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SCIENCE AND MATHEMATICS TEACHER PERCEPTIONS OF THEIR PROFESSIONAL TEACHING ENVIRONMENT RELATED TO GRADE LEVEL AND URBAN SUBURBAN CONTEXTS

DISSERTATION

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By

Mehmet Sahin, M.S.

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Dissertation Committee:

Professor Arthur L. White, Adviser

Professor Donna F. Berlin

Professor Garry D. McKenzie

Approved by

Adviser
College of Education
The main purpose of this study was to determine pre-service and in-service science and mathematics teachers’ perceptions of the characteristics of a professional teaching environment. The study further investigated the relationships of urban or suburban field placement contexts and 7-9 or 10-12 grade levels on pre-service teachers’ perceptions of importance and availability of certain aspects of a professional teaching environment.

The teacher perceptions were assessed using the Professional Environment for Teaching Survey (PETS). The responses reflecting the teacher perceptions of importance were subjected to a principal component analysis and two components were identified. These were Resources for Teaching and Recognition of Teacher Contributions. Teachers’ responses provided four dependent variables consisting of importance of Resources for Teaching, importance of Recognition of Teacher Contributions, availability of Resources for Teaching, and availability of Recognition of Teacher Contributions.

Data obtained from pre-service teachers who enrolled in a graduate teacher education licensure program at a large Midwestern university and from in-service teachers who were mentors for the pre-service teachers were analyzed using correlational and forward stepwise multiple regression analyses and multivariate analyses of variance (MANOVA) and univariate analyses of variance (ANOVA).

The results of the data analyses suggested that the perceptions of importance and/or availability of those pre-service or in-service teachers with more experience were
related to the academic degree they held and the content that they were teaching or were expecting to teach.

Pre-service teacher placement in urban context during the first quarter of their field experiences predicted low scores for the importance of the Recognition of Teacher Contributions, the availability of Resources for Teaching, and the availability of Recognition of Teacher Contributions. By the third and final placement, student teaching, urban field placement was no longer a significant predictor of pre-service teachers’ perceptions of either the importance or the availability.

For the in-service teachers, the most predominant predictor for both the importance and availability scales was teaching experience at the lower grade levels and particularly grade 8.
CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

The main goal of science education reform efforts (e.g., American Association for the Advancement of Science, 1993; National Research Council, 1996; Rutherford & Ahlgren, 1990) is a scientifically literate nation. These efforts suggest revising curriculum, adapting new ways of teaching, and devising different and effective ways of assessment in order to reach the national goal of scientific literacy. It is essential to include teachers and their beliefs about teaching and learning in the reform efforts in order for these efforts to be successful, effective, and durable. Professional teachers are one of the most important elements of a successful educational reform. Since the classrooms are the places where recommendations are going to be implemented and teachers are the people who are going to implement these changes, their beliefs about reform recommendations and science teaching and learning environments are important and must be investigated thoroughly for these changes to be effective. This investigation is vital for the effectiveness and durability of science education reform recommendations.

In the following sections, the elements that are relevant to a professional teaching environment will be discussed based on a comprehensive literature review related to each of these sections. These elements are school climate or school environment; role of the principal; professionalism, professionality, and professional development; professional teachers; teacher motivation and morale; and pre-service teachers’ perceptions of school contexts. A positive school climate or a professional school environment is one of the
most important factors in the process of facilitating teachers’ professional development. This review will provide information about professionalism, professionality, and professional development and define and describe these terms as they are used in the literature. It is important to know the characteristics of professional teachers in order to prepare such teachers for our schools. A literature review shows us that teacher motivation and morale which lead to teacher retention are closely related to teachers’ professional development. Lastly, pre-service teachers’ perceptions of their field experience/student teaching placements are important indicators of their professional perceptions of different contexts.

A theoretical model is postulated to reflect some of the concerns of this study and to represent the relationships between the factors that have influence on teacher professionalization. This model is shown Figure 2.1 and these influences are discussed next.
Figure 2.1: Concept map for professional environment for teaching
School Climate or School Environment

There is not a unique definition of school climate in the literature. Climate is usually thought of as the school environment or atmosphere where the school personnel or staff works. The concept, climate, in a school environment is used to refer to factors such as physical, social, psychological, and leadership support systems. School climate is defined in the literature (Lezotte, Hathaway, Miller, Passalacqua, & Brookover, 1980) as including the values, beliefs, and attitudes of the school community members as reflected in the institutional patterns, processes, and behavioral practices utilized in school across time. These have been shown to enhance (Coleman et al., 1966) or impede (Squires, 1980) student achievement.

School climate or environment is an important factor in the life of a pre-service teacher. Positive school climates, with professional mentors can potentially affect pre-service teachers in a positive direction. Negative school environments, in which pre-service teachers feel professionally isolated, can have an equally negative effect on pre-service teachers who might be teaching in these environments in the future. Since school environment is a major contributor to building teacher confidence (Harper, Weiser, & Armstrong, 1990), pre-service teachers must feel that they belong to the environment to be able to think and act as professional teachers. Therefore, it is important to work with pre-service teachers and determine their perceptions of the environments in which their field experiences take place, to help them prepare as professional teachers.

