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Staff development practices used in Virginia's public schools: A comparative analysis of personnel perceptions from rural and other districts

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STAFF DEVELOPMENT PRACTICES USED IN VIRGINIA'S PUBLIC SCHOOLS: A COMPARATIVE ANALYSIS OF PERSONNEL PERCEPTIONS FROM RURAL AND OTHER DISTRICTS

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Herbert O. Cox

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Approved December 1994 by

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Dedication

This dissertation is dedicated to my wife, Susan, without whose support and patience it could not have been completed, to my mother, Maude, who has sacrificed so much for me, and to my children, Brian, John, and Jennifer.

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Acknowledgements

The author wishes to acknowledge the contributions of many people to this study. Foremost of these is Dr. James Stronge, whose guidance was essential in the completion of the study. His expertise, time, and willingness to answer all questions regardless of their nature were invaluable. Additionally, his patience and concern for successful conclusion of the work were highly supportive of this novice. Dr. Thomas Ward also deserves recognition for his kindness, assistance, and guidance in the development of the data and his suggestions for preparation of Chapter 4. Dr. Robert Hanny's willingness to discuss the many aspects of staff development and his guidance to sources and resources provided valuable direction for much of the research efforts applied toward Chapter 2. I also wish to acknowledge the guidance and advice of Dr. James Yankovich during the early stages of the doctoral candidacy.

Expressions of appreciation should go to Dr. Stephen Thompson for permission to use the questionnaire which he developed. My thanks also are extended to Harriet Meader for her time spent proof reading the chapters. Finally, recognition should be made of the over 400 individuals who responded to the survey in the midst of their many other responsibilities as educators.

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Abstract

The intent of the study was to determine the perceptions of Virginia educators regarding the importance and implementation of 38 staff development practices. The sample consisted of 744 teachers, principals, and staff development supervisors from 60 school districts, who were surveyed using a questionnaire developed by Stephen R. Thompson (1982). The results were based on 392 returns. Comparisons were made among personnel types and among small rural districts, large urban districts, and other districts. Data were analyzed using mean scores, ANOVA, and, where significant differences were observed, t tests.

The findings revealed broad support for the staff development practices. However, it was determined that they were used less often than they should have been. Teachers were less supportive of 12 practices than were administrators and perceived 32 of them as implemented less often than did administrators. Principals and supervisors agreed on the degree of importance and

implementation of every practice except one. Principals saw themselves as more supportive of new programs and change than did either teachers or supervisors. These results generally supported earlier research revealing differences between the importance and the implementation of the practices. Additionally, the study supported Thompson's study revealing differences in the perceptions of teachers and administrators. There were very few differences between small rural districts and either large urban districts or other districts as to importance or implementation of the practices. This did not support the contention of earlier research which suggested small rural districts were at a disadvantage in the implementation of staff development practices. The study was weakened by a low rate of return by respondents.

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Chapter 1

The Problem

Introduction

The United States, long a leader among nations in quality education, has seen this position eroded to the point many Americans believe significant improvement is necessary (Elam, Rose, & Gallup, 1993). This belief was supported by the report of the National Commission on Excellence in Education (1983) as well as several noted educators (Boyer, 1983; Goodlad, 1984; Sizer, 1984). Boyer stated that education was making headlines after years of "shameful neglect" and that "...educators and politicians have taken the pulse of the public school and found it faint" (p. 1). Goodlad believed that public education was in a state of near collapse while Sizer suggested teachers had compromised themselves for survival.

While news media and politicians continued to dwell on the poor state of public education, some more recent authors challenged this position. Bracey (1993), noted that many of the statements about poor quality in education were based on erroneous or incorrectly interpreted data. Drake (1991) determined that education majors in a university had little basis in fact for their low opinion of education other than media reports. He

suggested this was probably true of the general population as well, hence the high opinion of local schools relative to schools nationally as reflected in annual polls (Elam et al., 1991, 1992, 1993). Bracey (1992) observed that, while some schools and some teachers were of poor quality, generally schools were performing as well as or better than at any time in the past, especially in light of the social and economic ills currently existing in the nation.

Within the framework of a public educational system that was at once under criticism, being defended, and, at the same time undergoing attempts to improve itself, educators and politicians alike identified a wide range of problems. Among these, the problems of rural and small schools received little attention (Bracey, 1992; Nachtigal, 1980; Schmuck & Schmuck, 1992). Rather, attention was focused on the problems of urban and suburban schools which had a higher visibility. Nachtigal (1980) further suggested that when rural problems were considered, the assumption was that school consolidation would resolve them.

Several writers, including Schmuck and Schmuck (1992), Nachtigal (1980), and Goodlad (1984), suggested that the problems of the small rural school needed to be addressed. Schmuck and Schmuck pointed out in their study that despite consolidation there were still some

16,000 school districts in the United States, of which approximately 75% had fewer than 3,000 pupils. These 12,000 or so districts served about 30% of the students in the nation. Nachtigal suggested that "...some schools would have to remain small because of the terrain and sparsity of population..." (p. 3). Schmuck and Schmuck, in writing of their six month touring study of small rural schools in the United States, stated that small districts were still an important component of public schools in the nation. Furthermore, Goodlad stated that educators needed to improve existing schools.

The given need to improve schools led to the question of how. Bradley, Kallick, and Regan (1991) suggested that improvement would be the result of change, and that "...staff development is one way to initiate and manage change" (p. 3). Dillon-Peterson (1981), writing for the Association for Supervision and Curriculum Development Yearbook, suggested that while change had not always been a part of the educational venue, now it was a way of life for the educator. She noted that little attention had been given to the process of effecting change. She emphasized that the need in education was for an organized, systematic process to effect needed changes. Joyce and Showers (1983) supported this conclusion and urged that the process be based on research. They noted that there had been a great

increase in research on staff development for both context and process since the 1960's (Showers, Joyce, & Bennett, 1987) to the extent that they had accumulated a file of over 200 studies, the product of which was a continually growing data base and a regularly updated meta-analysis for working hypotheses.

Kleine and Wood (1989) found that while there was a growing body of literature on staff development, virtually no studies had been conducted in rural settings. Consequently, there was little which could be said of rural staff development with certainty. Lawson (1989), in a study conducted in the rural southwest, stated that a study of rural staff development required one to study staff development conducted in urban and suburban settings and attempt to transfer the results to rural needs. Additionally, Helge (1985) noted the need to develop a data base of research in staff development in the small rural school setting.

That there was a need for research based information on staff development in small rural schools was not questioned. As Helge's work suggested, there was insufficient research to create an agenda for the study of rural school concerns. While there was research on staff development, data were lacking to determine whether small rural schools had a unique problem in this area as

some writers contended. It was to this issue that the present study was directed.

Statement of the Problem

The purpose of this study was to determine what staff development beliefs and practices described by Wood, Thompson, and Russell (1981) and delineated by the School Based Staff Development Inventory of Thompson (1982) were held to be important by educational practitioners in public schools in the State of Virginia. Further, this study was to make comparisons between those practices considered important and those practices believed to be currently employed in Virginia's public schools as perceived by Virginia educators. Third, a comparison of these perceptions was to be made among Virginia educators according to their position. Finally, a comparison of these perceptions was to be made among school districts by type of district.

Research Questions and Hypotheses

This study was conducted in four phases: (a) Phase I - Identification of Important Staff Development Beliefs; (b) Phase II - Identification of Staff Development Practices Considered Desirable; (c) Phase III - Identification of Staff Development Practices Currently Employed; and (d) Phase IV - Identification of Discrepancies Between Desirable and Employed Practices.

Research Question I: Identification of Important Staff Development Beliefs.

To what degree was each research-based staff development belief perceived as important?

Research Hypotheses for Phase I.

1.1 There are significant differences in perception among teachers, principals, and supervisors as to what degree each research-based staff development belief is considered important.

1.2 There are significant differences in personnel perceptions among small rural school districts, large urban school districts, and all other types of school districts as to what degree each research-based staff development belief is considered important.

Research Question II: Identification of Staff Development Practices Considered Desirable.

To what degree was each research-based staff development practice perceived as desirable?

Research Hypotheses for Phase II.

2.1 There are significant differences in perception among teachers, principals,

and supervisors as to what degree each research-based staff development practice is perceived as desirable.

2.2 There are significant differences among personnel perceptions in small rural school districts, large urban school districts, and all other types of school districts as to what degree each research-based staff development practice is perceived as desirable.

Research Question III: Identification of Staff Development Practices Currently Employed.

To what degree was each research-based staff development practice perceived as currently employed?

Research Hypotheses for Phase III.

3.1 There are significant differences in perception among teachers, principals, and supervisors as to what degree each research-based staff development practice is perceived as currently employed.

3.2 There are significant differences in personnel perceptions among small rural school districts, large urban school districts, and all other types

of school districts as to what degree each research-based staff development practice is perceived as currently employed.

Research Question IV: Identification of Discrepancies Between Desired and Employed Practices.

To what degree did discrepancies exist between desirable and currently employed practices?

Research Hypotheses for Phase IV.

