to the elevation of the status of the service mission of the university, those working in the Professional Development School settings must be able to define service in ways that make sense to others without providing lengthy illustrations.

Second, when asked, "In what way(s) has your Professional Development School experience affected how you choose the professional activities you perform as service?" the majority of respondents emphasized that they selected the service activities that they believed would elicit support for change in K-12 teaching practice. They provided service to organizations such as the Michigan Department of

Education (Linda and Evelyn), the school district where the Professional Development School was located (Jerry), the National Committee on New Teacher Induction and Mentoring of the Association of Teacher Educators, and team or teacher leaders (Winnie).

The responses to this question indicate that university professors working in Professional Development Schools also pursue a service agenda to fulfill the university's service mission and goal. This is consistent with the observation made by Adam and Roberts (1993) and Boyer (1990) about other members of the typical collegial culture of American universities. The respondents chose to provide service to organizations they thought needed to be educated about what was going on in the Professional Development School in class so that they could, in turn, support their effort to conduct research and change teaching practice. The respondents did not emphasize service activities that are related to committees on campus. Only Marcia mentioned committees on campus as a form of service, mainly to show how her Professional Development School service could have contributed to the critical attitude she was now showing in those meetings.

Third, respondents were asked, "In what way(s) has your Professional Development School experience influenced how you spend your service time?" All but one of the seven respondents mentioned different organizations in which they invested their service time. They provided service to the Advisory Council and the Task Force (Linda), classroom teachers (Winnie), and districts and the state (Mary) to educate the audience about change in teaching practice and to secure support

for such change. Marcia analyzed research data and wrote articles, whereas Winnie worked with team leaders rather than classroom teachers because she believed it would have a "cascading effect." These responses confirmed a finding from the literature review—that service as a mission and goal takes a considerable amount of participants' time. The respondents also used their service time to solve a significant problem, namely, limited knowledge of school reform and insufficient support for change in teaching practice. The respondents, therefore, spent their service time in a manner consistent with the suggestions made by the Provost's Committee on University Outreach (1993) and Boyer's (1990) characterization of service.

Fourth, respondents were asked, "In what way(s) has your Professional Development School work acted as a roadblock to your efforts to meet your service obligations (including scholarship) as a university professor?" The respondents described two main ways in which that experience had served as a roadblock to efforts to meet their obligations in the area of service. They had to invest too much time in Professional Development Schools to meet their service obligations (Linda and Marcia). For example, spending too much time doing Professional Development School service activities reduces time for interacting with the larger academic community. Spending too much time writing grant proposals to generate funds for Professional Development School initiatives (Linda and Jerry) reduces time to become involved in other service activities.

Fifth, respondents were asked, "How has your Professional Development School experience benefited you in your efforts to meet your service obligations as

a university professor?" The respondents indicated that their Professional Development School experience had benefited them by (a) grounding their service in the realities of the research and teaching contexts (Linda, Jerry, Mary, and Winnie); (b) giving them an opportunity to reflect on the methods of teacher preparation (Linda and Jerry); (c) giving them an opportunity to develop videotapes, stories, and anecdotes to use in keeping their teaching current and interesting (Linda, Mary, and Winnie); (d) providing them with role models (Linda and Jerry); and (e) developing critical-thinking skills. In short, the respondents claimed that their Professional Development School experience had benefited them by (a) enriching their experience as service providers, (b) deepening their understanding of the dynamics of the change process, and (c) empowering them to speak confidently on issues of change in teaching practice.

Finally, the respondents were asked, "In what way(s) has your Professional Development School work acted as a stimulus for your professional development/ growth in the area of service?" The respondents indicated that the experience had helped them gain deeper insight into strategies for implementing and managing change in the area of service. The respondents talked about various aspects of the change process. They maintained, for example, that their Professional Development School experience had helped them (a) discover an interest in bringing about planned change in teaching practice through curriculum innovation (Mary), (b) realize what they were actually interested in doing (Winnie), (c) create an opportunity to teach different audiences effective ways of changing their teaching practice

(Mary), (d) understand the strategies for supporting change (Mary), (e) understand effective strategies for implementing change (Winnie), and (f) develop a critical-thinking capacity (Marcia).

The members of the emerging Professional Development School subculture, therefore, strongly emphasized solving significant problems and generating new knowledge through the scholarship of application more than does the typical collegial culture of American universities.

Emphasis on Collaborative Dissemination and Diffusion of New Knowledge

University professors working in Professional Development Schools value the idea of sharing their scholarly research with colleagues. The respondents' beliefs were consistent with Pelikan's (1992) assertions that

1. [The] vocation of professors in the university is to publish results of their scholarly research. (p. 121)
2. To share with one's colleagues in the discipline the outcomes of the scholarly research in which one is engaged. (p. 123)
3. Research remains honest, by exposing itself to the criticism and correction of other scholars and by inviting them—or daring them—to replicate its results if they can and, if possible, to carry those results further or to refute them by more careful or imaginative research. (p. 124)
4. Only the diffusion of knowledge through some form of scholarly publishing can make this process possible. (p. 124)

The respondents described the struggles they had had in trying to disseminate their findings through publication. Linda, for example, said that it was quite a challenge to find time to write and publish her findings. She was also worried about the slow publication rate resulting from the nature of Professional

Development School work. She claimed that the fact that she spent time building relationships did not give her time to "get published." Linda was glad, however, that she had started collecting data that she believed might enable her to disseminate and diffuse the new knowledge through scholarly publications. Mary explained, "We certainly prepared for a conference presentation together . . . [that is], a conference of the National Council of Teachers of English and the Michigan Council of Teachers of English." Marcia, on the other hand, reported that her research paper "has done fantastically at local conferences, [but it] has been a bust in terms of national conferences." Evelyn wrote several chapters that are also published, while Winnie co-authored a book that is also published.

In summary, then, the university professors working in the Professional Development School settings make an effort to share with their colleagues, within and outside their disciplines, the outcomes of the scholarly research generated from the Professional Development School settings. Despite the difficulties encountered, university professors working in the Professional Development School settings do as Pelikan (1992) suggested—expose their research products "to the criticism and correction of other scholars by inviting them—or daring them—to replicate its results if they can and, if possible, to carry those results further or to refute them by more careful or imaginative research" (p. 124). Finally, the data suggest that some of the Professional Development School work, which cannot be identified in this section for fear of revealing the identity of the interviewees, was published in refereed journals. Thus, scholarly and nonscholarly findings, generated from the Professional

Development School settings, were shared with various audiences. It is, therefore, the distinctive nature of the members of the emerging Professional Development School subculture to collaboratively disseminate and diffuse new knowledge through (a) publications and (b) seminars, workshops, and conferences collaboratively with teachers more so than would the members of the typical collegial culture of American universities.

Norm of Collaboration Rather Than Autonomy and Individualism in Research and Teaching

Bergquist (1992) identified four major academic cultures. One of them is the collegial culture. He defined the collegial culture as

> a culture that finds meaning primarily in the disciplines represented by the faculty in the institution; that values faculty research and scholarship and the quasi-political governance or processes of the faculty; that holds untested assumptions about the dominance of rationality in the institution; and that conceives of the institution's enterprise as the generation, interpretation, and dissemination of knowledge and as the development of specific values and qualities of character among men and women who are future leaders of our society. (pp. 4-5)

In addition, Bergquist identified academic freedom and autonomy--that is, the freedom to set research priorities and agenda without interferences, and the freedom to teach without observation by peers--as one of the most distinguishing characteristics of the collegial culture. In summarizing this freedom, Bergquist (1992) stated, "Many faculty members in the collegial culture would take offense at being asked, let alone required, to accept an observing colleague in their classrooms. It would be considered an invasion of the essential privacy required by the teaching-learning act" (Bergquist, 1992, p. 42).

This study identified a subculture with a different set of beliefs and values. The Professional Development School subculture discourages individualism and demands and support collaboration (team-teaching). The study findings revealed that university professors who worked in the Professional Development Schools valued team-teaching and collaboration. Some respondents indicated that their Professional Development School experience had given them an opportunity to collaborate or team-teach at the K-12 and university levels. The respondents also cited advantages that they had derived from their team-teaching experience. Linda asserted, for example, that her team-teaching at the K-12 level had had a positive influence on her undergraduate and graduate teaching. She indicated that it gave her an opportunity to videotape her own teaching and provided interesting stories and anecdotes, which she used to make her own teaching more interesting and credible to both novice and experienced teachers. In addition to the chance to model her own teaching to inexperienced teachers, Linda thought that her team-teaching experience enabled her to develop support networks with elementary school teachers. This, in turn, enabled her to keep current with classroom trends and developments.

Mary, who team-taught at the K-12 level, also acknowledged that her team-teaching experience facilitated the development of team collegial relationships. This relationship ended with the collaborating teacher's teaching a university methods course for more than two years. Finally, Mary believed that her team-teaching relationship enabled her to gain the perspective of different classroom issues.

Another respondent who believed that his Professional Development School experience had affected his teaching was Jerry. He stated that his Professional Development School experience had provided him with teachers with whom to team-teach, as well as the ability to be credible to novice and experienced teachers alike. There is, therefore, sufficient ground to maintain that the university professors' Professional Development School experience had facilitated opportunities for team-teaching and team research or collaboration, which, in turn, brought more advantages to teaching and learning at the university level.

A major characteristic of the emerging Professional Development School subculture is its members valuing the norm of collaboration more than the autonomy and individualism emphasized by members of the typical collegial culture of American universities.

Mismatch With the Promotion, Tenure, and Merit-Pay System

A review of literature in higher education revealed that the promotion, tenure, and merit-pay system is one of the most highly debated issues in academic circles today (Diamond, 1993). The university professors in this study held varied views about the effects of the Professional Development School experience on their teaching, research, and service roles. They valued and worked hard to satisfy the criteria that would bring immediate promotion, tenure, and merit pay. They also reported, with high emotion, the factors that had prevented them from satisfying criteria for promotion, tenure, and merit pay.

Linda recalled spending several years working at a particular elementary school without producing any tangible products to show when she was evaluated for tenure. She also recalled how her department chairperson had reminded her that she had been neglecting the writing and publication criteria for promotion, tenure, and merit pay. The time-consuming nature of the Professional Development School assignments and the need to cultivate working relationships were two major factors responsible for this situation. Linda argued that these factors had had a detrimental effect on her progress toward promotion, tenure, and merit-pay raises. In addition, she thought she had not been well rewarded for her Professional Development School work because, in general, college administrators and her colleagues did not value that work. She also was concerned that the leadership thus far had not worked out a "systematic feedback or even support system" for Professional Development School work.

Jerry, who started his Professional Development School work with tenure, reported a different experience. He indicated that the rewards he was receiving matched the energy he was putting into his Professional Development School experience. Jerry emphasized that research productivity should remain the major criterion for promotion, tenure, and merit pay in the academic world. This means that the expectations for research productivity should not be lowered for the Professional Development School participants simply because they experience difficulties. Jerry further asserted, however, that Professional Development School work is unique and that we do not yet have a clear understanding of its nature.