The investigation of school environment or climate has been a popular field of research for decades. For many years school climate has been the major focus, and
researchers have examined it as a significant element in a school’s success. School climate is recognized as an important variable in school improvement (Flanagan & Trueblood, 1983; Paredes, 1993) and in school effectiveness (Duignan, 1986). Literature on effective schools indicates that climate factors account for student achievement (Bossert, 1988; Purkey & Smith, 1985). A positive school climate has been shown to consist of three primary situations: an emphasis on academic achievement, an orderly environment, and consistent expectations for success. In some cases, a positive school climate is the main goal, with high student achievement as the expected result.

Paredes (1993) presented the findings of a study that examined the relationship between school climate and student persistence. Two surveys were administered to teachers and students at 10 Austin, Texas high schools. Three factors of school climate were investigated in the study: (a) teachers as professionals (items related to job climate, principal leadership, and working conditions); (b) goals for student learning (items related to the conditions conducive to student learning and achievement); and (c) school discipline and management (items related to safety and student behavior). Results indicated that schools with positive climates had higher achievement and lower dropout rates. Teacher expectations for student success and teachers’ instructional goals were school climate variables that were identified as the most significant predictors of student achievement.

Research has shown that the nature of a school can make a difference in teacher effectiveness (Rutter, Maughan, Mortimore, Ouston, & Smith, 1979). Norman (1988) investigated secondary teachers’ perceptions of school organizational climate relative to their own professional growth and development attitudes. The results showed that the
professional growth and development attitudes of teachers and their perceptions of their school’s organizational climate were related. If one is known then the other can be predicted with a high degree of certainty. Caring about each other within the school and the school’s capability for self-renewal were considered as the most important general climate factors. Teachers’ involvement in decision-making and effective communications between students, teachers, administrators, and school personnel were also perceived as important contributors to a positive school climate. Respect among teachers, students, and parents; high morale; and opportunities for input by teachers and students within the school were other contributing conditions. In addition, Flanagan and Trueblood (1983) suggest that a positive school climate is a platform where productive learning and teacher job satisfaction are built.

Teachers and principals are the major contributors to the assessment of a school’s climate. If the perceptions held by these two groups can be determined, school climate then can be measured in a school. School climate can be a determining factor in a school’s success. Therefore, there have been studies investigating the beliefs and perceptions of teachers and principals about their work environment. It is suggested that there are links between teachers’ philosophies, ways in which they conceptualize meeting student needs, ways in which they experience their work environment, and their success in developing both professionally and personally.

Ellis (1984) conducted a study focusing on teachers’ perceptions of student needs, school social and professional climate, and their educational beliefs in order to determine whether their beliefs about learning could be compared consistently with their perceptions about the support systems available for improving teaching in their schools.
Structured, in-depth interviews were conducted with 10 elementary and secondary teachers who were selected by their principals as exceptionally competent and growth oriented in their profession. Ellis used extensive quotations from various teachers to illustrate both variations and commonalities in the teachers’ approach to their work, colleagues, and students. It was argued that teachers who enjoy teaching and value student ideas and experience, are more likely to pursue professional growth and development than teachers who consider themselves to be diagnosticians of student deficiencies. The study suggested that differences occur in teachers’ experiences of their schools’ social climates and work environments.

Riehl and Sipple (1996) examined the relationships among teachers’ task environments, more general characteristics of school organizational climates, and teachers’ professional and organizational commitments. “Data were derived from the 1987-1988 National Center for Education Statistics School Staffing Survey; the study was based on a sample of 14,844 secondary school teachers” (p. 873). School climate was measured in terms of administrative support, teacher influence and autonomy, and collegiality. Teachers who were provided with resources and protected from intrusions on teaching time showed enhanced commitment to the profession and to the goals and values of their schools. Although the results for the climate factors were not statistically significant, being provided with administrative support from their principals and instructional support from peers and other persons seemed to enhance teachers’ commitment to teaching in general. The results also indicated that both classroom autonomy and involvement in school-wide policy making were positively related to teachers’ professional commitment. The findings of this study support the proposition...
that teacher commitment is greater in schools characterized by high levels of administrative support, teacher collegiality, and professional influence.

Huang’s (2000) study is another one in which teacher perceptions were measured to investigate the school climate. Huang examined public high school teachers’ perceptions of school environment, focusing on seven scales: satisfaction, collegiality, teacher-student relationships, discipline, principal leadership, equity, and teacher influence. The study also investigated teachers’ perceptions of their school environment by gender. The study consisted of 8 public high schools with 275 teachers (127 male, 148 female) who responded to the seven-scale school environment survey. This study was conducted in 8 public high schools from the southern region of the United States. The results of the study indicated that teachers generally perceived that their schools had a positive environment.