4.1 There are significant differences in perception among teachers, principals, and supervisors as to discrepancies between desirability and current use for each practice.

4.2 There are significant differences in perception among personnel for small rural school districts, large urban school districts, and all other types of school districts as to discrepancies between desirability and current use for each practice.

Operational Definitions

The following definitions of key terms were utilized in this study.

Beliefs. Beliefs were the 10 Beliefs about Staff Development as listed by Thompson in the SSSDP.

Central Office Administrator. A Central Office Administrator was a full time or shared time educator in charge of a school district or serving on the staff of the school district with district wide responsibility for one or more areas of the district's operations.

Difference. Difference was the Difference between the Practices as they Should Be and what Exists.

Exists. Exists was the Practices as perceived to be currently utilized by respondents to the survey.

Large Urban District. Large Urban District was a district serving a large population nucleus of a Metropolitan Statistical Area or Urban Area as defined by the United States Bureau of the Census (1992).

Metropolitan Statistical Area (MSA). A MSA was a large population nucleus together with adjacent communities socially and economically integrated with the nucleus. It included all or most of the suburbs, smaller satellite communities, and inclusive open country where whole counties are included, in addition to the city itself (United States Bureau of Census, 1992). A MSA may have had more than one central city or nucleus.

Other Districts. Other districts was defined as all districts except small rural districts and large urban districts.

Practices. Practices were the 38 Staff Development Practices as listed by Thompson in the SSSDP.

Principal. A principal was any professional educator employed full time as a principal or assistant principal in charge of an elementary, middle, high, or combined school.

School District. A school district was one or more schools under the authority of a superintendent and school board. In Virginia school district boundaries generally were defined by county and city boundaries. There were 88 county and 36 city school districts in Virginia. Additionally, there were two independent towns having school districts and five school districts each serving a combined county and city. Two county and city pairs included in the above numbered districts each shared a secondary school (Spar, 1992).

Should Be. Should Be was the importance of the Practices as perceived by respondents to the survey.

Small Rural District. Small Rural District was a school division located outside of any Metropolitan Statistical Area or Urban Area having fewer than 2,500 students. There was no definition of rural in use by the Virginia State Department of Education. The Rural Schools of America Act of 1991, (HR 2819), introduced June 27, 1991, used as a definition enrollment under 2,500 and a school division that didn't serve a

Metropolitan Statistical Area (United States Bureau of the Census, 1992). Writers in the field of small rural schools have used several different figures to denote the upper limit of what is small. These ranged from 300 to 3,000 (Lawson, 1989; Lewis & Edington, 1983; Muse, Barker, & Smith, 1983; Schmuck & Schmuck, 1992; Sly, Everett, McQuarrie, & Wood, 1990; Smith, Muse, & Barker, 1983). In most cases the numbers used in the definitions were specific to a particular state (Lawson, 1989).

Survey of School-Bases Staff Development Practices (SSSDP). The SSSDP was the questionnaire developed by Thompson (1982).

Staff Development. Staff Development was the process of personnel improvement, conducted by a school district, using approaches that emphasize readiness, planning, training, implementation, and evaluation, through activities which are aimed at individual growth, development of abilities, attitudes, skills, and knowledge, which will benefit the individual staff member and the school division in terms of student learning. This definition borrowed from various writers (Bradley, Kallick, & Regan, 1991; Castetter, 1986; Dillon-Peterson, 1981; Harris, 1989; Lawson, 1989; Orlich, 1989; Ryan, 1987; Sparks & Loucks-Horsley, 1990; Wood et al., 1981).

Suburban District. Suburban District was a school district serving a community adjacent to a central city

within a Metropolitan Statistical Area or Urban Area as defined by the United States Bureau of the Census (1992).

Supervisor. Supervisor for the purpose of this study was defined as the central office administrator responsible for the staff development of the school district(s) with which he/she was employed.

Teacher. Teacher was a full time classroom teacher serving in a school.

Urbanized Area. Urbanized Area was a central city or a central core together with contiguous closely settled territory that had a total population of at least 50,000 (United States Bureau of Census, 1992).

Urban Population. An Urban Population was any incorporated city or town with 2,500 or more inhabitants, or any "census designated place" of 2,500 or more inhabitants, or any urbanized area (United States Bureau of Census, 1992).

Significance of the Study

While the body of research on staff development had increased in magnitude in recent years, the task of adding to the database was far from complete (Showers, Joyce, & Bennett, 1987; Sparks, 1983). Showers et al., in an update of their efforts to synthesize the research, reported that the data collected from various teacher strategy and skill acquisition studies allowed the

development of hypotheses about how these skills and strategies were acquired. However, they stated that the quantity of studies necessary for establishing hypotheses was available in only a few areas and that for most areas of study the data were insufficient. Sparks divided her review of the research literature on staff development into three categories: content, context, and process. Showers et al. suggested that the greater part of research to date was in the category of content and that there was an acute need for more research in the context and especially the process of staff development. The present study provided data on both the context and the process of staff development in public high schools in Virginia.

Research on small rural schools, as previously noted, also suffered from neglect. Schmuck and Schmuck (1992) stated that the vast majority of their research was conducted in urban and suburban school settings. Newlin, the executive director of the National Rural Education Association, testifying in 1987 before the National Rural and Small Schools Task Force in Washington, D.C., stressed the need for rural education research and pointed out that funding for such research was severely lacking (Regional Labs, 1987). Additionally, DeYoung (1987) also stated there was a lack of research in rural education compared to other

educational fields of study. Finally, Helge (1985) recommended establishing a database on rural education upon which future research could be established. The present study provided data on rural schools in Virginia.

As can be imagined, the availability of studies on staff development in rural schools was almost non-existent. Lawson (1989), in a study of staff development interventions in small rural schools, stated it was necessary to review the literature on rural schools and the literature on staff development in order to establish a data-base for her study. A review of the Educational Resources Information Center (ERIC) database for January, 1982 through March, 1994 listed 34,095 studies or reports on staff development, professional development or inservice teacher education of which 1,287, less than 4%, addressed rural concerns. A review of the literature identified no studies on the status of staff development in Virginia. Neither did this review reveal any studies in Virginia of staff development in rural settings. The present study provided data on the status of staff development in small rural schools in Virginia.

Limitations of the Study

The following constraints were used to limit interpretation of the results of this study:

1. This study was limited to perceptions of full time teachers and principals of public schools in Virginia.
2. This study was limited to perceptions of central office administrators charged with the responsibility of staff development in public school districts in Virginia.
3. The method of data collection was a self report questionnaire. Therefore, in-depth answers were not possible. Further, because the items on the questionnaire elicited respondents' perceptions, the results of the survey were subject to respondent bias and/or error.
4. The questionnaire was based upon a pre-existing staff development model. Consequently, it may not have included all possible staff development practices.
5. This study was limited by a questionnaire return rate of 53%.

Major Assumptions

The following comprise the major underlying assumptions contained in the study:

1. Staff development is an essential part of the operation of a successful school district.
2. Staff development is a responsibility of the school as well as the school district.

3. Given the increasing call for site based management, teachers as well as administrators must have a role in the planning, design, implementation, and evaluation of staff development.
4. Staff development consists of several components which can be enumerated and evaluated.
5. Respondents will respond honestly to the questionnaire.
6. Teachers, principals, and supervisors responsible for staff development are the best source of information for the study in Virginia.
7. Responses to the questionnaire used in the study will reflect an accurate measure of the perceptions held by educators in Virginia regarding staff development practices.

Chapter 2

Review Of The Literature

Introduction

The literature on staff development in small rural schools and school districts is nearly non-existent (Educational Resources Information Center, 1994; Lawson, 1989; Regional labs, 1987; Thompson, 1982; Veir, 1990). There are several reasons for this. First, staff development as a research topic is relatively new. It is only within the last 35 years that a body of knowledge has been developed from research sufficient to create a data base (Showers, Joyce, & Bennett, 1987; Sparks & Loucks-Horsley, 1990). Second, in spite of its long history in the United States, the small rural school has been largely ignored. It has been considered of questionable value at best, and determined a detriment to the education of rural students in the worst cases (Cubberly, 1914; Muse, Smith, & Barker, 1987; Nachtigal, 1980, 1982; Sher, 1983).

In addition to these two reasons, several others have hindered studies of rural staff development. They include (a) a lack of research on rural issues generally (Augenblick & Nachtigal, 1985; DeYoung, 1987, 1991; Helge & Marrs, 1981; Muse, 1984; Muse, Barker, & Smith, 1983; Schmuck & Schmuck, 1992; Sher, 1983; Theobald, 1991), (b) the focus of educators on other issues such as urban

problems, poor student performance, the basics, the perceived crisis in education, social and economic issues, and teacher shortages (Nachtigal, 1982), (c) the conclusion of most educators that consolidation solved the rural problem (DeYoung, 1987; Nachtigal, 1980, 1982), and (d) the belief that the solutions to problems in education are generic (Nachtigal, 1982).

While there is evidence that migration to rural areas has brought about renewed interest in rural issues, there remains an insufficient data base on staff development in the small rural schools (McIntire & Marion, 1989; Schmuck & Schmuck, 1992; Sher, 1983). Consequently, a study of this topic requires a review of both staff development and small rural school issues.