Consequently, Jerry suggested that measures should be taken to redefine research productivity in the Professional Development School settings and establish an alignment between Professional Development School work and the reward system.

Mary, who started her Professional Development School work without tenure, reported that cultivating relationships delayed her progress in producing the tangible results she needed to show when she went for tenure evaluation. She maintained that her supervisors (word used to protect their identity) were unsympathetic to the fact that she had no control over the events that retarded her research productivity. She was frustrated when they labeled her a "less productive" faculty member and claimed that she was "going native" when she tried to explain that the relationships she was cultivating would not stand an "in-progress kind of report." Although Mary believed that the situation was beyond her control, the peer review committee proceeded to give her a low evaluation at the end of the year. At the appropriate time, however, Mary's research productivity surged, which, in turn, led to her tenure appointment. These events made Mary realize that a structural conflict exists between the university's reward system, in which professors are evaluated at regular intervals, and the Professional Development School schedule. Mary concluded that until this structural conflict is resolved, Professional Development School work will continue to be a risky undertaking for untenured junior faculty.

Marcia, another respondent who started to work in the Professional Development School without tenure status, also reported several examples of difficulties associated with securing promotion, tenure, and merit pay within a

Professional Development School context. As reported earlier, Marcia's form of scholarship fit the description of the scholarship of integration. She questioned underlying assumptions and came up with findings that were contrary to current thinking and public belief. But like Mary, Marcia reported that she was frustrated by the slow rate of her research productivity. She claimed that publishers were not willing to publish her findings because they found them "politically incorrect." She was further concerned that those who evaluated her might give her a low rating because of their limited knowledge of the complexity of Professional Development School work. Marcia also reported a happy ending for her Professional Development School work because her work attracted the attention of her evaluators, who, in turn, gave her a high evaluation for outstanding accomplishments in that work.

Richard thought that his work was supported and valued by his colleagues and administrators, but he was unwilling to state that he felt well rewarded for the work he was doing in the Professional Development Schools. Although Richard was untenured when he started his Professional Development School work, he did not, like others who were untenured, report having experienced difficulties in striving for promotion, tenure, and merit pay.

Evelyn was one of the professors who started her Professional Development School work with tenure status. She reported that she loved her work because it gave her opportunities to interact with teachers and students. Evelyn believed that she was intrinsically well rewarded for her Professional Development School work.

Winnie started her Professional Development School work outside the tenure system and worked herself into the tenure track while serving in those schools. Like other respondents who started outside the tenure system or who were untenured when they began their Professional Development School work, Winnie reiterated the joys and struggles involved in satisfying the criteria for promotion, tenure, and merit pay. She maintained that tenure was "the ultimate" reward she was expecting from her Professional Development School work. She talked about various roadblocks that had retarded her progress toward promotion, tenure, and merit pay and those that could possibly prevent her from getting tenure that fall. Winnie indicated that her progress toward satisfying the criteria for promotion, tenure, and merit pay had been retarded for a year and a half because she worked with a teacher who was not intellectually curious. Her research productivity began to increase when she replaced that teacher with three others who were intellectually curious.

Unfortunately, Winnie encountered other difficulties that retarded her progress toward promotion, tenure, and merit pay. The leaders who valued Professional Development School work were replaced by administrators who placed much less value on such work. She argued that change in leadership was a significant negative factor affecting her promotion, tenure, and merit pay because the attitudes of the new administrators toward Professional Development School work had forced her to make a very different case than she had with the previous administration.

The third problem that kept Winnie uncertain about whether she would acquire tenure was the perceived incongruity between the criteria for promotion,

tenure, and merit-pay increase and the nature of her research. She indicated, for example, that she was "writing for a practitioner audience and less for a research audience." This practice ran contrary to the expectations of the administrative leadership, who expected her to write for a research audience. A review of the Department of Teacher Education's summary of indicators for faculty ratings, developed in 1994, confirmed Winnie's fears because it emphasized that writing to the research audience would be rewarded more than writing to the practitioner audience. What was not confirmed, however, was her perception that the book that she and a colleague were planning to publish held less value even though she thought it had the potential to make a much larger impact on practice than an article in the Journal of Staff Development (name used to protect the identity). Preparation and publication of a book is listed as the first criterion for being awarded an extraordinary rating for research/scholarly writing activity during the annual evaluation.

Retardation of Career Development of Junior Faculty

Tenure status was one of the major criteria for selecting the study participants. As indicated earlier, some of the respondents were tenured, whereas others were untenured when they started their Professional Development School work. The review of literature suggested that university faculty's careers can be divided into five stages: beginning assistant professor, assistant professor with more than three years of experience, associate professor, full professor with five years of experience, and full professor within five years of retirement. The study findings

indicated that the Professional Development School experience affected professors in some of these developmental stages more than in others.

The effects of the Professional Development School experience seemed to have been most strongly felt by those professors who began such work without tenure. For example, Linda's department chairperson reminded her that she had not been publishing. Mary, who also started her Professional Development School work without tenure, reported that she spent the first few years of that work without "tangible products" because of circumstances beyond her control. What was frustrating to her was that the peer evaluators were not sympathetic to her case, nor did they show appreciation for the difficulties experienced. She concluded that it is risky to expect junior faculty to be involved in Professional Development School work because it retards progress toward promotion, tenure, and merit-pay raises.

Marcia, who also started working in Professional Development Schools without tenure status, was frustrated by her slow rate of research productivity as an assistant professor. She stated that publishers were not willing to publish her findings because they found them politically incorrect. Finally, Winnie started her Professional Development School work outside the tenure system, and she was not even sure whether that experience was going to help her attain tenure in the fall of that year. She was uncertain because her Professional Development School experience only enabled her to write to the practitioner audience. She was still upset about the delay in her advancement due to a working situation she thought was not productive but that was beyond her control. After reviewing the report of her

interview, Winnie indicated that she ultimately had received tenure. Nevertheless, Winnie thought that her administrators did not value her Professional Development School work very much. Thus, the mismatch between the current reward system has a detrimental effect on the career development of junior faculty.

Conclusions

This study generated volumes of qualitative data. Drawing inferences from the data collected in this study was a challenging experience. No researcher can capture all of the nuances regarding the effects of Professional Development School experience on university professors' research, teaching, and service. However, the analysis of data from this study led to the following exploratory, tentative conclusions.

1.   Emerging Professional Development School work can be classified into the following eight characteristics: (a) generation of new knowledge through research; (b) focus on applied versus basic research; (c) transmission of new knowledge through teaching; (d) application of new knowledge to the solution of significant problems (service); (e) dissemination and diffusion of new knowledge;(f) the promotion, tenure, and merit-pay system; (g) socialization of new faculty in the Professional Development School culture through career-development stages; and (h) team-teaching/collaboration with teachers.

2.   The aforementioned eight characteristics of the Professional Development School culture refute the assumption that Professional Development School work is just service.

3.   Professional Development School work has not been respected and valued by either colleagues or administrators because it is perceived as exclusively service. The study showed that the Professional Development School participants engage in scholarly research. They also work hard to connect their research to teaching and teaching to service. Colleagues and administrators who characterize Professional Development School work as just service are not well informed about the true nature of such work.

4.   The Professional Development School setting is a stimulating laboratory for scholarly work in teaching, research, and service.

5.   Professional Development School work cuts across research, teaching, and service. That is, the participants generate new knowledge, extend it to the students through teaching, and use it to solve significant societal problems.

6.   The actions of some participants in this study were congruent with the concepts of the scholarships of discovery, integration, teaching, and application.

7.   Professional Development School work affected untenured professors more than it did tenured professors; that is, it greatly retarded the professional development or growth of untenured professors working in those schools.

8.   The professors who were already tenured when they started Professional Development School work were more satisfied with the rewards they derived from that experience than were those who started as untenured professors.

9.   University professors need to learn about the cultural complexity, diversity, and nuances of Professional Development Schools before they can operate effectively within those school cultures.

10.   The geographic and cultural distance between the school and university cultures tends to isolate Professional Development School participants from the mainstream of academic life.

Recommendations

The findings presented above led to the following recommendations, which can be food for thought for university professors, administrative leaders, policy makers, and researchers involved with Professional Development Schools. It is, therefore, recommended that university professors and administrative leaders should seriously consider the following:

1.   Redefine Professional Development School work as outreach, in which participants are responsible for conducting research, teaching, and service.

2.   When defined as outreach, Professional Development School initiatives should emphasize the cross-cutting nature of research, teaching, and service activities.

3.   As outreach, the research, teaching, and service activities of university professors should be classified as scholarly and nonscholarly.

4.   The university community should develop criteria for differentiating between scholarly and nonscholarly Professional Development School activities in the areas of research, teaching, and service.

5.   The College of Education should establish a forum for presenting good examples of scholarly work done in Professional Development School settings to educate the university community about Professional Development School work.

6. The university's promotion, tenure, and merit-pay reward system should be revamped in such a way that it recognizes and rewards scholarly work emerging from Professional Development Schools in the areas of research, teaching, and service.

7.   The difficulties experienced by Professional Development School participants should be recognized and appreciated by colleagues and administrators alike.

8.   A support system should be established for university professors, especially junior faculty.

9.   A mentoring program should be established for professors who are beginning to work in Professional Development Schools.

CHAPTER VI

INTERPRETATION OF THE FINDINGS

Introduction

In this chapter, the organizational culture perspective is used to interpret findings presented in Chapter V. Austin (1996), Bergquist (1992), Ott (1986), and Schein (1992) argued that, over time, organizational cultures breed subcultures that coexist with the parent cultures. This phenomenon is not unknown in collegiate settings. Austin found, for example, that the typical collegial culture of American universities breeds (a) a departmental culture and (b) a discipline culture. Bergquist found that the typical collegial culture of American universities breeds (a) a developmental culture, (b) a managerial culture, and (c) a negotiating culture. An understanding of the differences between a parent culture and a subculture is key to understanding organizational function or dysfunction because serious differences between the two can render an organization too weak to pursue its missions and satisfy its stakeholders. Thus, knowledge of the similarities and differences between a parent culture and its subcultures often reveals opportunities and challenges for organizational improvement.

The main thesis of this chapter is that nine years of the conceptualization and implementation of Professional Development Schools associated with Michigan

State University have resulted in the emergence of a Professional Development

School subculture. The researcher based this conclusion on the interview data and

a review of pertinent literature. The Professional Development School subculture

is not only distinctive from the typical outline of American universities, but it also

differs in several ways from the cultures to be found at Michigan State University and

in the College of Education. Below are descriptions of the distinctive elements of

each of the five cultures.

1. The typical culture of American universities. The researcher derived the characteristics of this culture from a review of literature. Bergquist (1992) suggested, for example, that the typical culture of American universities is characterized by a devotion to research, teaching, and service. In reality, the typical collegial culture of American universities emphasizes research. This is certainly the case in more prestigious and selective universities.