Most enjoyed teaching in their current schools and did not want to leave the profession. Most thought their principals provided positive educational leadership. They also believed that most of their colleagues had a professional commitment to education and that they worked well with other teachers. They had good relationships with students and cared about students’ interests and needs. Most believed they had certain influences on students. They were concerned about discipline, but they did not view it as a serious problem in their schools. Teachers perceived that there was racial inequality in their schools. There was an overall significant difference by gender in teachers’ perceptions of their school environments, with females perceiving their school environments more favorably than males. (p. 1)
Female teachers perceived their school environment more favorably than did male teachers. They reported better relations with colleagues and students. They believed that they had greater influence than male teachers. They reported better discipline control and job satisfaction. The study identified a gender difference among the subject areas they taught, yet there was no significant correlation between teachers’ perceptions of school environment and the subjects they taught. Huang suggested differences in communication styles as a possible explanation for the gender differences. The results of the study were consistent with the literature which indicated that teacher job satisfaction is critical to teacher retention, teacher commitment, and school effectiveness (Latham, 1998; Miller, Brownell, & Smith, 1999; Shann, 1998).

Role of the Principal

It is widely accepted that principals affect school climate and hence school outcomes. Almost every study of effective schools concluded that “effective administrative leadership is the key to establishing and maintaining a climate conducive to academic learning and achievement” (Troisi, 1983, p. 9). Although the principal is of primary influence in enhancing school climate, teachers, other staff in the school, students, policy makers, and community leaders also have important roles in creating a positive and supportive school climate. Peach and Reddick (1989) suggest that if a school is to be successful and productive there must be a principal who consistently supports and gives direction to the school. Valentine and Bowman (1988) identified some factors that contribute to the principal’s efforts to maintain a productive climate in the school. These factors were building teacher and student relationships and keeping a good interaction between the school and the community.
It is assumed that the effectiveness of a leader depends mainly on how he/she is viewed by others. It also depends on how the principals themselves perceive their leadership styles. If the perceptions of the school staff and the principal about school environment are different then this leader may have problems in performing his/her duties. If the views of the principal match the views of the staff, then it can be expected that everything will work out fine in that school.

Pashiardis (1998) conducted a study in an urban high school with 60 teaching personnel, 11 assistant principals, and a principal in Cyprus. The goals of the study were (a) to explore the perceptions of teachers regarding their principals’ leadership styles, (b) to analyze the perceptions of principals themselves regarding their own leadership styles, and (c) to compare teachers’ perceptions of the principals to discover discrepancies between the views of the two groups. A 57-item questionnaire was developed and used in the study. The items were grouped under nine areas: school climate, school leadership and management, administration and fiscal management, student management, professional development and in-service, relations with parents and the community, problem-solving and decision making, curriculum development, and personnel management. Results of the study indicated some agreement and some disagreement between the teachers and the principal regarding the principal’s perception and teachers’ perceptions. There was agreement between teachers and the principal in four out of the nine areas. The principal and the teachers were in agreement in their perceptions of school climate, curriculum development, student management, and relations with parents and the community. Perceptions of the principal and the teachers were different in the areas of personnel management and professional development and in-service. In three
areas, there were partial agreement and partial disagreement between the principal and the teachers: school leadership and management, administration and fiscal management, and problem-solving and decision making. Since this study did not employ a broad range of participants from other schools, only 43 questionnaires were returned to analyze and this limited the generalizability of the study.

Braukmann (1980) offers and elaborates on 12 suggestions to help principals establish a positive school climate:

(1) Be aware that the principal’s most important function is getting people to feel good about themselves; (2) establish a climate of professionalism in working with teachers; (3) interact personally with children; (4) be visible and get into the classroom; (5) be a teacher advocate; (6) be hospitable to teachers; (7) be sensitive to teachers’ suggestions; (8) have a fund available to finance small teacher or student projects; (9) learn to give negative criticism in a positive way; (10) be a politician when dealing with the community; (11) capitalize on the strength of people by delegating responsibility; and (12) be human, have sense of humor, and address unpleasant tasks with fairness, firmness, and dispatch. (p. 1)

Principal’s behaviors to develop and maintain an effective school climate to help teachers and better student achievement are outlined by Troisi (1983). A principal should:

- Create an atmosphere where staff members can openly discuss teaching with colleagues;
- Set academic achievement as a primary goal;
- Ensure that all members of the school community understand the importance of teaching;
• Reduce intrusions and disruptions;
• Assist in publicizing student accomplishments;
• Encourage teachers to share their strategies for keeping students on task;
• Use teaching effectiveness as a continual theme for in-service programs;
• Be consistent in reinforcing rules, regulations, and policies;
• Hold high expectations of self, teachers, and students. (pp. 9-10)

All of these suggestions are common in the literature concerning characteristics of effective and supportive principals.

Professionalism, Professionality, and Professional Development

Professionalism is about the quality of practice and the public status of a job, according to Sockett (1996). Regnier (1994) pointed out that it is an illusion to think of teacher quality in terms of technique, nor is it enough to think that subject knowledge alone will yield quality. Moral or ethical relationships are at the heart of teaching, since teachers are responsible for the education of children. It is obvious that as long as teachers are seen as technicians, they cannot provide children with the required education to be literate. Professionalism refers to “those strategies and rhetorics of an occupation employed by members in seeking to improve status, salary, and conditions” (Hoyle, 1975, p. 315).