One other observation should be made at this juncture. Of the studies available on small rural schools, the vast majority have been descriptive in nature, primarily questionnaire surveys (Helge, 1985; Kleine & Wood, 1989). Consequently, much of what is reported in this review is based on descriptive research.

Small Rural Schools

Definition of the Small Rural School District. No mutually agreed upon definition of the small and/or rural school district existed (Augenblick & Nachtigal, 1985; Stephens & Perry, 1991). Definitions of the small district ranged from a low of 300 to a high of 3,000

students (Barker, 1986; Schmuck & Schmuck, 1992). Nachtigal (1982) noted that of 181 school districts in Colorado in 1982, approximately one third had 300 or fewer students and 114 had 1,000 or fewer students. Muse, Barker and Smith (1983) identified 105 K-12 school districts with enrollments under 900 in Colorado. Horn (1983) noted that approximately 50% of the 306 public school districts in Kansas had 600 or fewer students.

Lawson (1989), in a study of five southwestern states, noted a problem of working with five different state definitions of small and rural school districts. For example, she identified 88 districts in New Mexico, of which 52 had fewer than 500 students. At the other end of the spectrum Louisiana had 66 districts of which 32 had fewer than 2,500 students (Lawson, 1989). Nachtigal (1982) also noted that small was relative. He cited the case of two schools, each with 250 pupils. One, located in Colorado, served a 1,000 square mile area, while the other, in Iowa, served 100 square miles.

Lawson (1989) noted that each of the five states in her study used a different definition of small and rural school district. The definition in each case was suited to the needs of the state. By contrast, Virginia had no definition for small and rural schools or school districts according to the Virginia Department of

Education (J. Eanes, personal communication, March 30, 1993).

Similarly, there was the question of the definition of rural. Helge (1985) observed that the lack of a definition for rural schools had been a significant obstacle to assessing rural education effectiveness. The United States Bureau of Census (1993) had utilized several definitions to establish locality categories. They have been centered around the concepts of metropolitan statistical areas (MSA) and urban areas. Rural populations have been defined as all populations not classified as urban or part of a MSA. The Bureau of Census also recognizes the presence of rural areas within MSAs. However, other than this oblique reference, Bureau of Census definitions haven't utilized density as a defining factor (Helge, 1985). Consequently, in Virginia, the City of Richmond (3,384 people per square mile), Chesterfield County (482 people per square mile), and Charles City County (35 people per square mile) are, by definition, all part of the Richmond-Petersburg MSA (Virginia Center for Public Service, 1992).

Many non-metropolitan counties had unincorporated places of over 2,500 population which were classified as urban by the Bureau of Census. Conversely, there were metropolitan counties with rural areas (O'Hare, 1988). Johnson (1989), in an effort to clarify these definitions

for schools, developed a classification system for the National Center for Education Statistics (NCES). This system failed to resolve the issue for school districts. In addition, Johnson's definition of rural was still "everything else not already defined" (p. 26).

Some clarification existed, however. The Rural Schools of America Act of 1991 defined rural districts as having 2,500 or fewer students and not serving a MSA (HR 2819, 1991). Stephens (1991) developed a framework for state policy in reorganizing schools in which he used figures of less than 2,500 students and at least 25 miles from an urban center. For the purpose of this study a small rural school district was defined as having fewer than 2,500 students and as being located at least 25 miles from a MSA or urban area.

Consolidation of Small Schools. A number of problems unique to small rural school districts also related to staff development. Most were interrelated. A brief review of small school consolidation serves as an introduction to these problems.

The advent of industrialization brought the belief that bigger was better, specialization and proper supervision brought efficiency, and large organizations accomplished more. This concept was extended to public schools as cities grew and urban districts merged to form larger organizations similar to those of business and

industry. This concept became the ideal for all public schools and consolidation of rural districts was seen as necessary to achieve similar efficiency and effectiveness (Committee of Twelve on Rural Schools, 1898). The small rural school and school district became known as the rural problem. Consolidation was seen as the solution (Cubberly, 1914; Nachtigal, 1982). Where localities resisted, they were considered backward and not cognizant of either the problem or of the reality of modern day needs (Cubberly, 1914). Truthfully, consolidation was needed in many situations and the automobile made it feasible. By 1930 the number of school districts was reduced to 128,000 while schools totaled 262,236 (National Center for Education Statistics, 1992; Sher & Tompkins, 1977).

By 1960 most of the major portion of small school consolidation was complete (Nachtigal, 1982). Only 40,520 districts existed to serve 117,637 schools. Of these 20,213 were one teacher schools (National Center for Education Statistics, 1992). The small schools still remaining were essentially rural and generally isolated from other schools. Consolidation of these schools would prove to be economically unfeasible. Efficiency would be impaired by the great distances to be traveled. Between 1980 and 1990 the number of districts was reduced by only 600. During the same period the number of schools

dropped by 400. Some 300 of these were one teacher schools (National Center for Education Statistics, 1992). As of 1991, the country had 15,358 districts managing 84,538 schools including 617 which had one teacher.

A study of Vermont's schools determined that the advantages of economy, efficiency, and equality of education were offset by transportation costs, the advantages of local knowledge of needs and problems, the quality resulting from personalized attention, and a desire by local citizens to retain an integral part of community life (Rosenfeld, 1977). Rosenfeld also noted the emotional aspects of the consolidation issue within local populations.

Rural educators began turning elsewhere for solutions to smallness. Studies conducted attempted to demonstrate that small wasn't necessarily bad, that big might be worse, and that school size had an optimum point (Sevanson, 1988; White & Tweeten, 1973). Other studies emphasized that student performance on standardized tests and post secondary education were not hindered by school size (Martellaro & Edington, 1983; Schonert, Elliott, & Bills, 1991; "Small Schools," 1994). While consolidation of small schools and districts served a legitimate purpose, it appeared that it had now reached the limits of its effectiveness as a solution for school improvement (Nachtigal, 1982).

Distance and Isolation. Population sparsity and the accompanying distances involved were found to be a limiting factor for many districts. Distance, coupled with terrain features limited the number of students a school could serve (Barker, Muse, & Smith, 1983; Nachtigal, 1982) and the number of intermural activities available (Bandy, 1980; Schmuck & Schmuck, 1992). Barker et al. (1983) determined, in a survey of Arkansas schools, that the distances buses transported students to and from school ranged from a low of eight miles to a high of 32 miles with a median of 16.1 miles. Muse et al. (1983), observed that the average rural district was three times the size of the national average geographically. McLeskey, Huebner, & Cummings (1984), in a study of rural special education services, noted the difficulties of administering services because of school and community isolation, travel over difficult terrain, with the added hindrance of extreme climate conditions. Rural special education teachers spent many hours traveling, and weather conditions frequently restricted travel. Bandy (1980) also noted the problem of time expended in travel and the accompanying factor of exhaustion. Schmuck and Schmuck (1992), in their tour of western and mid-western rural communities, observed that travel for extra-curricular events stretched as far as 175 miles one way for visiting teams in many rural areas.

Distance restricted staff development activities, courses and degree work for teachers (Dunne, 1982c; Dyck & Thurston, 1987). Donaldson (1982) observed that professional isolation and lack of access to staff renewal programs were the result of the great distances from institutions of higher education (IHE) as did Meier and Edington (1983). Meier and Edington also pointed out that rural inservice programs were often weak or nonexistent because professional support was inaccessible. Peer mentoring, seen as a solution for weak or new teachers, was often unavailable especially for teachers of like subjects or same grades because of the small size and isolation of rural schools. It was restricted because of travel time, the expense of man hours and, where cooperation was needed between districts, affected by the need for cooperation and legal issues (Decker & Dedrick, 1989). Additionally, distance and related travel costs and time limited the sharing of specialized personnel among districts (McLeskey, Huebner, & Cummings, 1984).

Even regional laboratories were so distant as to provide only limited support in educational activities (Lipinski, 1991). Regional centers proved to be a solution for some rural areas. Gjelten & Cromer (1982) reported a very successful program, the National Diffusion Network, in a study of that program in Maine,

while Bohrson (1982) noted similar, though less spectacular, results in Texas with a Regional Center program. Both of these studies noted the importance of skilled and personable leadership. In other examples, where leadership was lacking, the success of regional centers was limited by distance (Lipinski, 1991) or the regional center failed as did the Mountain Towns Teachers' Center in Vermont (Dunne, 1982b). The latter closed due to split leadership, reduced funding, and the inability of teachers to spend time and effort traveling to the center for the services.

Distance contributed to the problem of securing and retaining teachers. Difficulties arose for several reasons, among them low salaries, the result of local financial restraints and community economic poverty (Helge & Marrs, 1981; Muse, 1977; New York State School Boards Association, 1988). Matthes and Carlson (1985) found that urban and suburban teacher salaries averaged about 13% higher than salaries of rural teachers.