2. The culture of Association of American Universities (AAU). The main focus of the culture of the AAU is to conduct "activities to encourage cooperative consideration of major issues concerning research and advanced training, and to enable members to communicate effectively with the federal government" (Encyclopedia of Associations, 1996, p. 990). Thus, it could be argued that the culture of the AAU universities is even more research oriented than the typical collegial culture of American universities.

3. The culture of American land-grant universities. Mawby (1996) and Anderson (1976) characterized the culture of these universities as being more oriented to service through applied research and problem solving than the typical collegial culture of American universities.

4. The collegial culture of Michigan State University. The researcher argues that because Michigan State University is both an AAU and a land-grant university, its culture resembles the typical culture of American universities, but with a more pronounced tension between the research and service/problem-solving orientations.

5. The dominant culture of the MSU College of Education. Long before the Professional Development Schools were initiated, the College of Education had made considerable progress in linking and balancing the AAU emphasis on research with the land-grant emphasis on service and problem solving.

The Institute for Research on Teaching (IRT), established in 1975, featured the involvement of "teacher-collaborators" in much of its work. Teacher-collaborators were regular classroom teachers who took a leave from their classroom duties to serve as members of IRT research teams. The teacher-collaborator role was designed to connect the research of the Institute more firmly with the realities and complexities of classroom teaching. This connection was intended to make the products of the Institute's research more useful to practicing teachers, as well as to strengthen it in other ways. Another example of pre-PDS work designed to link research and problem practice more firmly was the Teacher Development and Organizational Change (TDOC) project initiated by Erickson and brought to fruition by Campbell and his teacher colleges at Elliott Elementary School in Holt, Michigan. TDOC research members employed ethnographic methods for a combination of research intervention purposes. After observing their colleagues at Elliott for a time, they began to raise questions in a nonthreatening way about why the teachers were using the approaches they observed. In the context of a relationship of increasing trust, the teachers were able to respond to the question without becoming defensive. They began to ask themselves, "Why do we do things this way?" And "Is there a better way to do them?" Campbell and his fellow teachers then engaged with the teachers in exploring new possibilities. As these two examples suggest, the culture of the College of Education had begun to move in the direction of a closer research connection with practice well before Professional Development Schools started. Even so, the responses of several interviewees indicated that significant differences between the dominant culture of the College of Education and the Professional Development School subculture continue to exist.

The values and orientations shared by participants in the Professional Development School subculture are not solely attributable to the Professional Development School experience itself. Other factors that might have contributed to their emergence are (a) the land-grant mission of the university, (b) the components of collegial culture of the College of Education and the Department of Teacher Education that have been supportive of this subculture, and (c) the self-selection of the Professional Development School participants. (Professional Development School participation was voluntary, and it seems reasonable to assume that those

who volunteered first were more likely than others to value closer connections to practice and other "Professional Development School values" from the outset.)

To sum up, an analysis of the interview data suggested that the emerging Professional Development School subculture differs, in varying degrees, from all three collegial cultures and from the specific cultures of Michigan State University and its College of Education. This researcher would argue that the degree to which the Professional Development School subculture differs from the primary culture in the college is contingent upon the visions of the leadership at any given time.

The findings of the study suggested that the character and uniqueness of the emerging Professional Development School subculture are more distinct when its elements are compared with those of the typical collegial culture of American universities than with those of the MSU College of Education. The comparison is presented below. Occasionally, however, the researcher also will draw contrasts between the Professional Development School culture and the typical collegial culture of the MSU College of Education, as the latter was portrayed by the faculty members interviewed for this study. Before embarking on such a comparison, a more detailed description of the typical culture of American universities will establish a firmer basis for comparison.

The Typical Collegial Culture: Pooled-Interdependence Missions

Before describing pooled interdependence of the research, teaching, and service missions, it is necessary to define two constructs: (a) technology and (b) interdependence. In this study, the construct "technology" was used to refer to "the

knowledge, tools, techniques, and actions . . . [that organizations use] to transform inputs into outputs . . . [or] the organization's transformation process, and includes machinery, employee education and skills, and work procedures used in that transformation process" (Daft, 1986, p. 133). Interdependence refers to the extent to which the missions of research, teaching, and service depend on one another to yield the desired output (for example, research articles, teaching for conceptual understanding, or gaining support for Professional Development Schools and changes in higher education and K-12 teaching practices).

A review of the literature suggested that members of the typical collegial culture pursue the missions of research, teaching, and service through a technology called pooled interdependence. Pooled interdependence occurs where faculty members perceive the missions of research, teaching, and service as "contributing [independently] to the common good of the organization" (Daft, 1994, p. 153). That is, pooled interdependence develops in settings where faculty members believe that they can accomplish their goals by pursuing the missions independent of one another. In a pooled-interdependence setting, the relationship among the missions of research, teaching, and service resembles what Daft called a "weak interdependence."

Systems theorists perceive universities as complex organizations embedded in dynamic and turbulent environments (society). They believe that universities receive inputs from the environment in exchange for the outputs they supply to the environment (society). The inputs and outputs of higher education fall into three categories that are called the missions of (a) research, (b) teaching, and (c) service.

In the typical collegial setting, the three missions would be viewed as independent of one another. Using the pooled-interdependence technology, university professors transform the inputs (e.g., funds) they receive from the environment into outputs (e.g., a research product). The products that university professors generate differ in quality. According to the academic standards, high-quality products are considered as scholarship, whereas the rest are nonscholarly. Both scholarly and nonscholarly products are sent to the environment for use. Figure 1 illustrates this process.
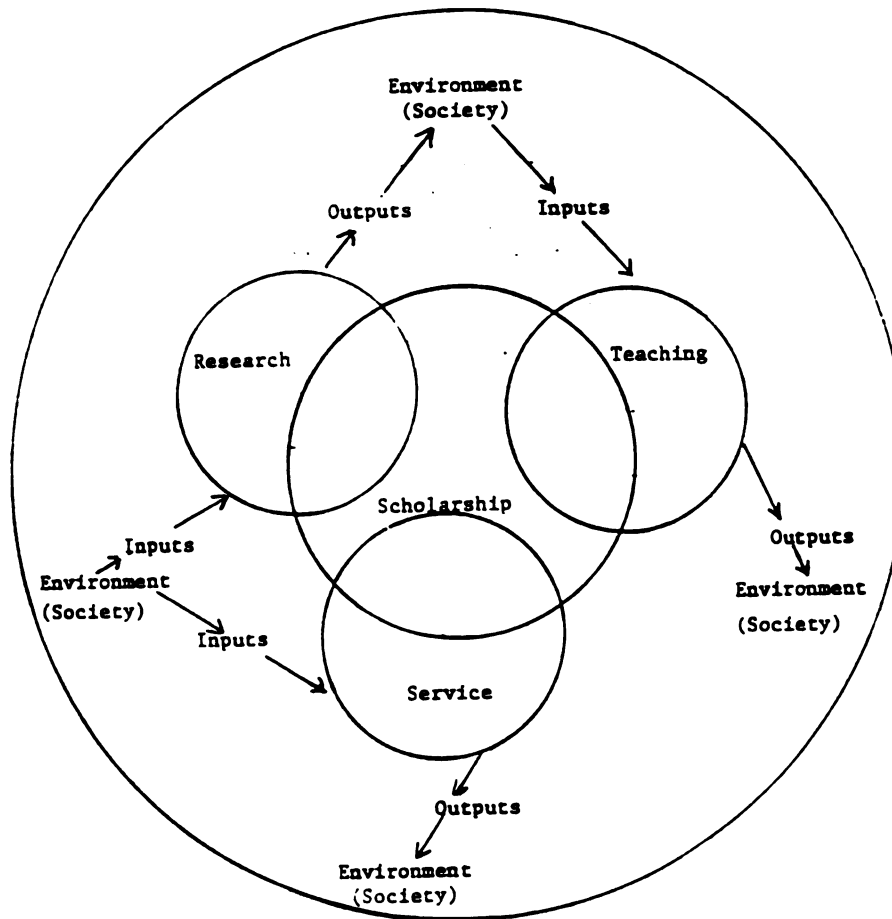

Figure 1: The pooled interdependence of research, teaching, and service missions.

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Balderston (1995) contended that "the dominant paradigm for the development of new knowledge and its transformation into things of value begins with basic research" (p. 265). Thus, a technology that the members of the typical collegial culture use to fulfill their research, teaching, and service obligations is not necessarily sequential. A detailed discussion and illustrations of how pooled interdependence occurs when the members of the typical collegial culture of American universities pursue the missions of research, teaching, and service is provided below.

Research

In the area of research, universities receive inputs such as funds, faculty time, equipment and buildings, and other consumables. University professors transform these inputs into outputs such as books, journal articles, conference papers, and book reviews. Within the research mission of the typical collegial culture of American universities, the process of transforming inputs into outputs begins with the conceptualization of a researchable problem, followed by the formulation of hypotheses, the design of research methods, the collection of data and its analysis. The process ends with the presentation of findings, at a conference or publication in a refereed journal.

Academic freedom and the norms of the typical collegial culture of American universities do not require university professors to select research questions that are grounded in particular contexts, or restrict them from doing so. The assumption that "knowledge is pursued for its own sake" (Rice, 1996, p. 8) governs the selection of

research contexts and questions. The members of the typical collegial culture of American universities argue that the "most distinctive task of the academic professional is the pursuit of cognitive truth" (Rice, 1996, pp. 8-9).

The members of the typical collegial culture of American universities believe that "peer review" plays a significant role in assessing the quality of their output and characterizing it as either scholarly or nonscholarly output. They also believe that "national and international professional associations" are the major sources of their reputation. As members of specific disciplines, members of the typical collegial culture of American universities are careful to conduct research that generally informs their disciplines. They present the findings of their research to the research community through the publication of research articles in refereed journals and/or conference presentations.

The outputs that members of the typical collegial culture of American universities generate may be of a scholarly or nonscholarly nature. Scholarly outputs are believed to have an influence on the environment and enhance the reputation of the faculty and the institution. Scholarly research outputs bring awards, prizes, honors, and more funds to faculty members of the typical collegial culture of the American university. Their outputs are widely cited by the academic community.

When the outputs are not of a scholarly standard, they fail to bring the desired reputation to the university professors and the institution. The prevailing artifacts, norms, values, and basic assumptions derived from the literature review suggest that the members of the typical collegial culture of American universities pay more

attention to the research mission of the university than to the teaching and service missions. Jordan (1994) asserted, for example, that "there are widespread concerns that faculty value research more than teaching. The evidence offered to support this perception is the undisputed fact that many faculty spend only six to ten hours per week in the classroom" (p. 15).

Thus, a member of the typical collegial culture of American universities selects one of the problems presented to him or her by the environment (society), develops a research question, collects and analyzes the findings, and then delivers those findings back to the society through publication or conference presentation. The research findings are not necessarily connected to the missions of teaching or service. They generally do not find their way into the classroom. In the words of Rice (1995), the findings of the research mission do not "interact, inform, or enrich" (p. 144) the missions of teaching and service.

Teaching

In the area of teaching, the environment (society) also provides university professors with inputs such as students, students' time, faculty time, tuition, buildings, and equipment. University professors transform these inputs into outputs through the teaching process.