Professionality is a term that has not been defined clearly in the literature. Hoyle and John (1995) define it as “that set of knowledge, skills, values, and behaviors, which is exercised on behalf of clients” (p. 16). They state that “we consider professionality of teachers as a concept referring to a social constellation of interpretations of how teachers should work in terms of what they should master, what they should do and aim for”
Hoyle (1975) defines professionality as “the knowledge, skills and procedures employed by teachers in the process of learning” (p. 315).

Professionalization of teachers is often perceived as an important way to enhance the status and quality of teaching and the quality of education (Forsyth & Danisiewicz, 1985; Huberman, 1989; Llewellyn, Hancock, Kirst, & Roeloffs, 1982; Vollmer & Mills, 1966). Professionalization of teaching involves many factors such as systematization of educational knowledge, uniqueness of teaching service, long-term professional training, emphasis on professionalism, professional autonomy, and governing by a professional organization (Lieberman, 1956; Tsang, 1984). Teachers’ professionalism is assumed to be a crucial factor contributing to the professionalization of teaching and the quality of education (Devaney & Sykes, 1988; Llewellyn et al., 1982).

Many researchers have studied the relationship between the workplace and the organizational environment in schools and teacher professionalism and performance. (Cheng, 1990; Lieberman, 1988). Research (Cheng, 1991; Hackman & Oldman, 1976; Hage & Aitken, 1967) has shown that among the many organizational factors in schools, principal’s leadership, school’s organizational structure, and teachers’ social norms are important for influencing school functioning and teacher performance. School organizational structure provides a place for teachers to perform their work and interact with others.

Cheng (1996) investigated the relationships between teacher professionalism in school and educational process and outcomes, teachers’ job attitudes and feelings, and school organizational factors through a survey involving 62 primary schools with 58 principals, 1,476 teachers, and 7,969 students. The data were derived from an ongoing
large-scale project entitled “Education Quality in Hong Kong Primary Schools: Indicators and Organizational Determinants.” The sampled schools were primary schools of one sponsoring body with a religious affiliation, subsidized by the Hong Kong government. Cheng’s study supported the belief that teachers’ professionalism at the school level is positively related to students’ affective educational outcomes. It was suggested that the higher the teachers’ professionalism, the greater the tendency for students to have positive self-concept and positive attitudes toward the school, teachers, and learning. The results of this study also indicated that teachers’ professionalism is positively related to teachers’ quality of work life. Teachers in high-professionalism schools tend to have more positive job attitudes and feelings. It is emphasized that the findings of this study strongly support the importance of teachers’ professionalism in the professionalization of teaching and enhancement of education quality.

Professional development is defined as continuous efforts made by teachers to improve their teaching skills through research and learning, experimenting with new methods, analyzing, and self-evaluating. Learning can occur in many areas related to teachers’ work: teaching strategies, classroom management, content knowledge, curriculum design, materials design, and use of new technology (Ellis, 1984).

Who Are Professional Teachers?

Dass (1999) describes a professional science teacher as the one “who teaches science to impact student learning in multiple domains, whose instructional strategies are based upon research-based rationales, and who is reflective about his/her practice” (p. 13). It is these features that distinguish a professional science teacher from a teaching craftsman (one who is capable of merely transmitting scientific knowledge).
Packard (1993) has described the professional teacher as a master communicator, a researcher, and a scholar. *The professional teacher as a master communicator:*

Professional teachers use positive communication in their interpersonal relationships with students or parents or the other staff in the school. This kind of communication and interpersonal relationships within a classroom can affect students’ emotional health, which in turn, may affect their learning. *The professional teacher as a researcher:*

Professional teachers are at the same time good researchers. Using multiple observation techniques, they can find their students’ understanding levels or skills and prepare instructional materials according to these findings. Professional teachers learn from their research continually. *The professional teacher as a scholar:*

Professional teachers must be scholars in various related educational and social areas. They must be knowledgeable about the social setting and the roles of different groups within the school. They have understanding, knowledge, and skills of their field content. They prepare appropriate curriculum or instructional objectives for their students. Teaching professionals must have the essential knowledge and skills of the principles of human development and the teaching/learning process, and they must be able to apply their teaching methods according to students’ level of understanding.

Sockett (1996) suggests that

- a professional teacher must be capable of profound reflection on practice;
- competent to enter into dialogue of the practice they know and the theory or literature they read; able to engage in teacher community of interpretation and critique with colleagues and with children; able to observe, document, and
analyze their own practice and experience; and take that analysis into the white hot cauldron of public forums and public accountability. (p. 26)

Teachers who are agents of change must not merely replicate traditional educational practice, but must become, themselves, students of teaching and learning. “A student of teaching and learning is the type of educator who continually seeks and applies new insights, methods, and understandings of content and pedagogy in order for all students to be truly educated” (Lederhouse & Morrison, 2000, p. 314). With these characteristics, teachers not only will teach all students successfully, but also improve themselves as professionals. Torres (2000) puts it well:

Even the most sophisticated reform proposals ignore what should by now be glaringly obvious: to change education it is necessary to work with teachers and not against them or behind their backs, accepting them not only as agents of reform but also as allies and subjects of change. There can be no educational quality without teacher quality; without teacher professional autonomy, there can be no school autonomy. (p. 255)

Teachers are being confronted by a variety of expectations regarding their work. Different people, such as policy makers, educators, parents, principals, and society in general, have expectations about teachers’ work. Questions such as “how do teachers, themselves, view their work; what do they consider important?” (van Veen, Sleegers, Bergen, & Klaassen, 2001, p. 176) must be regarded as important and taken into account when considering educational change. In other words, it is important that teachers’ perceptions of their teaching environments must be investigated and understood in order for educational reforms to be successful. Despite the differences in children’s
background, poor teaching environments, and demanding stakeholders, teachers are expected to build knowledge communities with skillful and capable individuals in every field in order to keep a nation economically and technologically competent in the future. A teacher’s job is one of the most difficult and important professions. They have a very complex job to do.