Isolation as a factor of rural living was also observed to be a problem in recruiting and retaining teachers (Horn, 1985; Muse, 1977). Travel time and distance to reach urban areas for shopping, social activities, attendance at cultural events, specialized medical services, and personal services were major deterrents for both current and potential rural teachers

(Hare, 1991; Horn, 1985; Lewis & Edington, 1983; Muse, 1977). Teachers also considered the lack of opportunity for professional development and job advancement drawbacks to rural teaching (Hare, 1991; Lewis & Edington, 1983; Muse, 1977; New York State School Boards Association, 1988). Young, single teachers were especially susceptible to an urban lifestyle with its social benefits and greater privacy (Matthes & Carlson, 1985; New York State School Boards Association, 1988). These teachers considered the loss of privacy in a small community a drawback. Schmuck and Schmuck (1992) noted the claustrophobic feelings of close scrutiny and judgement by a gossiping public. They observed that teachers in small rural communities were public figures and were constantly concerned with public relations. Similarly, Nachtigal (1982) observed that teachers' deviations from community expectations were the subject of conversation and feedback. Horn (1985) and Matthes and Carlson (1985) noted the need for a teacher to fit in with the rural community. The New York State School Boards Association (1988) and a study by Lewis and Edington (1983) noted the importance of a rural background and family ties to the area for rural teachers. Schmuck and Schmuck (1992) observed that the majority of rural teachers and virtually all long term ones had local ties. Other concerns of rural teachers

included the lack of appropriate housing (Helge & Marrs, 1981; New York State School Boards Association, 1988), severe weather conditions (Helge & Marrs, 1981), the number of teacher preparations, the teaching of subjects for which the teacher wasn't endorsed (Muse, 1977), and teacher burnout (Helge & Marrs, 1981; Schmuck & Schmuck, 1992). Burnout was noted as the result of multiple problems including a lack of materials, long hours, and multiple duties, as well as the problems mentioned above.

Geographic isolation made dissemination of information difficult. The lack of outside contact with other professionals, institutions of higher education and available publications limited the accessibility of new ideas, research and practices (Donaldson, 1982; Lipinski, 1991). Nelson and Hegg (1987) identified dissemination of information as one of six needs of rural teachers in a study in the northwestern United States. Dunne (1982b), in reporting on the Mountain Towns Teachers' Center, observed that teachers wanted new information and ideas but were hindered by geographic isolation and the time and distance that travel required, especially after a full teaching day. Barker (1991), in a recommendation for technical developments to be applied in support of rural teachers, noted the difficulties of remote site visits, transfer of materials, technical breakdowns, start up costs, local control and interaction levels when

working with regional support centers. Dunne's study also noted problems of financing, control, and site visits. Nelson and Hegg (1987) observed the need for professional development which used adult education techniques and effective methods of conducting inservice.

Professional isolation resulted in a failure to disseminate information, the absence of shared experiences, and an ignorance of research and new practices (Donaldson, 1982). Isolation and the accompanying lack of information was also noted as a problem by Lipinski (1991) who observed that there had to be an intent to network in order for information sharing to work. From these studies it became evident that professional isolation was a problem for rural educators and one which regional centers and technological developments had yet to overcome consistently.

Manpower Limitations. Manpower was found to be limited in small rural districts. Superintendents were often the only professional educator in the district's central office (Schmuck & Schmuck, 1992). Principals were often part time teachers or served two or more schools as principal. In extremely small districts the superintendent also served as the school principal, and functioned as the only administrator (Nachtigal, 1982).

Principals and superintendents had multiple responsibilities in the daily operation of schools and

districts (Brizius, Foster & Patton, 1988; Nachtigal, 1982; Washington West School District, 1977). Recent state and federal legislation placed additional regulations on school districts, placed greater reporting requirements on districts, and created a greater administrative burden (Nachtigal, 1982). Small and rural districts had to cope with the same issues as all districts, such as asbestos in buildings, lead in drinking water, and radon in soil and the air (Schmuck & Schmuck, 1992). Old storage tanks and fuel spills concerned small districts as well as large ones. Money had to be allocated for elimination or replacement of old tanks. The superintendent also often served as the public relations person for the district (Schmuck & Schmuck, 1992). In this role a great deal of time was spent attending local public functions, greeting people, and working on small problems typically handled at the school level. Educational reforms similarly added to the strain on administrators (Brizius et al., 1988). Curriculum reforms, new instructional practices, new programs, and programs for special populations placed demands on human resources and added to the administrative burden. Helge and Marrs (1981) noted that the reporting and recording procedures for special education placed a strain on rural administrations.

Because the few administrators had several areas of responsibility each, none had the time necessary to identify, retrieve, and share new information. The time and expertise to apply for grants, establish staff development programs, and carry out reform was often unavailable with the given time and manpower. Small districts couldn't afford full time staff development coordinators (Lundsgaard, 1983) or personnel directors (Hare, 1991). These responsibilities were assigned to general supervisors or superintendents. Sher (1978) and Augenblick and Nachtigal (1985) observed that small rural school districts seldom had the manpower or expertise to compete for federal funds. Sher also noted that, as of 1978, funding criteria often had an urban bias such as requiring a minimum of 15,000 minority students.

The manpower issue was found to be a problem for teachers in small rural schools also. Typically they had three different subject preparations daily. Many had five (Barker & Beckner, 1987; Barker et al., 1983; Lundsgaard, 1983; Meier & Edington, 1983; Smith, Muse, & Barker, 1983). Several studies have also noted that rural teachers often taught one or more subjects for which they weren't endorsed because of the small size of the school's student body (Bandy, 1980; Barker et al., 1983; Meier & Edington, 1983). Nachtigal (1982) observed that guidance counselors, librarians, and special

education teachers were often part time or shared among schools. Additionally, teachers in small rural districts often had one or two extra-curricular responsibilities, coaching responsibilities, non-teaching duties and tutoring responsibilities (Bandy, 1980; Lundsgaard, 1983; Meier & Edington, 1983). Schmuck and Schmuck (1992) determined that 40% of the teachers encountered on their tour of small rural schools were coaches or sponsors of an activity. Teachers were often exhausted by days that began with classes at 8:30 A. M. and concluded upon return from courses at distant institutions of higher education, sports events, or field trips at 1:00 A. M. the following morning (Bandy, 1980; Helge & Marrs, 1981; Lemke, 1989; Meier & Edington, 1983). Lessons were prepared and papers graded in spare moments. As previously stated, Schmuck & Schmuck (1992) observed that many rural teachers verged on burnout.

Recruitment and Retention of Staff. Recruitment of teachers was an annual time consuming task because of a high turnover rate. Recruitment was seen as the second greatest rural problem by rural educators in four surveys (Barker et al., 1983; Bernal & Villereal, 1990; Muse, et al., 1983; Thayer, 1989) and the third greatest in two others (Nelson & Hegg, 1987; Smith et al., 1983). A survey conducted by the New York State School Boards Association (1988) outlined a number of problems faced by

superintendents of small rural districts. These included a general lack of applicants and a severe shortage in some specialized areas including special education, foreign languages, librarians, science, math, and technology. Another concern of the New York survey was that of applicants who were inadequately trained or certified. Low pay was a hindrance to recruiting and retention. The survey also cited as drawbacks the lack of social life, little opportunity to attend graduate schools and/or cultural events, and a lack of housing in rural areas.

Other writers supported the results of the New York survey. A study in the midwest by Horn (1985) cited low salaries and isolation as recruiting problems. Teachers left for higher salaries and fewer teaching preparations in metropolitan areas. McLeskey et al. (1984) observed that rural districts had difficulty recruiting adequate special education staff. Lemke (1989), in a California study, noted low salaries and access to IHE's as problems of recruitment and retention. Helge and Marrs (1981) reported similar recruiting problems in special education as identified in two separate studies. They cited low salaries, social isolation and a lack of housing as reasons. Helge and Marrs noted that the lack of staff development was part of the problem. Teachers interested in certification could not access programs. Those

already certified were unable to update their knowledge because of isolation, distance and travel difficulties.

Nachtigal, in Rural Education (1982), stated that many teachers recruited for rural districts used the assignment to gain experience, then moved to urban or suburban settings which had higher salaries and greater benefits. Schmuck and Schmuck (1992) observed that 12 of the 25 small districts they visited had trouble keeping science teachers for more than one to two years. The New York State School Boards Association (1988) survey noted that rural districts appeared to be a training ground for larger districts. Schmuck and Schmuck (1992) also observed that non-local teachers usually stayed one or two years, then moved on for higher salaries and a better teaching environment in metropolitan districts. Teachers, along with dentists, doctors, and lawyers, fled from small-town America in the 1980's.

Several authors observed that a connection with rural living early in life was important to retention of teachers in small rural communities. Schmuck and Schmuck (1992) noted in their study that 70% of the rural teachers interviewed grew up near where they taught or in a similar rural setting. A study of New Mexico teachers recommended that recruitment should focus on candidates who had community ties or rural interests (Lewis & Edington, 1983). Pesek (1994) determined that the most

common recruiting source in rural Pennsylvania was the local district substitute teacher list.