Teaching outputs are sent back to the society in the form of a qualified or an educated workforce. The outputs of teaching also may be in the form of "skills which will be valuable both to the person acquiring those skills and to the society more

generally" (Johnes & Taylor, 1990, p. 52). As in the case of research, the teaching outputs may be scholarly or nonscholarly in nature.

The members of the typical collegial culture of American universities often claim "the triumvirate of their missions—teaching, research, and public service/ outreach" (Mawby, 1996, p. 49). There are many cultural artifacts, norms, values, and basic assumptions revealing that this assertion is more rhetoric than reality because professors devote very little time to teaching as compared to research. Braxton (1996) affirmed that "to accommodate research activity, faculty teaching loads are reduced, and teaching assistants are assigned to large undergraduate courses, . . . [leaving an impression that] students are ignored because faculty pursue their own scholarly interest" (p. 5). Sullivan (1996) further explained that "in recent years . . . observers and policy makers have criticized academe for being too research oriented, with resulting detrimental effects on college and university students" (p. 16). Diamond (1993) also noted that academic "institutions are told that they have lost touch with their central mission of teaching students" (p. 6).

In summary, although the members of a typical collegial culture of American universities claim that teaching is one of their central missions, many observers argue that, in reality, the members of the typical collegial culture of American universities do not devote many hours to teaching; that is, they value teaching less than research. There are "unwritten rules [norms especially in the reward system] that allow members of . . . [a typical collegial] culture [of American universities] to know [that] they are expected to do more research than teach" (Hatch, 1997, p. 214).

The criticism that university professors devote more of their time to research than teaching is an indication that the missions are not connected and are pursued independently of one another. This happens because, when pursued independently, the mission of research demands its own time, and the tendency, although not always intentionally, is to spend more time on research at the expense of the other missions. That is, the missions of research, teaching, and service do not "interact, inform, and enrich . . . [each other]" (Rice, 1995, p. 144). This happens because the output of one mission is not necessarily the input of another mission.

Service

In the typical collegial culture of American universities, the pursuit of the service mission of the university is not necessarily connected to the pursuit of the missions of research or teaching. Cornett (1993) explained that, in the area of service, typical traditional university professors are expected to

1. Contribute to the orderly and effective functioning of the academic administrative unit (program, department, school, and college). . . .
2. Contribute to the university community with service on university-wide committees [e.g., task forces] . . . and
2. Contribute to local, state, and regional and national communities, including scholarly and professional associations. (p. 50)

In the area of service, the environment (university community and the society) presents the typical collegial culture of American universities with many inputs, such as "social, civic, economic, and moral problems" (Boyer, 1996, p. 11). According to Mawby (1996), societal inputs to academic institutions today also include "inflation, K-12 and higher education, health-care and wellness promotion, ground-water

quality, environmental issues, violence, civil relationships, [and] peace" (p. 51). The society expects the members of the typical collegial culture of American universities to transform these problems (inputs) into solutions that, in turn, become outputs to the environment (society).

The members of the typical collegial culture of American universities are not "moving encyclopedias" of answers or solutions to societal problems. However, society, at least, expects the academic community to respond in one way or another to the challenges facing the society. The quality of the solutions that members of the typical collegial culture of American universities generate and send to the society may be scholarly or nonscholarly in nature. Although the members of the typical collegial culture of American universities believe that they are doing their best to address the problems facing society, the general norms, values, and basic assumptions of the typical collegial culture of American universities strongly suggest that the members of that culture give very little attention to solving societal problems. Mawby (1996) asserted, for example, that "in the academic life of public institutions today, . . . public service is too often accepted with reluctance" (p. 49). Mawby further charged that "the solutions most often devised to address such issues tend to be narrow, discipline- or professional-oriented, and biased, simplistic, and inadequate to the task" (p. 51). Schoppermeyer (1990) also observed that the members of the typical collegial culture of American universities are selective in providing service and that the amount of service they provide is insignificant. He added that when a faculty member in the typical collegial culture of American

universities provides service off campus, "neither service nor instruction [off-campus classes] is tied into any mission statement" (p. 81).

Thus, the artifacts, norms, values, and basic assumptions of the typical collegial culture of American universities suggest that although members believe that they tend to focus on the missions of research, teaching, and service, in reality they overemphasize research. They relegate service to the lowest position. Basic research remains the dominant strategy for conducting research in the typical collegial culture of American universities. Records indicate, for example, that "of the estimated $1;7.2 billion in academic research spending in fiscal year 1991, $11.1 billion was . . . [spent on] basic research and [only] $5.2 billion was [spent on] applied research" (Balderston, 1995, p. 264). Balderston confirmed that "the dominant paradigm for the development of new knowledge and its translation into things of value begins with basic research and proceeds through applied research to development and commercial market introduction" (p. 265).

The overemphasis of one mission at the expense of the others results from the fact that the typical dominant collegial culture of American universities does not reinforce the connection among the research, teaching, and service missions; that is, there is little interdependence among the missions of teaching, research, and service. The members of the dominant culture sometimes pursue each mission independently of the others. The outputs of the service mission, for example, do not necessarily have to inform and enrich teaching. In short, there is no sequential interdependence among the missions of research, teaching, and service.

When a weak relationship (dependence) exists among the missions of research, teaching, and service and when the outputs of one mission do not become the inputs of the next mission but are sent directly to the environment, a pooled interdependence exists. This type of relationship is characteristic of the typical collegial culture of American universities. Whereas scholarship can be accomplished in this setting, the mission connection is remote.

There are situations in which the missions of research, teaching, and service can be connected and scholarship can become the core of the pursuit of the institutional missions. This occurs when the missions of research, teaching, and service are sequentially connected. This kind of relationship among the missions of research, teaching, and service was found within the emerging Professional Development School subculture.

Cultural Characteristics of the Professional Development School Subculture

The aim of this section is to present ten dimensions of the typical collegial culture of American universities that emerged from the review of literature on the typical culture of American universities and the interview data. Nine of the ten cultural dimensions were derived from Schein's (1992) book on organizational culture theory, and the tenth was derived from Nanda's (1996) writing on organizational learning theory. The ten dimensions used to compare the typical collegial culture of American universities and the emerging Professional Development School subculture were (a) mission, (b) strategy, (c) time, (d) space, (e) sharing of information, (f) relationships, (g) leadership, (h) assessment/reward,

(i) growth, and (j) structure. The dimensions are presented in diagram form in Figure 2. The diagram is followed by a discussion highlighting the similarities and differences between the typical collegial culture of American universities and the emerging Professional Development School subculture.

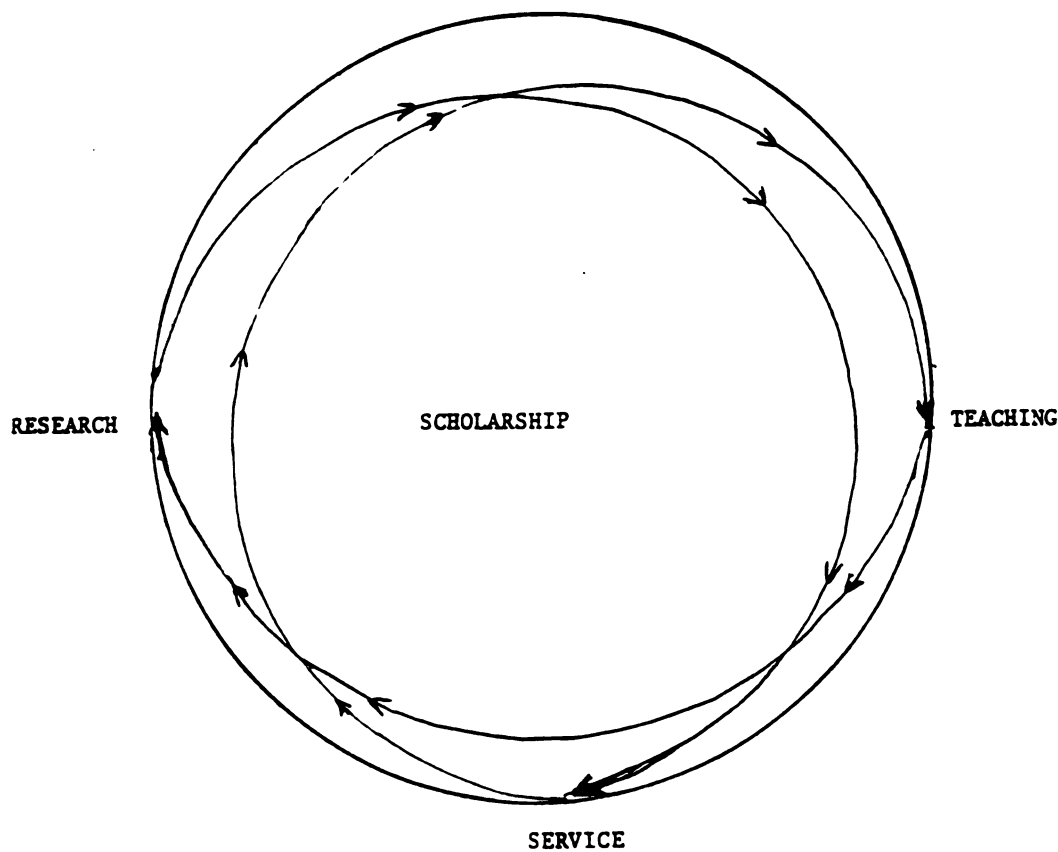RESEARCH   SCHOLARSHIP   TEACHING

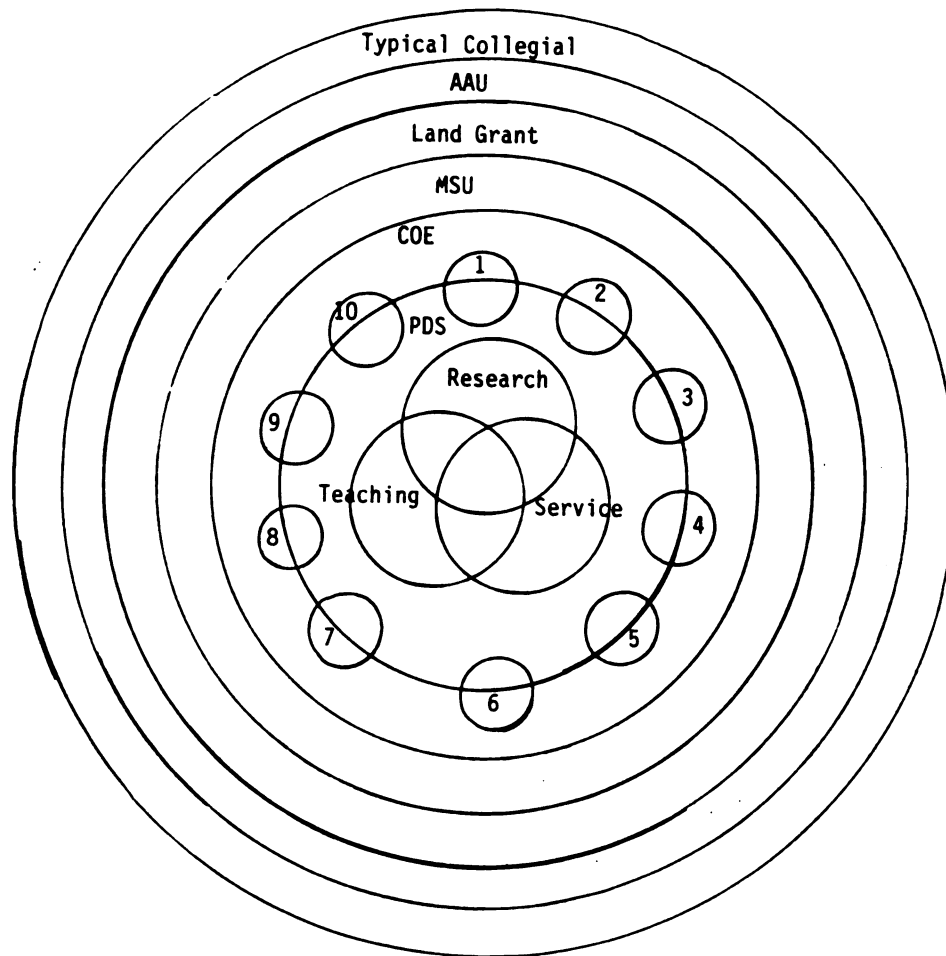SERVICE

Figure 2: Dimensions of culture.