In order to expect teachers to prepare successful students, first of all, teachers must be treated as professionals. Society expects teachers to perform professionally in carrying out their responsibilities; however, not often do they treat teachers as professionals (Berlin et al., 1995). The resources and support systems for teachers to design and implement new teaching and learning methods and to develop the knowledge and skills they need for self-inquiry into their own teaching strategies are insufficient for an effective teaching and learning process to take place, and for a meaningful and effective implementation of the curriculum (Berlin et al.). It is important that teachers be prepared according to what is expected of them.

Teacher Motivation and Building Morale

As reported in Overbaugh (1990), research indicates that besides job security, benefits, and salary, to achieve feelings of professional respect, competence, and self-worth are important motivational factors for teachers. Teachers need to be recognized as “people of achievement, professionals who are influential in their workplaces, growing persons with opportunities ahead to develop even greater competence and a sense of accomplishment” (Owens, 1987, p. 104). Research in the 1960s identified the teacher as the most significant factor affecting students’ learning in school. Hence, studies along the same line have identified the need for a school environment that allows teachers to work
professionally. It has been suggested that there is a close relationship between one’s job effectiveness, job retention, and the environment (Overbaugh). The physical setting of the educational environment must allow teachers to carry out their activities with comfort, effectiveness, and self-esteem. It is reasonable to expect that the more professional the environment, the higher the competency level of teachers will be. It is believed that teachers with high expectations will have higher student success and highly motivated teachers will motivate students for achievement (Anderson, 1982; Guskey, 1981; Lezotte et al., 1980).

In addition, one can say that the condition of the physical environment provided to teachers, in a way, reflects the respect, status, and value the society gives to teachers in that school in particular and to education in general (Stenzler, 1987). Overbaugh (1990) investigated teachers’ perceptions of how school facilities affected their ability to function as professionals. The population of the study was elementary and secondary teachers who were identified as the State Teachers of the Year by the Council of Chief State School Officers in 1988. Data were collected by means of a 105-item questionnaire. The results of the study revealed that except for space utilization, the teachers were satisfied with all the physical environmental aspects of their school’s instructional areas. Equipment, planning areas, conference areas, classroom furnishing, and teacher professional libraries were some of the factors with which teachers reported to be least pleased. This and many other studies (Keppel, 1986; Stenzler) show that the school environment plays a significant role in the quality of teachers’ work. It is important that teachers be in a comfortable, satisfying, and resource-rich environment in order to function as professionals. What is more important is that, the environment must be
designed according to teachers’ needs and expectations and their perceptions of a professional teaching environment. The working environment affects teachers’ psychological condition, morale, and hence the relationship between teachers and students.

Research has shown that extrinsic rewards are also important for teacher motivation and morale. Freiberg and Knight (1987) described the development and implementation of a non-monetary incentive program to foster cooperation and communication among teachers in a rural school district in southeastern Texas. The incentive plan included (a) special project grants (such as funds for materials, for the use of special equipments, or for use in innovative approaches of teachers); (b) grants for summer institutes; and (c) grants for conferences and workshops. They administered a questionnaire to 151 teachers to obtain their perceptions of six school climate dimensions: leadership qualities of the principal, teacher-peer relations, parent-teacher relations, student-teacher interpersonal relations, student-teacher instructionally related interactions, and school building and facilities. It was reported that teachers’ perceptions of the incentive program were significantly positively related to their views of the principal as a leader and their instructional interactions with students. District mandated career ladder programs were strongly negatively perceived by the teachers of the same study.

Ellis (1984) reported that intrinsic rewards such as self-respect, responsibility, and a sense of accomplishment are very effective in motivating teachers. Among the most important factors contributing to job satisfaction are achievement, recognition, the work itself, responsibility, and advancement (Overbaugh, 1990; Stenzler, 1987). Personal and
professional development is identified as a significant intrinsic motivator. Weld (1998) has identified similar factors as the key areas that must be improved if schools were to attract and retain high quality teachers: (a) the sense of being isolated, (b) the lack of administrator or principal support; (c) lack of recognition of teachers as professionals; and (d) lack of or inadequate professional development opportunities.