Hare (1991), writing on rural recruiting strategies, observed that small rural schools didn't have a personnel director. It was a job assigned to a supervisor or the superintendent. Hare also noted that rural district recruiters should know why their current teachers came to the district and why they stayed. Equally important was knowing why former teachers departed. In a different approach to the same concept, Helge and Marrs (1981) stated that recruiters had to appeal to a candidate's interests and intrinsic values combined with seeking teachers who had rural backgrounds or specific interests in rural living. Lewis and Edington (1983) noted the importance of a teacher's long range goals as well as community ties. Seifert and Kurtz (1983) also noted the importance of a teacher's fit into the community. They suggested a local program of inclusion for new teachers including social activities, prestige, recreation, and local commitment to higher salaries.

Financial Issues. Financing small rural schools was frequently mentioned as the primary concern of rural educators (Bernal & Villereal, 1990; Muse et al., 1983). During the 1980's a drop in rural economic output occurred as agriculture, mining, and timber interests, and small industries suffered declining profits or failed

completely (Schmuck & Schmuck, 1992). The general economic recession of the 1980's affected rural America even more than many urban areas (O'Hare, 1988). Jobs were lost and the rural population declined as people sought employment elsewhere. A study by Huang and Howley (1991) found that the rural poverty rate was 50% higher than urban poverty. They determined that during the 1980's the rural poverty rate rose faster, stayed higher and dropped more slowly than that of urban areas. A study by the Hispanic Policy Development Project (1991) also determined that more poverty exists in rural areas than in urban areas.

A number of conflicting studies addressed the question of rural unemployment. One study determined that rural poor were more likely to have jobs than urban poor but that wages were lower (Huang & Howley, 1991). Another study determined that more rural workers than urban workers lost jobs and that they were out of work longer (Podgursky, 1989). The two studies agreed that new jobs in rural areas paid lower wages than those in urban areas when people were re-employed. A third study found that poverty rates were higher in non-metropolitan areas than in metropolitan areas and that rural poverty approached the level of central city poverty rates (Porter, 1989).

The small rural school was found to be closely tied to the economic status of its community. As local financial resources dwindled during the 1980's, so too did financial support for the schools (Brizius et al., 1988). A study of the Appalachian community of Clinch County, Tennessee served as the extreme example of the problem (DeYoung, 1991). Local government, unable to provide funds for all local needs, reduced funding in all areas, the public schools included. As a result school buildings decayed from lack of maintenance and repair. No money was available to replace old worn out equipment, or to purchase new equipment. Buses were not replaced. Teachers were released from contract. These circumstances were repeated throughout the country in numerous poverty stricken communities where local economies collapsed (Schmuck & Schmuck, 1992). Exacerbating the situation was the fact that public school expenses rose more rapidly than local resources during the 1980's (Inman-Freitas, 1991). Increased costs in technology, textbooks, equipment, and teacher salaries all contributed to the problem. Consolidation, once seen as the solution to the rural problem, reached the point of diminishing returns financially. The savings of buying in greater quantity and the combining of human resources were increasingly offset by travel costs, time, and distance (Webb, 1979). Several studies showed that

the poverty of the locality, a low static tax base (the result of a sparse population), combined with transportation costs, teacher salaries, and other per pupil costs, caused nearly insurmountable budget problems for small rural schools (Augenblick & Nachtigal, 1985; Helge, 1985; Sher, 1978). Schmuck and Schmuck (1992) found the same problems still existed when they conducted their study of small rural communities and schools.

One feature of the rural financial problem was population sparsity coupled with a nationally declining birthrate. Smaller numbers of students served by small rural districts elevated per pupil costs significantly above those of larger districts (Dunne, 1982c). Professional salaries and human resources, transportation, the cost of facilities and their upkeep, and the cost of programs were greater in small rural populations (Barker, 1985). Jensen (1991) determined that non-metropolitan counties had higher per pupil costs than metropolitan counties in all but seven states in 1982. A study by Verstegen (1991) also determined rural per pupil costs to be higher. Other researchers cited similar increases in the cost per pupil for the delivery of services (Sher, 1983) where enrollments were declining (Dunne, 1982c).

Another facet of the rural schools' financial picture stemmed from governmental mandates placed upon

local districts (Nachtigal, 1982). School reform legislation for improved curricula required the same response from small and large districts. The costs of new programs, including the time necessary to administer them, the hiring of additional specialized personnel, and the costs of housing these programs all strained small budgets (Augenblick & Nachtigal, 1985; Brizius et al. 1988). Legislation imposed additional costs in manpower to manage an increase in reporting requirements, new policy requirements, evaluation of programs, accountability expectations, and legal requirements placed on rural and urban districts alike. Berkeley and Ludlow (1991) maintained that no consideration was given for the impact of the volume of state and federal legislation on the small rural school district.

Stephens and Perry (1991) stated that the rural education problem was one of equity. The states traditionally acknowledged the overburden argument in rural school funding (Augenblick & Nachtigal, 1985). Even so, the Augenblick and Nachtigal study noted that rural schools received little attention in previous school finance reforms. A cash flow problem often occurred as a result of late reimbursement of state aid and taxes (Inman-Freitas, 1991).

Verstegen (1988, 1991) noted, in a study of school financing methods, that 30 of the states included a

factor to help compensate for the added costs to small rural districts in the state school finance formula. (The factor was usually based on enrollment, population density, distance or travel time, tax effort or some combination.) Several Appalachian states changed state financial aid formulas to address rural needs (Brizius et al., 1988). Virginia was one of 20 states that did not include a rural factor in its state aid formula (Verstegen, 1988). A study by Odden and Augenblick (1981) recorded the fact that Virginia ranked second lowest among the states for expenditures per pupil equality and 41st on a wealth/per pupil correlation despite modification of the state finance formula in the late 1970's. Congress considered steps to alleviate some of the financial burden on rural localities but took to action (HR 2819, 1991). Brizius et al. noted that mandates required local financial increases in expenditures too.

Rural Culture. Rural communities tended to be at once homogeneous and heterogeneous (Sher & Rosenfeld, 1977). The small rural community was basically stable and traditional in its values. Most were homogeneous in terms of the culture of the given community, primary occupation of the population, politics and ethnic identification (Dunne, 1977). Rural society was often integrated within the community by blood and the many

different roles of the citizens (Nachtigal, 1982). Homogeneity also existed in the local economy and culture. Small rural communities often depended on a single source of income, either agriculture or some other economic base. The community financial condition was a reflection of the success of the local primary source of income.

Several writers observed that small rural communities were traditional by nature, conservative in habit, independent, self reliant, suspicious of outsiders, slow to change, autocratic in function, and often religious in attitude (McLeskey, 1986; McLeskey et al., 1984; Washington West School District, 1977). These traits combined to make small communities closeknit, resistant to change, often backward, and recalcitrant in the view of outsiders. Sher and Rosenfeld (1977) noted that there were exceptions to this homogeneity, notably race. However, even those communities with a racial duality tended to maintain a homogeneity of attitude and presented a common front to outside pressure.

Despite being homogeneous within, small rural communities were notably diverse in relation to one another. Horn (1985) observed this diversity in terms of geographic location, ethnic make-up, and values. Helge (1985) stated geographic differences ranged from islands to desert, plains to mountains, and included clustered

communities and isolated families. In terms of geography and economy the range of diversity among rural communities included an island off the Maine coast, a Virginia coal town, a ranch in Wyoming, an area of poverty in Mississippi, a Vermont ski resort, a Texas migrant settlement, a native Alaskan community and an Iowa farm (Meier & Edington, 1983). Sher and Rosenfeld (1977) stated the diversity was so great that almost any characterization could be found.

A study of rural communities found five differing types dependent upon sociocultural influence (Gjelten, 1982). Each characterization had its own set of economic circumstances and a differing set of values.

The diversity and resistance to change affected the application of new ideas and limited the success of implementing staff development (Nachtigal, 1982, 1985). McLeskey (1986) noted that rural communities tended to have social systems different from more densely populated areas. Nachtigal (1982) observed there were no layers of bureaucracy in small communities. Verbal transactions were the norm. Rural society was more integrated and its members had multiple roles. Running the community was a part time job. Traditional values had great influence.

Goodlad (1979) expressed doubt about the application of the factory/production model to schools and districts. Lipinski (1991) stated that rural diversity made the

application of new ideas difficult. Stephens (1991) observed that rural school districts were as diverse from each other as they were from urban and suburban districts. He stated that uniform state policy strategies that couldn't accommodate diversity were likely to fail. Muse (1984) noted that policy makers should recognize the diversity of rural subcultures. Phelps and Prock (1991) suggested that there was a need for federal policy recognizing this diversity and for providing resources without counter-productive restrictions. Helge (1985) stated that, because of this cultural diversity, no one service delivery model for special education would work for all rural districts. Berkeley and Ludlow (1991) determined that to get special education services implemented one first had to overcome diverse cultures, conservatism, labeling, and resistance to change.