Before presenting a comparison, the criteria for judging the similarities and differences of the dimensions of the emerging Professional Development School subculture and the typical collegial culture of American universities are presented. The three criteria, developed by Ott (1989), are the following subcultures: (a) the

enhancing subculture, (b) the orthogonal subculture, and (c) the counterculture. The criteria are used throughout the presentation to judge whether a dimension of the emerging Professional Development School subculture, when compared to the typical collegial culture of American universities, is (a) an enhancing subculture, (b) an orthogonal subculture, or (c) a counterculture.

Professional Development School Subculture: Sequential Interdependence of Missions

Mission

The previous section showed how the members of the typical collegial culture of American universities maintain a weak interdependent relationship among the missions of teaching, research, and service through the use of pooled interdependent technology. The typical dominant collegial culture of American universities emphasizes research more than teaching and service (Diamond, 1993). In this section, the researcher argues that, on the contrary, the members of the emerging Professional Development School subculture maintained a strong interdependent relationship among the missions of research, teaching, and service through a technology called sequential interdependence (Daft, 1996). This means that the members of the Professional Development School subculture tend to use the outputs of one mission as the inputs of another mission. Figure 3 illustrates the sequential connection of the three missions of research, teaching, and service as an example of how the members of the emerging Professional Development School subculture maintain a strong interdependence of the three missions.

Typical Collegial
AAU
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Research
Teaching
Service

1 2 3 4 5 6 7 8 9 10

1. Missions	6. Relationship
2. Strategy	7. Leadership
3. Time	8. Assessment/Rewards
4. Space/Distance	9. Growth
5. Language/Communication	10. Structure

Figure 3: Professional Development School point of view of research, teaching, and service.

The following examples illustrate how the members of the emerging Professional Development School subculture established and maintained interdependence. Gloria, for example, used the outputs of her research to make her classroom teaching more exciting. She also used the outputs of her research and

teaching (e.g., well-trained graduate students) to make conference presentations during her service time. In addition, she used her knowledge to improve the admission system and inform colleagues about the quality of suitable applicants. Evelyn stated, "I launched a research program based on the 'problem' presented to me by Jennet" at a Professional Development School Summer Institute in 1991. She connected the outputs of her research to her "undergraduate . . . and doctoral teaching." Evelyn also indicated that she connected her research and teaching outputs to service through conducting "a workshop . . . [that was] based on my mentoring tapes, which featured my Professional Development School teachers and colleagues."

The two examples described above illustrate the sequential nature of the technology that the members of the emerging Professional Development School subculture used to accomplish the research, teaching, and service obligations to make sure that the outputs of one mission "interact, inform, and enrich" (Rice, 1995, p. 144) the others. The central zone represents the cross-cutting of the functions of research, teaching, and service, which is called scholarship. To the extent that the MSU College of Education culture resembles the typical collegial culture of American universities (where research, teaching, and service are separate entities), the Professional Development School subculture relative to research would be a counterculture (Ott, 1986). To the extent that the MSU College of Education culture is influenced by the land-grant culture, the Professional Development School subculture becomes enhancing.

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<u>Strategy</u>

The typical collegial culture of American universities and the emerging Professional Development School subculture differ in the strategies that they use to pursue their missions of research, teaching, and service. In the area of research, members of the typical dominant collegial culture of American universities normally use a basic research strategy, whereas those of the emerging Professional Development School subculture sometimes use an applied research or action research strategy. In this way, the Professional Development School subculture becomes a counterculture to the typical collegial culture of American universities.

In teaching, the members of the typical collegial culture of American universities emphasized individualism, whereas those of the emerging Professional Development School subculture emphasized team teaching and teaching collaboratively. Although it could not be ascertained whether the members of the typical dominant culture used an "inquiry and discovery" teaching strategy, it was found that this strategy was used by members of the Professional Development School subculture.

In the area of service, members of the typical dominant collegial culture of a college of education and the Professional Development School subculture differed on the strategies they use to connect research and teaching. The literature review revealed that members of the typical collegial culture do not always use the outputs of one mission as the inputs of the next mission. In contrast, the members of the emerging Professional Development School subculture used service as a strategy

for educating and eliciting support from different audiences about research and change in teaching practice. Thus, on the strategy of service, the Professional Development School subculture becomes a counterculture.

To Schein (1992), strategies are "the means by which goals will be made . . . [and] require a higher level of consensus" (p. 58). Because "cultural assumptions form around the means [strategy] by which the goals are accomplished, they will inevitably involve the internal issues of status and identity" (Schein, 1992, p. 61). Thus, the differences in the strategies used by the different cultures accounted for the differences in, for example, the reward structures, and inclusion or exclusion of people in discussion and decision making. Thus, on the dimension of strategy, the Professional Development School subculture held basic assumptions that are in conflict with those of the collegial culture, making it a counterculture. Although the applied research strategy is not new, it will continue to challenge the traditional strategies of the typical collegial culture of American universities. The other strategies also hold the same potential.

Time

Schein (1992) asserted that time is a very important cultural dimension that may cause "tremendous communication and relationship problems" in the organization if the members of the organization hold different conceptions of time, about which there is a low level of consensus. An analysis of the norms, values, and basic assumptions of the typical collegial culture of American universities and the emerging Professional Development School subculture offers several examples of

the conflict resulting from the differences in the conception of time and a low level

of consensus among the members of the typical collegial culture of MSU's College

of Education and the emerging Professional Development School subculture.

There are three main conceptions of time. They are

(a) the linear-separable [conception of time, which] assumes that time can be subdivided into discrete [quantifiable] units . . .; (b) the circular-traditional [conception of time, which assumes] that the future will resemble the past if the same conditions will occur; and (c) the procedural-traditional [conception of time, which] focuses on the activity being done and not on the time it takes to complete it or how it fits within a cycle. . . . [In this paradigm, time] as measured by minutes or hours is unimportant. (Schein, 1992, pp. 26-27).

In the domain of research, the literature review showed that the typical

collegial culture of American universities holds different conceptions of time. As

Diamond (1993) asserted, "Promotion, tenure, and merit pay are but three of the

reasons why faculty do what they do" (p. 3). The review committees and the

administrators hold and use the circular and the procedural conceptions of time to

make judgments about the promotion, tenure, and pay increase of faculty. This

happens because many research activities are organized according to these two

conceptions of time. For example, "scholarship does not necessarily have clear

beginning and end . . . points; . . . the process of article submission and review is

quite open-ended" (Lawrence, 1994, pp. 30-31), and the faculty progress toward

tenure by going through successive stages of development (Lawrence, 1994).

The members of the emerging Professional Development School subculture

also hold these conceptions of time. The trouble starts, however, when the peer

review committees and the administrators use these conceptions of time to make

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judgments about the scholarship of the members of the Professional Development School subculture for promotion, tenure, and pay increase purposes. When this happens, and decisions regarding members of the emerging Professional Development School subculture are made on the basis of the circular and procedural conceptions of time, junior faculty tend to be disadvantaged. As Mary observed, "It is difficult to be rewarded within the structure that casts things out in academic years. You have to be evaluated at regular intervals, and those intervals may not match where you are in your work." Thus, the application of the procedural conception of time by administrators to the research productivity of members of the emerging Professional Development School subculture tended to retard the participants' (especially junior faculty's) progression toward tenure. In this regard, the emerging Professional Development School subculture tends to be developing as a counterculture to the typical collegial culture of the MSU College of Education.

In the area of teaching, both the members of the typical collegial culture of American universities and those of the emerging Professional Development School subculture hold linear conceptions of time. For example, their "class periods are regulated by the clock and can be plotted out in a weekly schedule" (Lawrence, 1997, p. 27). Second, the traditional circular conception of time also influences the teaching and learning activities because the organization of the teaching and learning processes takes place in an orderly form. To this extent, the emerging Professional Development School subculture grows as an orthogonal subculture to the typical collegial culture of American universities.

In the area of service, the dominant culture used the circular-conception-of-time perspective to provide faculty with time to attend annual conferences. The members of the Professional Development School subculture also used the circular perspective of time to organize their service time. In this case, the emerging Professional Development School subculture was orthogonal to the typical collegial culture because the circular conception of time was applied at different levels.

The study findings indicated that the norms, values, and basic assumptions governing a typical culture's linear social conception of time were not always compatible with those used by Professional Development School participants, nor did they enhance their goals and aspirations. Thus, with regard to the time dimension, the emerging Professional Development School subculture stood as a counterculture to the typical collegial culture of American universities. However, to the extent that a land-grant culture is in place, the Professional Development School subculture would be enhancing. It is important to take these differences seriously because, according to Schein (1992), "When people differ in their experience of time, tremendous communication and relationship problems typically emerge" (p. 105).

The current emphasis on outreach may mean that more university professors will find themselves in partnership with K-12 education systems and other organizations. If the outreach mission is to be accomplished, a typical academic culture will have to find ways to reconcile the administrators' and faculty members' differences regarding the time perspective.

Space/Distance

The typical collegial culture of American universities and the emerging Professional Development School subculture differed on the dimensions of space, as well. Space is a multifaceted element of culture and has many implications for the relationship between the typical collegial culture of American universities and the emerging Professional Development School subculture.

In the area of research, Bergquist (1992) described the theme of isolation characteristic of the typical collegial culture of American universities. He acknowledged that the members of the typical collegial culture of American universities prefer to "labor alone on [research] projects" (p. 43). Jerry affirmed the theme of isolation, saying that the Professional Development School work "reduces . . . contact with other researchers in other institutions." In the domain of research, the emerging Professional Development School subculture tends to develop as an enhancing culture to the typical collegial culture of American universities.