Teachers’ images of themselves as teachers is another important factor impacting teacher motivation and morale. Wildman, Niles, Magliaro, and McLaughlin (1989) reported perceptual changes of 15 teachers completing their first year. They suggest three factors that determine growth and success: (a) the content to be taught and the nature of students; (b) support and assistance of colleagues; and (c) parental support. Another study (Cole, 1990) reported similar findings. Three out of every four teachers with a clear image of self as teachers had to reconsider and change their images because of their school environment. Clandinin’s (1985) study, which described the struggle of a first-year kindergarten teacher to express his image of self as teacher within the constraints of his teaching environment, supports these results. Kilgore, Ross, and Zbikowski (1990) reported a negative relationship between teachers’ frequency of reflectivity and the degree of administrators’ control over the teachers. The degree of autonomy and empowerment given to teachers in a school is an important factor. The importance of school environment factors for teachers’ success and satisfaction was supported in a survey conducted among 1,322 second-year teachers in Australia (Watson, Hatton, Squires, & Soliman, 1991).

According to Wentworth (1990), staff morale refers to the quality of lives within a community.
It involves being known and appreciated, having professional knowledge valued, and being given the freedom to act. It involves learning, growing, making mistakes, reflecting on them, and moving on. Low staff morale results from professional lives that have little meaning; from frustration and the inability to change what is happening…. Schools with high staff morale have very distinctive features. A sense of community is obvious. (p. 1)

Factors that determine high teacher morale are:

1. Input into decision making that directly affects teachers’ work
2. Recognition and appreciation of teachers’ work
3. A sense of feeling unity, pride, and cooperation in the school community
4. Good communication between teachers and principals
5. Opportunities for professional growth
6. Clear and shared goals
7. Supportive administration
8. Enough time for collegial interaction
9. Providing a professional teaching environment
10. Human relations between school and community and within school
11. Encouragement and reward for innovation, and better teaching
12. Attention to professional needs of teachers
13. Attention to personal needs of teachers. (pp. 1-2)

In light of these reviews, the following diagram (see Figure 2.2) is presented as a model for criteria for teachers to be professionals. Whenever the community provides
teachers with the following (not necessarily complete) list of resources and/or benefits then we may say that they are working in a professional environment as professionals.

Figure 2.2: Elements of teacher professionalization

1. Autonomy
2. Support (Collegial, principal, societal, parental, etc.)
3. Appreciation and recognition (by parents, principals, and community)
4. Shared governance and responsibility in decision making
5. Instructional resources/materials (professional teaching environment)
6. Opportunities for professional development
7. Attention to their needs (professional and personal)
8. Good communication (between administrators and teachers)
9. Enough time for self-reflection
10. A cooperative school community
11. Encouraging and supportive administration (to do research)
Professional development is a continuous process and pre-service years constitute an important part of teacher professional development. Pre-service teachers take graduate courses and participate in field experiences in order to get teacher certification and/or licensure. Student teaching is often considered as the most important part of a teacher education program. During field experiences, pre-service teachers learn about actual school environments, students and their behaviors, in-service teachers and their beliefs and attitudes, and the teaching profession which they have chosen. Teacher education programs should investigate pre-service teachers’ perceptions and attitudes related to these environments, and toward teaching in these environments so as to help them become proficient teachers in each environment as well as to help their professional growth during pre-service years. The following section reviews the literature on pre-service teachers’ perceptions of different school contexts (urban, suburban, and rural) and the effects of these environments on pre-service teachers.

Pre-Service Teachers’ Perceptions of School Contexts

There is concern that many prospective teachers hold negative attitudes toward teaching in urban schools (Garcia, 1994). There can be various reasons for this attitude such as school facilities, materials for use in teaching, and socioeconomic status (SES) of students. It is important that whether a teacher is going to be teaching in an urban setting or not, he/she must be provided with the required education to be able to teach in an urban, suburban, or rural setting. It is suggested that field experiences can help prospective teachers understand the needs of students better and hence improve their teaching capabilities when they are properly supervised during these teaching practices (Mason, 1999).
Many researchers have emphasized the importance of placing prospective teachers in different teaching contexts such as urban, suburban, and rural during their student teaching (Cook & Van Cleaf, 2000; Goodlad, 1990; Nelson, 1997). Cook and Van Cleaf examined first-year elementary teachers who had completed their field experiences in four socioeconomic settings, and compared their perceptions regarding their student teaching placements. Four groups of first-year elementary teachers who had field experiences in urban Comer, urban non-Comer, suburban, and rural area schools were surveyed by mail. Comer was described as an intervention program that targets schools with low-income minority students, and was designed to improve students’ school environments by improving the communication between the home and the school. Mean scores of the four groups for each question were compared by using the analysis of variance procedure. Significant differences were then analyzed using t-test procedures for pairwise comparisons of the groups. The results of the study indicated that first-year teachers from both Comer and non-Comer urban area schools felt that they were better prepared to deal with sociocultural needs of students and to work with parents with different multicultural backgrounds than teachers from either suburban or rural area schools. They suggested that, “by carefully selecting field sites, and becoming more proactive in counseling student teachers in the direction of cross-cultural student teaching placements, we may find that our graduates are better prepared for the schools in which they will ultimately teach” (p. 174). It is well established that pre-service teachers often try to avoid placements in urban schools and they have negative attitudes toward urban environments (Garcia, 1994). Haberman (1995) suggested that by placing student teachers in challenging settings we can help them prepare as teachers who are capable of
teaching successfully in schools with different instructional environments. Goodlad (1990) shares this idea in his book. The idea was that if we fail to prepare teachers by engaging them fully in fieldwork in diverse settings, we cannot expect them to take full professional responsibility. Beginning teachers’ perceptions are important to consider for the improvement of a teacher preparation program.