The School/Community Relationship. Rural schools were found to be closely tied to their communities (Schmuck & Schmuck, 1992; Sher, 1977). They were often viewed as the font of the continued existence of the community. The school served as a social and entertainment center for local meetings, sports, and cultural events. It was frequently the largest business in town, and often the only place large enough for a sizable gathering. It served to perpetuate the local

values and culture, united the community through its children (most citizens had relatives in attendance or employed there) and fostered community pride (Brizius et al., 1988; Dunne, 1983; Hoke, 1993; Howley, 1991; Nachtigal, 1979; Rogers & Burdge, 1972; Schmuck & Schmuck, 1992; Sher, 1977).

Howley (1991) saw in the rural school a need to do more than provide for the economy, improve efficiency of workers, and prepare children for the world of work. Preparation for work often led to their departure after graduation to seek better jobs in metropolitan settings. Perhaps more important for Howley was the task of teaching children their own local culture in order to perpetuate their society and inculcate the skills of reason and considered judgement. Others also saw the importance of transmitting the culture to succeeding generations (Sher & Rosenfeld, 1977). These writers stated that educators who wished to utilize staff development to facilitate change had to recognize the close ties between a rural community and its school. Schmuck and Schmuck (1992), during their tour of the rural western half of the United States, observed that the local school unified the community and gave it its identity. The community looked upon the school as "everybody's house" (p. 2). Larsh, in a 1983 study, summed up the relationship this way: "[The] school is not

isolated from the community - it is the community." (p. 26) To summarize, small rural schools had many strengths, among them keeping children close to home, greater safety, more personalized instruction, local control, and direct contact with teachers. They served as a focal point for the community, contributed to the local culture, and served tradition and local pride. They assisted the local economy, promoted local autonomy, and were convenient. For all of these reasons, small rural communities were very protective of their schools (Dunne, 1982c; Gjelten, 1982; Nachtigal, 1991; Schmuck & Schmuck, 1992; Sher, 1978).

Teacher Preparation For Rural Teaching. One final problem rural schools faced involved teacher pre-service training. With few exceptions, institutions of higher education (IHE) provided no preparation specifically oriented toward teaching in small rural communities (Horn, 1983; Massey & Crosby, 1983; Matthes & Carlson, 1985; Sher & Rosenfeld, 1977). It was noted, however, that teachers planning to work in rural areas often needed special training to prepare them for the unique circumstances found in small communities (McLeskey, 1986; Meier & Edington, 1987).

Several studies during the 1980's addressed the lack of training for rural teachers. A pair of studies reported by Matthes and Carlson (1985) surveyed recent

graduates of the Universities of Iowa and Vermont. Teachers who accepted positions in rural districts rated their preparation for teaching lower than those who accepted positions in urban and suburban districts. These results supported the contention that teacher education wasn't providing adequate preparation for rural districts. In another survey 473 public four year IHEs were reported to have some aspect of rural education preparation (Barker & Beckner, 1987). Results showed that of 306 IHE respondents, 87 reported that rural education was included in their curriculum. Only nine of the IHE's actually reported one or more courses devoted solely to small or rural schools. A study by Marso and Pigge (1987) was also supportive of the contention that preparation for teaching in small rural districts is neglected. In a survey of first and second year teachers who had graduated from Bowling Green State University, respondents rated various aspects of teaching in terms of preservice expectation and actual experience. Respondents rated preservice preparation of the university poorly, sixth worst of 24 items. Rural teachers rated their preparation somewhat better than urban and suburban teachers, though not significantly different statistically. Marso and Pigge observed that 16 of the 24 items significantly contributed to reality shock. They recommended as a solution that more field

experience be provided for all teacher candidates. While these surveys didn't fully agree on the comparison of preservice training for rural, suburban, and urban teaching, they all agreed that a problem exists in preparation for teachers in small rural districts.

Several writers emphasized the importance of and need for more field experience than preservice teachers currently received. Horn (1983, 1985) in particular outlined a work/study program for teachers in rural sites during their college tenure as well as the need for additional field-based instruction. Myton (1984) also concluded from his study that additional field-based study was needed. Smith et al. (1983) similarly stated a need for greater field experience.

A number of researchers attempted to identify the needs that preservice education should fulfill for rural teachers. Several suggested that small rural schools needed teachers who had two or more teaching endorsements, either for subject areas or grade levels (Bandy, 1980; Campbell, 1985; Herbster, 1982; Horn, 1983; Massey & Crosby, 1983; Sher & Rosenfeld, 1977; Smith et al., 1983; Swift, 1985). Contrary to this finding, Massey and Crosby (1983) observed that IHE's were emphasizing teacher preparation as specialists instead. Bandy (1980) observed that personal characteristics, adaptability, tact, and self reliance, were important

qualities for rural teachers. She also noted the importance of preparation for rural living and isolation as did Jones (1987). Muse (1977) too, noted the need to understand rural cultures and their association with community poverty and low salaries, as well as their isolation from professional development, social and cultural activities, services and material needs common to urban areas. Bandy (1980) also emphasized the importance of teaching the need for community involvement and cooperation as did Massey and Crosby (1983) and Kleinfeld, McDiarmid, Grubbis, and Parrett (1983). Campbell (1985) stated the need for understanding not only rural cultures but the power structure and familial relationships within the community.

Preservice education needed to prepare rural teachers for creative use of available materials and supplies. Bandy (1980) encouraged instruction on efficient planning for use of materials and orders with available funds. Massey and Crosby (1983) suggested training for curriculum integration for best use of resources as well as for providing cross curricular instruction. Herbster (1992) and Swift (1985) recommended training in the use of technology and innovation for use with distance learning. Other researchers recommended instruction on the needs of rural students (Sher & Rosenfeld, 1977) and psychological

preparation for the demands of rural teaching (Swift, 1984).

Several researchers reported programs that were unique in the support of rural teacher preservice. An exchange program was operated by Brigham Young University whereby a student teacher would substitute for a regular teacher for from two to five days (Muse, 1978). During this time the regular classroom teacher attended an inservice program on campus to further develop professional skills. Muse also noted that Brigham Young operated teacher centers in outlying areas in cooperation with rural communities. Muse stated that one existing problem was a lack of expertise in rural teaching among Brigham Young University staff.

Lahren (1983) reported a case study in which Western Montana College's Education Division, charged with responsibility by the state for conducting a rural teacher education program, hired an anthropologist to evaluate the current teacher education program, make recommendations, and implement them. As a result of the study an introductory course for cultural anthropology was mandated and a rural education option was provided for education majors. The latter consisted of two courses, one on pedagogy including unique instructional methods, resources in rural settings, and multigrade management, the other on problems of teacher adjustment

in isolated rural communities. The latter course included actual time spent living in a rural community. Sophomore education classes included exposure to rural teaching situations.

Nachtigal (1982) reviewed a project at Berea College, Kentucky, in which the training of teachers for small rural districts placed emphasis on cultural differences and working with parents on local issues. Nachtigal noted that once established, rural teachers contributed much to a child's education through direct parental contact.

It is also important to note that researchers have pointed out the desire for establishment of cooperative programs between IHE's and local districts (Myton, 1984). Nelson and Hegg (1987) stated that cooperation was needed to better prepare and upgrade teachers. Meier and Edington (1983) saw a need for improved inservice. Horn (1983) supported cooperative programs for inservice and continuing education and also cooperative work/study programs for preservice teachers (1985). Lemke (1989) noted that IHE's needed to be more accessible for rural teachers in addition to providing stronger inservice programs. While this evidence may not be conclusive because so few studies serve as a foundation, it is clear that the issue needs to be addressed.

Staff Development

Staff development, like the small rural school district, had no universally accepted definition. Many terms were used interchangeably including professional development, inservice education, teacher training, continuing education, and professional growth (Castetter, 1986; Harris, 1989; Ryan, 1987; Thompson, 1982). An increasing number of researchers and theorists, however, differentiated among these terms. Staff development was usually an all encompassing descriptive, while inservice was usually taken to describe only the actual training program for a specific occasion.

Definition of staff development. Dale (1982) defined staff development as "...the totality of educational and personal experiences that contribute toward an individual's being more competent and satisfied in an assigned educational role" (p. 31). Dale described inservice as teacher training, one of several components of staff development. Sparks and Loucks-Horsley (1990) defined staff development as "...those processes that improve the job-related knowledge, skills, or attitudes of school employees" (p. 234-235). Training, one of the staff development models they described was similar to the inservice model in that it had workshop sessions which addressed a clear set of objectives. Sergiovanni

and Starratt (1993) described staff development as the development of professional expertise. It provided for growth of teachers through activities which were planned cooperatively by the teacher(s) and administrator(s). They contrasted this definition of staff development with inservice which they described as training for skills, ideas, and methods to correct deficiencies.

Orlich (1989) utilized a more comprehensive definition of inservice:

> In-Service Education denotes programs or activities that are based on identified needs; that are collaboratively planned and designed for a specific group of individuals in the school district; that have a very specific set of learning objectives and activities; and that are designed to extend, add, or improve job-oriented skills, competencies, or knowledge with the employer paying the cost. (p. 5)

He contrasted this definition with staff development as follows:

> ...staff development subsumes in-service education projects and also addresses the larger issue of developing organizational problem-solving capacities and leadership skills. The totality of building

> human and institutional resources in the organization becomes the goal of staff development. (p. 5)

For the purpose of this study staff development was defined as the process of personnel improvement, conducted by a school or district, using approaches that emphasize readiness, planning, training, implementation, and evaluation, through activities which are aimed at individual growth, development of abilities, attitudes, skills, and knowledge, which will benefit the individual staff member and the school division in terms of student learning (see Chapter 1).