In the area of teaching, Bergquist (1992) also indicated that the members of the typical collegial culture of American universities prefer to work in isolation from other faculty members. He indicated that the members of the typical collegial culture of American universities "teach by themselves in the classroom, plan curriculum and courses in isolation from their colleagues [i.e., they prefer not to share their own teaching spaces]." As far as teaching space is concerned, the findings of this study showed that the members of the emerging Professional Development School subculture preferred to share their teaching space with collaborating teachers, both

on and off campus. Thus, in the domain of teaching, the emerging Professional Development School subculture stands as a counterculture to the typical collegial culture of American universities. The pre-Professional Development School collaborative activities of the MSU College of Education, however, seem to suggest that the degree of isolation within the MSU College of Education culture might be less intense compared to that of the typical collegial culture of American universities. One can speculate, therefore, that the emerging Professional Development School subculture might have been closer to the MSU College of Education's culture than the collegial culture of American universities.

Universities and Professional Development Schools can be compared to what Giroux (1992) called "social sites and 'spaces' in which the [typical] dominant [collegial] culture [of American Universities] is encountered and challenged by subordinate cultures [e.g., an emerging Professional Development School subculture]" (p. 99). Giroux also used the "border metaphor" to characterize the boundary between a culture (e.g., the typical collegial culture of American universities) and a subculture (e.g., Professional Development School subculture). According to this metaphor, then, university professors and K-12 partners become "border-crossers" (p. 34), crossing into the culture they know less about. This means that university professors leave the collegial culture they understand best and cross the border into the Professional Development School subculture, about which they know less. K-12 collaborating teachers also experience the same problem when they border-cross to the university in order to team teach with university

professors. Rhoads (1996) found that the differences in culture across the borders were the major roadblock to research and change in teaching practice.

Giroux (1992) identified different types of spaces or borders that university and K-12 participants had to cross. They include "physical and cultural borders" and the "ideological and political borders" (p. 33). The dimension of space and "border crossing" has implications regarding the assumptions people bring into the foreign spaces (cultures). It is imperative for collaborating institutions to design programs that will help participating faculty "crossing borders" to understand the norms, values, and basic assumptions of the new culture as quickly as possible. Thus, in the areas of research and teaching, the Professional Development School subculture reveals itself as a counterculture to the typical collegial culture of American universities. The mounting emphasis on outreach at a land-grant institution should place the issue of space and border crossing at the center of academic discourse.

Language/Communication

Over the years, the language differences between the typical collegial culture of American universities and the emerging Professional Development School subculture have become distinct. The language dimension has implications for communication across the borders. According to Boyer (1990), communication is a process of sharing new knowledge with various constituencies.

In the area of research, the members of the typical collegial culture of American universities write for a peer researcher audience, whereas members of the

emerging Professional Development School subculture write for a "practitioner audience." The fact that the current reward structure of the typical collegial culture of American universities continues to provide greater rewards for faculty who write mainly for the research audience than it does for those who write mainly for the practitioner audience may continue to escalate the tension between the typical collegial culture of American universities and the Professional Development School subculture.

In the area of teaching, members of both the typical collegial culture of American universities and the emerging Professional Development School subculture believe in sharing new knowledge with future scholars [students]" (Boyer, 1996, p. 16). Although Braxton (1996) suggested that the former pay very little attention to teaching, Rice (1995) maintained that the scholarship of teaching "is the most difficult form of scholarship to discuss because we do not have the appropriate language" (p. 142) to talk about it. Thus, developing a language to articulate the scholarship of teaching continues to be a critical issue in the university-school collaboration.

In the area of service, the members of the Professional Development School subculture spend time communicating with and educating audiences who could later support research and change in teaching practice. As Rhoads (1996) observed, "Part of the communication problem relates to language differences: academic jargon versus school jargon" (p. 58). The language difference has implications for understanding the assumptions that university and K-12 participants bring with them

when they enter foreign cultures. This difference also has implications for how they act in the new cultures. Giroux (1992) advised educators crossing borders that they should talk across the borders in ways that minimize miscommunication. He indicated that when educators leave their own cultures to work in unfamiliar cultures, they should address the social, political, and cultural issues using the experiences of their own cultures. Giroux advised that, to be effective in addressing issues in the new cultures, educators will sometimes be forced to relinquish some of the preconceived notions about race, gender, and class that they acquired from their own cultures. He further asserted that once educators have crossed the borders into a new culture, they can speak reflectively on issues of race, gender, politics, and class, but "they may not speak as others whose experiences they do not share." This means that they should always acknowledge that the interpretation of the norms, values, and basic assumptions may be clouded by the fact that they are outsiders to the culture.

Despite the difficulties in communication and the differences in the cultures of the university and the school, the partnership concept has much to offer for K-12 and higher education systems. Addressing issues of communication might help improve the climate for teaching and learning across the borders. "The lack of a commonly understood vocabulary . . . [underlies] the need to give close attention to this problem at the early stages of planned change" (Bull, 1994, p. 85).

Thus, the difference in the nature of the audiences (which side of the border) and purposes for writing illustrate the tension between the typical collegial culture of

American universities and the land-grant culture. The fact that communication is problematic nine years after the establishment of the Professional Development Schools underscores their resilience and indicates that communication should occupy a high place in the university-school partnership discussion if the college culture is to reflect important elements of the land-grant culture.

Relationship

Relationship is a cultural dimension that has the potential for strengthening the interaction between the typical collegial culture of American universities and the emerging Professional Development School subculture. Members of the typical collegial culture of American universities uphold the norms, values, and basic assumptions of individualism. That is, "Faculty members labor alone on projects. . . . The collegial culture nurtures the 'lone wolf,' the 'eccentric,' and the oblivious absentminded professor in the manner that is unique to American higher education" (Bergquist, 1992, p. 43). Members of the Professional Development School subculture, on the other hand, emphasize collaboration in research, teaching, and service.

For example, in the area of service, when Mary was invited to deliver a keynote speech, she invited collaborating teachers to share their Professional Development School classroom experiences with the audience. University participants and K-12 faculty of the emerging Professional Development School subculture attend seminars, workshops, and conferences together. Thus, the rise in relationship in the Professional Development School subculture raises serious

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questions about the place of individualism in higher education in the twenty-first

century. That is, should the typical collegial culture of American universities continue

to reward faculty for working alone more or reward collaboration at least equally?

As academic institutions strategically position themselves to enter the twenty-

first century, the need to reevaluate this academic norm against the findings of

Gilley, Fulner, and Reithlinghoefer (1986) will become urgent. Gilley et al. asserted

that, when searching for academic excellence, "we found a significant emphasis on

teamwork and the creation of strong administrative teams" (p. 29). Even more

instructive is Senge's (1990) advice that

> As the world becomes more interconnected and the business becomes more
> complex and dynamic, work becomes more "learningful." It is no longer
> sufficient to have one person learning for the organization. . . . The learning
> organizations that will truly excel in the future will be the organizations that
> discover how to tap the people's commitment and capacity to learn at *all*
> levels of an organization. (p. 4)

Senge (1990) further challenged the place and role of the "lone wolf," the

"eccentric," and the oblivious absentminded professor" (Bergquist, 1992, p. 43) in

learning organizations when he wrote that "learning organizations [are] organizations

where people continually expand their capacity to create the results they truly desire,

where new and expansive patterns of thinking are nurtured, where collective

aspiration is set free, and where people are continually learning how to learn

together" (p. 3). Thus, the emerging Professional Development School subculture

stands as a counterculture to the typical collegial culture of American universities.

Clearly, the place and the role of the individual versus that of the group in academic-

learning organizations of the future is likely to be one of the most perplexing

questions facing academic institutions of the twenty-first century if the land-grant culture is to function.

<u>Leadership</u>

The role of leadership in organizational culture and change was captured by Schein (1992) when he stated that leadership is "intertwined with the formation, evolution, transformation, and destruction" (p. 386) of the culture of the institution. In this study, it was found that the members of the typical collegial culture of American universities and those of the emerging Professional Development School subculture held different norms, values, and basic assumptions about leadership. For example, Bergquist (1992) asserted that

> members of the . . . [dominant] collegial culture [of American universities] generally assume that the effective leadership is exerted through the complex give-and-take of campus politics . . . [and that] the successful faculty leader will have learned how to live in and even enjoy . . . committee meetings and will have gained power by working skillfully within this structure (as well as working outside by meeting individually with colleagues and making artful use of memoranda, agendas, and action-oriented proposals). (pp. 44-45)

Bergquist added that the members of the typical collegial culture of American universities "will assume that institutional change takes place primarily through . . . the quasi-political, committee-based, faculty-controlled governance process of a college or university" (pp. 45-46).

On the other hand, the members of the emerging Professional Development School subculture believe that "leadership . . . [is] exerted in complex and non-traditional ways . . . [through] the use of expert power. . . . [They] choose . . . a more collaborative or . . . autonomous form of authority" (Bergquist, 1992, p. 119).

According to Bergquist, the leadership of the Professional Development School subculture, which he called the "developmental leadership, . . . seek[s] to change institutions through . . . collective awareness of the problems facing the institutions and a joint recognition of alternative solutions to these problems" (pp. 120-121).

First, the respondents in this study indicated that the university community and the administrators did not value the Professional Development School work. One of the participants reported that she had been given a bad evaluation for refusing to turn in an "in-progress report" because she believed that it was not the right time to write about the relationship that was emerging in her Professional Development School setting. Some respondents also indicated that the leadership did not understand the true nature of Professional Development School work, even though these types of schools had been in place for nine years. The experiences mentioned by the Professional Development School faculty respondents suggest that they did not experience individualized consideration (i.e., "considerate and supportive leadership") (Bass, 1985, p. 211) from leadership.

Second, some respondents did not think they were appropriately rewarded for the work they were doing in the Professional Development School settings. Another participant believed that the institution would not do anything to improve the participants' current Professional Development School situations. These perceptions suggest that their perceptions was that their leaders were not giving them incentives or "contingency rewards" that were commensurate with the efforts they were putting into their Professional Development School work.

Finally, the idea that some interviewees perceived leaders as not valuing

Professional Development School work links with another idea expressed, that some

respondents experienced little institutional support. This might happen because

leaders "primarily," consciously or unconsciously, act from typical norms, values, and

basic assumptions of the collegial and AAU cultures. This further implies that, in the

cultural dimension of leadership, attention to the land-grant culture is necessary if

the Professional Development School subculture is to be enhancing.

The emergence of the Professional Development School subculture created,

nationally, a dual leadership situation. There is (a) the traditional leadership of the

typical collegial culture of American universities, skilled in bringing about

organizational change through "the quasi-political, committee-based, faculty-

controlled governance process of a college or university" (Bergquist, 1992, pp. 45-

46); and (b) the leadership of the emerging Professional Development School

subculture, which fits Baker's (1990) description of "paradigm pioneers" or "paradigm

shifters" (p. 71). According to Baker,

> [a] paradigm shifter [is one who] has played the role of catalyst, change
> agent, and has stirred up a lot of thinking in the prevailing paradigm
> community . . . [and] has offered an alternative way of thinking about these
> difficult and important problems [K-12 and the education of the educators].
> (p. 72)

As Bergquist proposed, members of the Professional Development School

subculture "seek to change the institutions [K-12 and university] through collective

force; they prefer to encourage increased collective awareness of the problems

facing the institutions and joint recognition of alternative solutions to these problems"

(p. 121).