It is important that teacher preparation programs provide teachers with necessary education including field experiences in different contexts if they were going to be teaching in any of these settings (Mason, 1999). Field experiences in different contexts would enable pre-service teachers to understand unique characteristics and demands of each context, and develop a teaching repertoire accordingly. This could yield better teaching and learning situations for both future teachers and students, and hence better outcomes. As Mason (1999) suggested, field experiences should be provided in different contexts where teachers can be sensitized to values, lifestyles, and cultures of different learners.

Pre-service teachers’ perceptions of urban, suburban, and rural teaching environments can be different due to the different characteristics and resources of each setting. It is generally believed that prospective teachers hold a negative belief about the urban teaching environments (Garcia, 1994). Banks and Stave (1996) designed a qualitative study to investigate 12 pre-service teachers’ views toward urban education during a two-week experience in an urban high school. Subjects’ pre-experience perspectives showed positive shifts on the post-experience responses for both females and males. For instance,

one male student’s pre-experiences responses focused on external neighborhood
security issues, support and development of teaching staff, and student needs. His post-experience perspective showed shifts in experience, awareness, feelings, and decisions moving from cynicism to optimism, from a passive to an active view of the role of the teacher, and from a stereotyped image of urban schools as largely uniracial to a view of them as a blend of races and cultures. (p. 1)

Harlin and Murray (2001) described field placement site selection experiences for pre-service teachers. They examined possibilities and limitations prospective teachers faced when sent to suburban and urban schools. They observed that although prospective teachers assigned to urban and suburban schools were very similar at the beginning of the placement, by the end of the field teaching their view of teaching and learning was different quantitatively. They observed that urban and suburban settings have different characteristics and these conditions affected pre-service teachers in various ways. It was reported that urban school limitations included negative teacher attitudes; whole group, lecture instruction; limited student involvement; and low teacher expectations for children. The outcomes for pre-service teachers as a result of these limitations were that “teachers were isolated from other professionals and had decisions made for them; they were seen as technicians not as professionals; and teachers’ attitudes affected student learning” (p. 1, 7). In contrast to urban settings, suburban schools had more positive effects on pre-service teachers. Suburban school characteristics were “use of authentic assessment; comfort with peer coaching strategies and feedback; and belief that children were active learners” (p. 1). Being in such an environment, prospective teachers “saw teachers as colleagues and decision makers and learned that the teacher’s role is to model and to facilitate learning” (p. 1).
Little is known about the attitudes of prospective teachers toward the teaching environment, community support, student characteristics, and other aspects of urban and non-urban schools. Hynes and Socoski (1991) developed and administered a 98-item questionnaire to assess the perceptions related to urban and non-urban schools to 140 students entering a teacher preparation program. The sample consisted of mainly elementary education (or early childhood education) students. There were also science, mathematics, social science, English, foreign language, music, and fine arts majors. The age of the pre-service education majors ranged from 17 to 31 plus. There were 89 freshmen, 34 sophomore, 16 junior, and 3 senior students. The purpose of the study was to seek answers to the question of whether or not undergraduates beginning a teacher education program perceived urban schools as being different from non-urban schools, and identify the differences of their perceptions, if any existed. The paper reported a preliminary item analysis of the data which suggested that most of the subjects thought that urban schools had the following characteristics:

… students are likely to be under-prepared academically, to have poor attitudes toward school, to be in need of discipline, to have parents who do not support teachers…. A typical urban school building was in disrepair, located in an unsafe neighborhood, and was itself a dangerous place in which to be. (p. 20)

There have been studies exploring pre-service teachers’ perceptions of school climate (Williams, 1989) and effective teaching (Wilson & Cameron, 1994) as factors affecting the student teaching experience (Booth, Abdulla, Lingham, Singh, Wilson, & Armour, 1998). Kelly (1993) indicates that student teachers develop their understanding of teaching and learning enterprise during their field experiences and this development of
the “real-world” perspective depends on their experiences in actual schools rather than their on-campus college classes.

Williams (1989) explored secondary pre-service teachers’ perceptions related to school climate before and after completion of a field-based practicum experience. Forty-seven pre-service teachers participated in a 30-hour field placement experience. Nineteen students majored in mathematics, 19 students majored in science, and the other 13 students majored in a variety of subjects. Williams used the School Climate Survey that includes 55 items and 10 subscales. Results from the pre- and post-administration of the School Climate Survey indicated that the pre-service teachers have significantly more positive perceptions of the school climate after their field practicum experiences. Significant differences were also found on the following subscales: teacher-student relationships, security and maintenance, student-peer relationships, parent and community relationships, and instructional management. No significant differences were found for the subscales of administration, student academic orientation, student behavior values, guidance, and student activities.