Staff development as a field of study. Prior to 1970, staff development was a non-research based activity. Early staff development programs were designed to correct deficiencies found in the large numbers of teachers without college degrees. These teachers were recruited to fill the void created when universal elementary education was adopted nationwide during the mid-1800's (Orlich, 1989). Much of this training was essentially short, two or three day inservice programs or evening sessions. Between the 1880's and mid-1910's summer courses were offered for remedial training and the concept of inservice education became accepted nationally (Tyler, 1971).

During the first half of the 20th century, emphasis on quantitative standards for teachers led to a push for teachers to possess bachelors' degrees (Tyler, 1971). Inservice programs became college courses so that teachers could complete degree requirements. Following World War II, inservice education developed into a certification process as larger numbers of teachers were needed to educate the "baby boom" generation. Emphasis was also placed on curriculum development and methods of instruction. Inservice, however, still consisted of teachers attending lectures and receiving materials which they were expected to implement with the new curricula. Inservice became important as a means of innovation and change (Harris, 1989).

Inservice education during the 1960's was used to introduce new curriculum projects (Wideen, 1987). Even as these new ideas were introduced, it became increasingly clear that inservice activities were not producing results. Research during the decade determined that teachers were frequently not implementing the new ideas or were trying and failing. Additionally, a number of researchers determined that teachers' attitudes toward inservice were not positive (Berman & McLaughlin, 1978; Branscome, 1982a; Hoover, Foley, Boethel, & Smith, 1989). Amos and Benton (1988) determined that teachers felt that inservice lacked relevance to their needs. By the 1970's

concern grew to the extent that researchers began searching for solutions (Sparks & Loucks-Horsley, 1990). This research continues today and has focused on several different approaches including supervision (Glickman, 1981; Sergiovanni, 1975), organizational change (Gross, Giacquinta, & Bernstein, 1971), learning styles (Dunn & Griggs, 1988; Hunt, 1976), staff development process (Hall & Loucks, 1981), stages of cognitive development (Harvey, Hunt & Schroder, 1961; Hunt, 1987), the process of change (Havelock & Havelock, 1973; Sarason, 1971), behavior theory (Hunt, 1978), leadership (Lieberman & Miller, 1978), learning contexts (Raymond, Butt, & Townsend, 1992), and social theory (Griffin, 1983).

By the mid-1980's Showers et al. (1987) had identified sufficient empirical studies to establish a body of knowledge, formulate theories, and begin testing some hypotheses. While much of the research was insufficient for theory to be substantiated, a link was established between change, successful staff development, and some contextual and process variables (Sergiovanni & Starratt, 1993; Wood et al., 1981). A number of texts on staff development are now available (Bradley, Kallick, & Regan, 1991; Dean, 1991; Harris, 1989; Orlich, 1987; Ryan, 1987).

The context of staff development. Sparks (1983), writing in Educational Leadership, outlined a concept of

staff development which she described as a "nested process." At the center of the illustration were goals and content. Surrounding this center was the training process which in turn was surrounded by context, the outer shell. Context was the environment in which the process of staff development occurred. The process included the activities of staff development.

Sparks (1983) listed as contextual factors administrative support, school climate, human/social interaction, the physical environment, and the organizational structure of a school. Sparks and Loucks-Horsley (1990), writing in the Handbook of Research on Teacher Education, defined context similarly to include organizational climate, leadership, administrative support, policies, systems and participant involvement in the process. Griffin (1983) defined context to include the school mission, reward structure, authority, purpose, school activity, evaluation (considered by Sparks to be a part of the process), and data sources (the background, history, and practices of the school, a part of school climate for Sparks).

The Rand Study (Berman & McLaughlin, 1978) illustrated the need for administrative leadership and support through a study of numerous federal projects. Gjelten and Cromer (1982) noted the importance of leadership in their study of the National Diffusion

Network program established in Maine. Studies by Hoover et al., (1989) and Lawson (1989) noted the importance of administrative leadership through participation in staff development with teachers.

School climate, another of Spark's (1983) contextual factors, was defined by Sparks as the organizational structure of the school and included the tone set by administrative leadership. For Griffin (1983) school climate included the school's stated mission and purpose, the reward and recognition structure, the funded knowledge and history of the school, and the policies and practices. Sergiovanni and Starratt (1979) called school climate the organizational environment and defined it by the level of sophistication of the technology used, diversity of goals, variety of tasks, and the structural patterns. They recognized that organizational structure and function played a major role in the climate of an institution. The formal and informal relations, communications, and concrete environmental factors played a major role in how school climate affected a school's response to staff development and change. In a subsequent work Sergiovanni and Starratt (1993) concluded that conformity, responsibility, standards, rewards, organizational clarity, peer support and leadership were a part of the school climate. Culture, the values and

understandings of the school, also formed a significant part of climate.

Other contextual factors cited by Sparks (1983) were more concrete. Physical environment was defined as the physical plant of the school, the equipment and furniture, and the materials available for study and teaching. Organizational structure, already touched upon, was the hierarchy of personnel, the formal relationship of the faculty and staff, the decision-making apparatus of the school, and the process of handling both routine and unique functions of the school.

The remaining area of Spark's contextual factors was called human/social interaction. Griffin (1983) referred to the school as a living entity with interaction among the physical, social, and regulatory factors. These factors influenced teachers individually and as a society. His view combined the aspects of climate with those of the interaction of school personnel upon each other. Griffin's view reflected a shift in the way schools as organizations were perceived. Research during the 1970's and 1980's placed a new emphasis on the teacher as learner and as an individual (Furey, 1978; Glickman, 1981; Hunt, 1976, 1978, 1987, 1992; Meade, 1971; Raymond, Butt, & Townsend, 1992; Rubin, 1971; Sprinthall & Thies-Sprinthall, 1983).

By the 1980's, it was evident that teacher learning style played a role in staff development and successful change (Thompson, 1982). Sparks (1983) stated that teacher characteristics and attitudes influenced the effectiveness of inservice education. As early as the 1940's researchers realized that learners brought different backgrounds and motivations to the classroom (Tyler, 1949). Further study brought the realization that people bring different conceptual levels to learning situations (Harvey et al., 1961). It was determined that people brought different backgrounds, experiences, preparation and perceptions to new situations (Havelock & Havelock, 1973; Raymond et al., 1992). Research showed that different learning styles and levels of conceptual achievement applied to adults as well as children (Glickman, 1981; Hunt, 1966, 1976, 1978, 1987, 1992; Knowles, 1978).

Writing in Supervisory Leadership, Glatthorn (1990) reviewed the work of several theorists in a discussion of adult learning behavior. Of note was adults' need to be in control, to be free of threat, and to learn actively. Lieberman and Miller (1978) noted the importance of meeting teachers' needs to be involved in the planning and preparation of their own staff development in order to have self-direction. Several writers recommended that teachers define their own problems, perform their own

research, and implement proposed solutions as teams of action researchers (Bennett, 1994; Hopkins, 1987; Oja & Pine, 1983, 1987; Sergiovanni & Starratt, 1993). Oja and Pine (1983), studying adult behavior and the several stages of learning., concluded that few adults reach the highest level of understanding. By reading the successive editions of Sergiovanni's text on supervision one can see the influence of the human perspective in staff development. Sergiovanni and Starratt originally perceived the school as an organization but more recently perceived schools as communities.

It is clear from these recent writings that one must consider adults' learning styles, conceptual levels, backgrounds, and attitudes to ensure successful staff development. As a consequence the face of staff development continues to change and grow.

The process of staff development. Havelock and Havelock (1973) described the process of staff development as an orderly sequence of goal setting, planning, and systematic execution. They considered staff development a training process for change. This training included the development of goals, planning for change, and training for change. Sparks (1983) looked upon process as a delivery system for staff development. For her, process included the dynamics of designing, planning, and execution of the training activities. She

defined training activities to include delivery of information, demonstration, discussion, practice with feedback, and coaching. Peer coaching, a concept borrowed from Joyce and Showers (1983), involved teachers training together and coaching each other through observation, feedback, and encouragement. Joyce and Showers (1988) also developed a process consisting of presentation of theory with explanations and demonstrations, multiple practice sessions for mastery, application in real settings with peer coaching, and implementation through repeated use of the new procedure. Central to their process was peer coaching.

Models of staff development. Since the early 1980's a plethora of staff development models have been offered as guides for improving teacher knowledge and skills. Wood et al. (1981) developed a process model of staff development consisting of five stages, readiness, planning, training, implementation and maintenance. The model was identified by Sparks and Loucks-Horsley (1990) and Sparks (1983) in respective discussions of staff development models. Sparks and Loucks-Horsley identified five types of models: individually guided models, observation/assessment models, development/improvement models, training models, and inquiry models. Sparks noted that Wood and his co-workers used their five stage model as a foundation for training school personnel.