As stated earlier, the findings from this study suggest that the traditional

leadership of the typical collegial culture of American universities and the emerging

Professional Development School subculture hold different mind-sets and use

different strategies to bring about organizational transformation. Scholars of

organizational transformation (Bass, 1990) and organizational learning (Senge,

1990) have argued that the traditional leadership mind-set cannot lead current

academic institutions into the twenty-first century and beyond. According to Senge,

the leaders of the twenty-first century will need to be "designers, stewards, and

teachers" (p. 340) to be effective. Johnson (1995) suggested that leaders can help

academic institutions face their major challenge of "reestablish[ing] public confidence

and influence with representatives, state legislatures and Congress" (p. 324) by

making a positive contribution to the solutions, among others, of the K-12

educational problems and improving the education of educators. He concluded that

"communication, interaction, collaboration, shared responsibility, and team

leadership seem to offer the greatest promise for addressing the multidimensional

problems characteristic of those challenges [facing] metropolitan universities" (p.

335). Because leadership makes a difference in cultural change, those involved in

university-school collaboration will be faced with the challenge of searching for and

developing the forms of leadership capable of integrating typical, AAU, and

Professional Development School subcultures.

Assessment/Reward

The members of the typical collegial culture of American universities and the emerging Professional Development School subculture would agree with Schein (1992) that assessment is an important dimension of an organizational culture because any culture wishing to maintain a competitive advantage must reach "consensus on how to judge its own performance" (p. 61). They would also agree that "assessment involves making a value judgement, judging quality, effectiveness, impact, and influence of the work of faculty" (Braskamp & Ory, 1994, p. 64).

In the area of research, the typical collegial culture of American universities over the last several years has developed certain norms, values, and basic assumptions for making those kinds of judgments (criteria). The criteria for evaluating faculty productivity in the area of research, developed by the MSU College of Education, were outlined in Chapter II of this study (Indicators for Faculty Ratings: Annual Review, 1994). The criteria included, among other things, publishing in respected journals and chairing major institutionwide committees. Braskamp and Ory (1994) also identified these criteria. The criteria currently used to evaluate the scholarship productivity of members of the typical collegial culture of American universities and the Professional Development School subculture are similar. None of the respondents in this study had any problems with the criteria used in evaluating their scholarly productivity. To this extent, the emerging

Professional Development School subculture could be perceived as enhancing the MSU College of Education culture.

However, the respondents mentioned two major sources of conflict regarding the evaluation of faculty work. In the area of research, one respondent complained about the university's use of academic years (linear perspective of time) to evaluate her Professional Development School work when she conducted her research in K-12 settings. The respondent explained that it was not always possible for her to meet the deadlines because she had no control of the time in her evaluation, agenda, and the goals of the K-12 institution and faculty. She indicated that the application of the linear conception of time created a perception that she was "less productive in the sense of cranking out articles and getting work published." Another respondent was concerned that her annual review was accompanied by a reminder that "It is very good, but you are not writing enough."

The source of the problems described above is that the typical dominant collegial culture apparently used a conception of time that is not compatible with the one that controls the work in the Professional Development School settings. As Lawrence (1994) observed, the typical collegial culture of American universities uses the linear-separable conception of time, which regulates faculty research productivity "by clocks and calendar" (p. 26). This same conception of time might also have been used to evaluate the work of the members of the emerging Professional Development School subculture. The linear conception of time used by the typical

collegial culture is incompatible with the circular conception of time that governs the work of members of the Professional Development School subculture. For example, the members of the Professional Development School subculture have to build relationships that develop according to "periods or phases" (Lawrence, 1994, p. 26) before they can engage in meaningful research. Sometimes "calendar time is less relevant" in building meaningful research and teaching relationships. This is what Lawrence (1994) called the procedural conception of time.

The second problem had to do with the audiences for research productivity. The norms of the typical collegial culture of American universities reward writing for a "research audience" (in refereed journals for promotion, etc.) when the same respondents were actually compelled by the norms of the partnership to write for the "practitioner audience" (e.g., communication of information to a broad audience). They believed that the latter was the primary audience of their Professional Development School endeavors and wished that the typical collegial culture of the MSU College of Education leadership could recognize and reward such efforts.

In the area of teaching, much of the national debate today focuses on the way universities assess and reward teaching. The general complaint is that teaching is very difficult to assess (Cochran, 1992). A review of the criteria that the typical collegial culture of the MSU College of Education uses to evaluate the scholarly teaching of university professors was presented in Chapter II. Peters (1997) asserted that "a recent search on promotion and tenure guidelines of major

universities rates activities to improve teaching around the tenth out of approximately twelve of the fifteen data sources of evaluating teaching" (p. 28). Currently, scholars (Boyer, 1990; Lynton, 1995; Rice, 1996) insist that teaching needs to be elevated to the level of scholarship so that faculty can be assessed for not only "transmitting knowledge but also . . . "for the extent to which they transform and extend knowledge" (Braskamp & Ory, 1994, p. 40) to future scholars and connect the teaching activity to reach and service.

In the area of service, the respondents complained that the university community did not respect service. Mary indicated that the evaluation of the scholarship of service was still in its infancy and that she was working with other faculty members, both within and outside MSU, to make improvements in this area. Mary and her associates were generating new knowledge about the scholarship of service and how faculty could be recognized for scholarly work in the area of outreach. The criteria that the MSU College of Education presently uses to evaluate the scholarly productivity of university professors in the area of service also were presented in Chapter II. As in the area of teaching, scholars (Boyer, 1990; Lynton, 1995; Rice, 1996) have insisted that service be elevated to the level of scholarship and be recognized as such.

The assessment problems discussed in this section were voiced by university professors who started working in the Professional Development Schools without tenure. University professors interviewed in this study who started Professional

Development School work as tenured professors expressed little concern about the institution as they were well rewarded by the work itself and thus were satisfied. The introduction of a posttenure review system, resulting from current tenure review debates (Licata & Morreale, 1997), may influence how tenured faculty perceive this. Scholars (Boyer, 1995; Braxton & Berger, 1996; Licata & Morreale, 1997; Rice, 1995) placed the assessment of university professors and the revamping of the reward system on the current academic agenda.

Growth

Some members of the typical collegial culture of American universities and the emerging Professional Development School subculture would agree with Mills (1994) that

> Faculty development programs, whatever their nature, are essential if campuses are to respond to complex changes in (a) expectations about the quality of undergraduate education, (b) views regarding the nature and values of assessment, (c) societal needs, (d) technology and its impact on education, (e) the diverse composition of student populations, and (f) paradigms in teaching and learning. (p. 458)

Some would also agree with the Council on the Review of Research and Graduate Education (CORRAGE, 1991) that professional development of faculty has, for years, been based on the "traditional assumption that the initiative for development lies solely with the individual faculty members" (p. 76).

The findings from this study underscored the fact that faculty's participation in the Professional Development School activities also had faculty developmental or

enhancing effects. For example, the respondents asserted that their Professional Development School experience helped them (a) engage in research at all levels of the teaching career, (b) speak in different languages within the school and university cultures, (c) understand factors threatening and facilitating change, (d) figure out how teaching can become related to their research instead of their research only being disseminated in their teaching, (e) develop critical thinking skills, and (f) develop collaborating attitudes and skills.

In the area of teaching also, six out of seven respondents reiterated that their Professional Development School experience had equipped them with knowledge and competencies that they found valuable in their teaching, including the knowledge and the competencies pertinent to the socio-political issues that formed the context and the culture of the schools; the ability to reflect on effective ways of reaching all children; and opportunities to secure role models, co-teachers, and network support groups. One respondent indicated that her Professional Development School experience revealed to her that teachers were facing unprecedented challenges in the creation of Professional Development Schools.

What are the implications of these findings? The results of this study showed that the members of the Professional Development School subculture believed that their Professional Development School experience increased their capabilities and competencies. Nanda (1996) defined competencies as the "potential applications of resources" (p. 106) and capabilities as "higher-order routines which develop and

configure organizational resources" (p. 106). Resources would be defined as "inputs" that an organization receives from its internal and external environment. Thus, despite the difficulties experienced, the university professors gained from their Professional Development School experiences. The capabilities and competencies the Professional Development School participants gained may be both tangible and intangible in nature.

Besides the research articles published in refereed journals, the university retains what Collis (1996) called "organizational capability" (p. 149). Organizational capabilities stem from the university's "dynamic routines that enable it to generate continuous improvement in the efficiency or effectiveness of its performance" (Collis, 1996, p. 149) in the pursuit of its mission. Organizational capability, in turn, gives the university a competitive advantage (Spender, 1996). The capabilities and competencies acquired over time help participants become experts who, in turn, represent the university in different situations, placing it in a competitive position among its peers.

Structure

Chaffee and Tierney (1988) identified structure as a critical dimension of organizational culture. Mintzberg (1983) defined an organization's structure as "the sum total of the ways in which its labor is divided into distinct tasks and then its coordination is achieved among the tasks" (p. 2). According to Chaffee and Tierney (1988), an organizational structure includes the "roles and relationships one can see

in a formalized organizational chart, encompassing all the processes by which

activities are accomplished . . . [and] the formal and informal aspects of decision-

making, as well as both the day-to-day operations of an organization and its long-

term planning" (pp. 18-19).

From a study of 115 typical collegial American universities and colleges, Blau

(1973) concluded that "they have administrative structures similar to those of other

bureaucracies" (p. 279). He also found that the size of an academic institution

affected the nature of its bureaucratization. Thus, the larger an academic institution

becomes, the less bureaucratic its structure becomes. Blau also concluded that

> Bureaucracy does not come into conflict with scholarship. Several
> bureaucratic features of academic institutions have deleterious
> consequences for educational performance, but none of these, and no others
> could be discovered, have negative effects on research performance,
> perhaps because research can be separated from an institution's
> administrative machinery while education is intricately enmeshed in it. This
> is a bad omen for the future of higher education . . . [because] the most
> influential faculty members, whose primary concern is research, have no
> immediate interest in shouldering the great burden of combating the process
> of academic bureaucratization that impairs education. (p. 280)

In 1983, Mintzberg classified organizations such as "universities, general hospitals,

school systems, public accounting firms, social-work agencies, and craft production

firms" (pp. 189-190) as *professional bureaucracies* as opposed to *machinery*

bureaucracies. He maintained that the latter achieve their coordination through high

formalization.