Harper, Weiser, and Armstrong (1990) suggest that, “development and maturation of an effective teacher could be enhanced by the awareness of how the environment influences effectiveness” (p. 22). They conducted a study to describe selected characteristics of the teaching situation for a representative sample of agriculture teachers from the Western Region of the United States to determine the factors associated with the teachers’ perceptions of teaching effectiveness. A sample of 411 urban and rural teachers in agriculture programs was selected randomly from a population of agriculture teachers from each of the 13 western states and the 1987 Vocational Agriculture Teachers
Directory. A survey instrument was developed and mailed to the participants. It resulted in 84% return rate after the third mailing. Of the teachers surveyed, 75% indicated that they preferred a rural setting to teach, 6% preferred an urban setting, and 21% indicated no preference. Based upon a literature review, 39 variables were selected which represented five factors believed to be associated with a teacher’s perception of teaching effectiveness: teacher preparation, teacher background, school environment, student characteristics, and the local community. Principal component analysis extracted 11 significant factors associated with the teachers’ perceptions of teaching effectiveness from the 39 variables. The 11 significant factors that agriculture education teachers perceive influence teaching effectiveness were: professional teacher training program, support for the agriculture program, community living environment, career considerations, school environment, teaching environment, professional development, youth experience, teaching load, pre-service development, and enrollment in the agriculture program. Results of the study indicated that teachers perceive the teacher preparation program as the most significant factor influencing teaching effectiveness. In addition, participating teachers perceived the school environment and the teaching environment as important factors related to teaching effectiveness. Moreover, the study showed that support from the local community was an important factor as perceived by teachers in their teaching effectiveness. Since agriculture teachers generally work in rural schools, this study revealed important results for pre-service and in-service teachers related to factors that affect teacher effectiveness and how to teach in rural area schools.
REFERENCES


the National Society for the Study of Education. Chicago: The University of Chicago Press.


THE PROFESSIONAL ENVIRONMENT FOR TEACHING SURVEY
(THE PETS)
From the following list of resources and/or benefits circle:

VI if Very Important  
GA if Generally Available and accessible

MI if Moderately Important  
LA if Limited Availability

NI if Not Important  
NA if Not Available

(Circle one for each item)  
(Circle one for each item)

1. VI MI NI  
Time during the day, week, term, or year for reflection on your teaching and other professional activities  
GA LA NA 1.

2. VI MI NI  
Sufficient funds to incorporate equipment-oriented teaching units into the classroom  
GA LA NA 2.

3. VI MI NI  
Other teachers available to talk with and share with in the teaching of science  
GA LA NA 3.

4. VI MI NI  
Opportunities to keep up with the latest developments in content and methods of teaching the various sciences  
GA LA NA 4.

5. VI MI NI  
The opportunity to design, develop, and implement useful and creative curriculum units in my classroom  
GA LA NA 5.

6. VI MI NI  
Public recognition and commendation of educational programs by newspaper, video, or television coverage  
GA LA NA 6.

7. VI MI NI  
Public recognition and commendation of teachers by newspaper, video, or television coverage  
GA LA NA 7.

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(Circle one for each item)

8. VI MI NI Letters of commendation of teachers from principals, superintendents, supervisors, or school boards
9. VI MI NI Letters of commendation of teachers from parent and other members of the community to principals, superintendents, supervisors, or school boards
10. VI MI NI Especially designed professional development opportunities or college courses and graduate programs for teachers
11. VI MI NI Opportunities for graduate level teaching, research, or study leave of absence support
12. VI MI NI Ready access to instructional materials such as printed materials, video equipment, manipulatives, software, calculators, computers, VCRs, and cameras for use in science instruction
13. VI MI NI Ready access to local, state, or national communication systems such as electronic mail, data processing systems, networks, bulletin boards, or 1-800 numbers
14. VI MI NI Ready access and support for science teachers from professionals and experts from areas of science, technology, science education, or research
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LA if Limited Availability
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(Circle one for each item)

21. VI MI NI A social and professional support systems of peers and collaborators including teachers with teachers, teachers with university faculty, or teachers with business and industry representatives

22. VI MI NI A forum for teachers and others to share ideals, ideas, concerns, problems, solutions, successes, and failures related to the efforts to improve teaching and learning

23. VI MI NI Publicly expressed appreciation for the capabilities and responsibilities of teachers

24. VI MI NI Evidence the public appreciates the value of and need for good teachers

25. VI MI NI An effective community support system

26. VI MI NI A public with a realistic view of what teachers need related to what is expected of them by society

27. VI MI NI Members of the community to serve as positive role models for children

28. VI MI NI A sense of "community" among teachers, parents, students, legislators, business and industry, work-force representatives, and administrators
VI if Very Important  GA if Generally Available and accessible
MI if Moderately Important  LA if Limited Availability
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(Circle one for each item) (Circle one for each item)

29. VI  MI  NI  Adequate time and energy necessary to think and apply your professional expertise  GA  LA  NA  29.

30. VI  MI  NI  Flexible scheduling and alternative schooling experiences which allow for in-depth study for students in their particular area of interest and expertise  GA  LA  NA  30.

31. VI  MI  NI  The availability of communication technology such as telephones and modems in your classroom or nearby  GA  LA  NA  31.

32. VI  MI  NI  The preparation you need to deal with the need to integrate content and processes of science with other traditional areas of study such as mathematics, social studies, language, the arts, business and economics  GA  LA  NA  32.

THANK YOU VERY MUCH FOR YOUR HELP