It was assumed, therefore, that when the Professional Development Schools

were established nationally in 1989, the members of the typical collegial culture of

American universities and the emerging Professional Development School subculture worked within the professional bureaucratic organizational structure. It is this organizational structure that the founders of the Professional Development School philosophy argued needed to be changed into "a different kind of organizational structure, [which will be] supported over time by enduring alliances of all the institutions with a stake in better professional preparation for school faculty" (Holmes Group, 1990, p. 7). The structural artifacts contained in the interview data from this study suggest that the members of the emerging Professional Development School subculture are currently challenging the professional bureaucratic structure of the university in significant ways.

The study findings revealed that the organizational structure of Professional Development Schools is in the hands of two groups of leaders: (a) the practitioners of the emerging Professional Development School subculture and (b) the leaders in the college. The role of the formal leaders of the emerging Professional Development School subculture is to create the norms, values, and basic assumptions of the subculture. If the subcultures are to enhance the college's cultures, then the role of the leaders of the typical collegial culture is, according to Drennan (1992), to "help *permanize* the effects, implement the structural shifts which will make it easy to adopt the new style, [and] make the new behaviour automatic" (p. 264). When Professional Development School participants believe that the leaders of the typical collegial culture are not supportive of Professional

Development School initiatives, they lose the confidence that the leadership can bring about changes that can improve their working conditions and institutionalize the emerging Professional Development School subculture.

As indicated earlier, the members of the typical collegial culture of American universities and their leadership are proponents of the scholarship of discovery and integration, which is currently being rewarded at the expense of the scholarships of teaching and application. To assume the leadership in revamping the organizational structure (e.g., especially reward system) to support the emerging Professional Development School subculture has implications for what Baker (1990) called "paradigm shift" (p. 32). This means embracing the paradigm that professional service, which is at the center of university-school collaboration, "can constitute scholarship of the highest order, equivalent in intellectual challenge, creativity, and importance to scholarly research and scholarly teaching" (Lynton, 1995, p. 21). According to Baker (1990), management skills, short-term goals, and quick-fix attitudes are not sufficient to paradigm change. To lead a paradigm shift, leaders should have the ability to bring about innovation and to develop long-range plans.

The perception that current typical college cultures are powerless to do anything to improve the working conditions of the members of the emerging Professional Development School subculture is indicative of the fact that the subculture is growing as a counterculture to the typical collegial culture. This mind-set must be transformed if leadership of the typical collegial culture is to assume the

effective leadership role necessary to bring about the structural changes that are needed to sustain the Professional Development School subculture and the transformation process to the next phase of the paradigm shift.

Conclusion

Nine dimensions of organizational culture proposed by Schein (1992) and one derived from the organizational learning literature (Nanda, 1996) were used to compare the dominant collegial culture and the emerging Professional Development School subculture. Each dimension was checked against Ott's (1989) classification of subcultures. Of the dimensions that could be compared, all but two emerge as countercultures to the typical collegial culture of American universities. All of these could be enhancing if the land-grant culture were in place. One area, research, emerged as enhancing of the traditional collegial culture. One other dimension emerged as orthogonal.

The Professional Development School experience affected the professional lives of university faculty participants in the areas of research, teaching, and service. Both positive professional development and negative effects were identified. Faculty involvement led to the emergence of the Professional Development School subculture. The Professional Development School is not the only factor that contributed to the emergence of the Professional Development School subculture. Other factors that seem to have contributed to the emergence of the Professional Development School subculture are (a) the presence of the typical collegial culture

of the MSU College of Education; (b) the land-grant culture, which had been supportive of this subculture; and (c) the self-selecting nature of the Professional Development School participants.

APPENDICES

APPENDIX A

MEMBERS OF THE FOCUS GROUP

Members of the Focus Group

Dr. Joyce Putnam
Dr. Charles Thompson
Dr. Douglas Campbell
Dr. Perry Lanier
Dr. Joyce Parker

APPENDIX B

CORRESPONDENCE AND CONSENT FORM

Approach Letter for University Faculty

From: Titus Singo, Graduate Student

Dear:

     This letter is a follow-up to our conversation about my dissertation research. I want to thank you for agreeing to participate in my university professional development study.

     As I mentioned when we talked, I am a graduate student in the College of Education at Michigan State University. I have a great interest in exploring "The effects of Professional Development School work on university faculty's professional development/growth in a mid-western university". The study will explore and describe the effects of the Professional Development School work on university tenured faculty's teaching, research, and service.

     We have a limited knowledge of the impact of the Professional Development School work on tenure stream professors. The findings of this study may be used to improve the working conditions of university faculty who choose to work in the Professional Development Schools. Some of the findings of the study may form a foundation for new theories that future scholars may pursue. It is also fair to assume that the findings of the study may help the university community decide how to invest its scarse resources in Professional Development School work.

     The data will be collected thorough an in-depth focused interview method. The interviews will last approximately one hour (60 minutes). The interviews will be tape-recorded. I may at a later time request a second interview to clarify some issues raised in the first interview.

     You will be asked questions such as "How has your Professional Development School work affected your professional development/growth in the domains of teaching, research, and service? You will be asked, for example, to talk about what and how you teach; what and how you do your research; and what service you perform and how you do your work in the area of service.

     I recognize that you may share with me, during the interview, sensitive information that, if disclosed, may put you in a vulnerable position. You can ask that this information not be included in the data-base. If you agree to participate in this study, you will have the freedom to withdraw from the study at any time, without any penalty or recrimination. If you choose to withdraw from this study, I shall immediately destroy all the data I collected from you. I shall treat any information you share with me with strict confidence. While anonymity cannot be guaranteed, I will protect your confidentiality by disguising your name and any information that could be used to identify you. You can ask me to stop tape-recording at any time, and you can stop answering any particular question.

     I am excited about this research. Please read and sign both copies of the enclosed consent form, retain one copy and return the other signed copy to me as soon as possible.

Thank you for agreeing to participate in this study.

Follow-Up Letter for University Faculty

From: Titus Singo, Graduate Student

Dear

This letter is a follow-up of our conversation about my dissertation research. As I mentioned previously, the purpose of my research is to explore the "The effects of Professional Development School experience on the university faculty's professional development/growth in a mid-western university"

Thank you for the time you took to respond to my invitation to participate in my study.

Titus

Thank-You Letter to Nonparticipants

From: Titus Singo, Graduate Student

Dear:

This letter is a follow-up to our conversation about my dissertation research. As I mentioned previously, the purpose of my research is to explore the "The effects of Professional Development School work on university faculty's professional development/growth in a mid-western university".

I enjoyed talking with you. I am sorry that it is not possible for you to participate in this study at this time.

Thank you for the time you took respond to my invitation to participate in the study.

Again, thank you for talking with me.

Titus Singo

Consent Form

Below is a consent form for participants in the qualitative study, on "The effects of Professional Development School work on university faculty's professional development/growth in a mid-western university".

I appreciate your willingness to participate in this study. As a participant, you have specific rights that will be observed. Your participation in the study is voluntary. Feel free to refuse to answer any question at any time during the interview. You also have the freedom to withdraw from the interview at any time; and to have the tape-record stopped. The interview will be kept strictly confidential. While parts of the interview may be in the dissertation, the researcher will under no circumstances use your name or any identifying characteristics in it.

I would be grateful if you could sign this form to show that you have read the letter of explanation describing the research plan and your rights. Retain one signed copy for your record. Use the enclosed self-addressed envelope to return another signed copy to me. I can be contacted at (517) 355 0992 to answer any further questions you might have regarding this study.

Sincerely,

Titus Singo, Graduate Student

Date: _____

Name (Please Print): _____

I agree to participate in the study on "The effects of Professional Development School work on university professors' professional development/growth in a mid-western university".

I read the letter explaining my rights as a participant.

Signature: _____

APPENDIX C

INTERVIEW PROTOCOL

Interview Protocol

Introduction

Thank you for agreeing to participate in this university faculty professional development study. To start the interview I would like you to tell me about how your Professional Development School(s) work has affected your Professional work. For example, what and how you teach; what and how you do your research; and what service you perform and how you do your work in the area of service.

Follow-up questions:

1. Effects on Teaching Practice:

I am still interested in hearing more about the effects of your Professional Development School experiences on your teaching practice.

1.1　In what way(s) has your Professional Development School experience affected **what** you teach? (e.g. the curriculum, content; readings you select for classes).

1.2　In what way(s) has your Professional Development School experience affected **how** you teach? (e.g. instructional strategies; evaluation criteria)?

1.3　In what way(s) has your Professional Development School experience affected **what you define** teaching?

1.4　How has your Professional Development School experience **benefited** you in your efforts to meet your teaching obligations as a university professors?

1.5　In what way(s) does your Professional Development Schools work act as a **roadblock** to your effort to meet your teaching obligations as a university professor?

1.6　In what way(s) has your Professional Development School work acted as **professional development/growth** for you in the domain of teaching?

2. Effects on Research Practices

Please tell me more about the effects of your Professional Development School experience on your research.

2.1　In what way(s) has your Professional Development School experience affected what you **define** research?

2.2　In what way(s) has, your Professional Development School experience affected your choice of **what** you research, that is, the topics and kinds of research questions you ask?

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2.3. In what way(s) has your Professional Development School experience affected **how** you conduct your research?

2.4 How has your Professional Development School experience **benefited** you in your efforts to meet your research obligations (including Scholarship) as a university professor?

2.5 In what way(s) has your Professional Development Schools work acted as a **roadblock** to your efforts to meet your research obligations (including Scholarship) as a university professor?

2.7 In what way(s) has your Professional Development School work acted as a **stimulus** for **professional development/growth** in the domain of research?

3. Effects on Service Practices

I would like us to explore the effects of your Professional Development School service oriented activities a little deeper.

3.1 In what way(s) has, your Professional Development School experiences affected the way you **define** service?

3.2 In what way(s) has your Professional Development School experiences affected **how** you choose the professional activities you perform as service?

3.3 One of the Research about Teacher Education Project (RATE) study found that professors spend 60% of their time on teaching, 22% on service, and 15% on scholarship" (Cassandra Book, 1996, p. 285). In what way(s) has your Professional Development School experience influenced **how** you spend your 22% service time?

3.4 How has your Professional Development School experience **benefited** you in your efforts to meet your service obligations (including scholarship) as a university professor?

3.5 In what way(s) has your Professional Development School work acted as a **roadblock** to your efforts to meet your service obligations (including scholarship) as a university professor?

3.7 In what way(s) has your Professional Development School work acted as a stimulus for your professional development/growth in the area of service?

4. Reward
   a. Do you feel well rewarded for the for you are doing in the Professional Development Schools?

    b. How is your Professional Development School work helping the university to balance rewards among teaching, research, and service?

5.   **Urban/Suburban settings:**
    a. Identify one Professional Development School at which you worked and tell me how you thought or felt when you first entered the school the first day.

<div align="center">@@@@@@@@@@</div>

Clarifying Questions

Please tell me more about that.
Is what your are saying "......?'
Can you expand on that?
Let me see if I understand what you mean ... "Do you mean ....?"
Tell me more about that.
It is accurate to say that you ... "believe that ...?"
It is accurate to say that you ... "think that ...?"
Please give me an example of what you just described?
Would "X" or "Y" be an example of what you are saying?
How long?
How much?
When?
In what way is this different?

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