Orlich (1989) also categorized a number of models of staff development as organization based, individual based, role based, and trainer based models. Orlich's intent was to develop a paradigm of staff development models. He noted that no one model could serve as the answer to all staff development needs.

Orlich (1989) observed that, of the organization based models, the organization-development model lent itself best to fostering development of self-renewal and dynamic organization. Individual based models recognized the need to address individual needs and growth styles. Some of these models required freedom for decision-making authority for individuals. Role based models looked at the individual's role "as determined by the institution and as modified by the individual" (p. 122). Orlich identified as trainer based models those in which the leader or trainer played a major or dynamic role. Peer coaching was included in this classification.

Sparks and Loucks-Horsley (1990) noted that research on training models was more robust than other types they identified and that they were the most widely used. They observed that research on coaching demonstrated the importance of in class assistance for teachers in the transfer of training to the classroom. Sparks and Loucks-Horsley stated that observation and assessment models could be powerful staff development models, but

too often were associated with evaluation in the minds of teachers. Individually guided staff development models assumed teacher self-direction and self-initiated learning. Inquiry models were also dependent upon teacher initiative to seek answers for problems. Both of these model types suffered from limited use and limited research according to Sparks and Loucks-Horsley. A willingness to empower teachers was also necessary in employing a model of either type. More research had been conducted on development/improvement models. As Orlich (1989) noted these models borrowed from and benefited by studies of evaluation models. Much of this research was related to problem-solving and school improvement efforts according to Sparks and Loucks-Horsley. Consequently, development/improvement models have been increasingly supported by research.

A review of staff development literature uncovers a plethora of models. The RPTIM Model of Wood et al. (1981), somewhat general in nature, is flexible enough to serve as an outline for the process and context of staff development. Regardless of the model used, staff development is a continuing function of schools which requires readiness for change, planning, training, implementation, and maintenance for institutionalization with feedback loops in each step.

A model of staff development. Wood et al. (1981) outlined their research based staff development model in the Association for Supervision and Curriculum Development Yearbook for 1981. The research available at the time lent support to several assumptions which were identified as common to successful inservice programs. These are summarized here to help provide a comprehensive picture of this current study.

1. Continuing inservice is essential for educators to stay current and effective.
2. Time and systematic, long-range staff development are necessary to improve educational practice.
3. Inservice should improve teacher performance and impact the quality of the school program.
4. Adult learners are motivated to risk learning new behaviors when they have control of the situation and are free of threat to their security.
5. Adult learners differ in learning style, readiness to learn and professional competence.
6. Professional growth requires personal and group commitment to intended change.
7. Organizational health (e.g. social climate, trust, open communication, peer support for change) influence professional development programs.

8. The school is the primary unit of change, not the district or individual.

9. Districts should provide the resources and training for a school staff to implement change.

10. The principal is the gatekeeper of change.

11. Staff development must be based on research, theory and best practice.

Using these assumptions as a foundation Wood et al. (1981) developed their model for staff development comprised of five stages: readiness, planning, training, implementation, and maintenance or the RPTIM Model. Stage One emphasized staff recognition of the need for change or new programs and commitment to make the change. In Stage Two, plans were developed and decisions were made to accomplish the desired change. Stage Three, Training, was the application of the program of activities to achieve the knowledge and skills necessary to the change. Implementation, Stage Four, was the practice of the change within the classroom or school setting. Stage Five, Maintenance, reinforced the change and assured its continued use. Each of the Stages of the RPTIM Model was at once distinguishable and part of an overlapping cycle. Within each stage Wood et al. listed several practices which provided the functions of the staff development process and the context within which it occurred.

More recent research supported the work of Wood et al. (1981). Studies of staff development determined the need for prior planning (Hopkins, 1987), the need for recognition of teacher differences (Celso & Morris, 1985; Dunn & Griggs, 1988; Huberman & Miles, 1984; Oja & Pine, 1987; Sergiovanni & Starratt, 1993), the need for a learning environment (Griffin, 1983), the need for teacher involvement in planning (Gibbons & Norman, 1987; Hopkins, 1987; Hunt, 1992), the need for training and implementation activities (Joyce & Weil, 1986; Showers, Joyce & Bennett, 1987; Sparks, 1983), and the need for maintenance or institutionalization (Harris, 1989; Orlich, 1989).

The Survey of School-based Staff Development Practices (SSSDP). The work of Wood et al. (1981) was followed by a study conducted by Thompson (1982). Thompson, using the assumptions and the RPTIM Model as a foundation, identified a number of specific staff development practices based on research. In addition he developed a list of beliefs based on the assumptions. These practices and beliefs were the foundation of a questionnaire which Thompson developed and tested for validity and reliability using a panel of experts (see Chapter 3). The result was an instrument consisting of 38 practices and 10 beliefs, each in the form of a

statement with a Likert type response scale (Borg & Gall, 1989).

Thompson's (1982) study established the relationship between each of the 10 beliefs and 38 practices to one or more of the five stages of the RPTIM Model of Wood et al. (1981). Similarly, each of the practices was associated with a corresponding belief. Thompson also identified research and writings of scholars in education and related fields which supported the 38 practices. The current study included a review of Thompson's sources as well as more recent research.

The Practices and Supporting Research

Following is a list of the 38 practices (Thompson, 1982) and the supporting research.

> 1. A positive school climate is developed before other staff development efforts are attempted. (A positive climate is characterized by open communications, trust, and supportive relationships.) (p. 33)

Huberman and Miles (1984) determined in a study of innovation that environmental stability was a critical factor in staff development. This was supported by Berman and McLaughlin (1978) who noted in the Rand Study that the human environment had to be stable and compatible with the change to be initiated and that the

organization needed to be oriented to support change efforts. A number of researchers observed that respect and trust are significant factors of the school environment and must be felt among all members of the school staff, a point also supported by the Rand Study (Branscome, 1982a; Dunne, 1982a; Fox, Bois, Brainard, Fletcher, Huge, Martin, Maynard, Monasmith, Olivero, Schmuck, Shaheen, & Stegeman, 197?; Little, 1982; Vaughan, Wang & Dytman, 1987).

2. Goals for school improvement are written collaboratively by teachers, parents, building administrators, and central office administrators. (p. 34)

Several studies noted that all parties having a stake in the change should be involved in the goal setting process (Berman & McLaughlin, 1978; Feldens & Duncan, 1978; Wood et al., 1981). Asayesh (1994) noted the need for central office staff to be more facilitative and less directive in behavior.

3. The school has a written list of goals for the improvement of school programs during the next three to five years. (p. 34)

Kilgore, Reichert, and Curtiss (1984) noted that teachers should be included in both long and short term planning for staff development. Matthews, Hill, and Casteel (1984) also supported the idea of long range

planning in a presentation to the Association of Supervision and Curriculum Development. Thompson (1982) determined that planning three to five years ahead was important to goal setting.

4. The school staff adopts and supports goals for the improvement of school programs. (p. 34)

Again, Berman and McLaughlin (1978) noted the critical need for school staff support of any changes to be made in the school.

5. Current school practices are examined to determine which ones are congruent with the school's goals for improvement before staff development activities are planned. (p. 34)

Staff development programs must be based on local needs (Hoover, Foley, Boethel, & Smith, 1989). Bernal and Villereal (1990), in presenting a model of staff development to the Rural Education Association Conference, included as a key element the matching of training purposes to district goals.

6. Current educational practices not yet found in the school are examined to determine which ones are congruent with the school's goals for improvement before staff development activities are planned. (p. 35)

Thompson (1982), in his study, determined that staff developers should look at programs outside the school district for new ideas and unknown needs. Sarason (1971) noted that educators are so immersed in a specific pattern of thinking that new ideas are not readily apparent. It is necessary to look at any and all options regardless of their unlikely character in order to break out of routine and develop the flexibility to make changes.

7. The school staff identifies specific plans to achieve the school's goals for improvement. (p. 36)

Berman and McLaughlin (1978) determined in the Rand Study that implementation plans are important to successful staff development. Ryan (1987), in his model of staff development, stated that many staff development failures could be attributed to poor planning and organization.

8. Leadership and support during the initial stage of staff development activity is the responsibility of the principal and central office staff. (p. 36)

The importance of positive, supportive leadership during the early stages of staff development by administrators was recognized by a number of researchers (Dean, 1991; Gjelten & Cromer, 1982; Hoover et al., 1989;

Kilgore et al., 1984; Neale, Bailey, & Ross, 1981; Showers, Joyce, & Bennett, 1987). Both Lawson (1989) and Thompson (1982) noted that staff development was more likely to be implemented if administrators participated in the training. Berman and McLaughlin (1978) observed that building and central office support was critical to the success of any change. Again, Asayesh (1994) noted the facilitative role of the central office.

9. Differences between desired and actual practices in the school are examined to identify the inservice needs of the staff. (p. 34)

Thompson (1982) found that this practice was considered very important in his Pennsylvania study. The difficulty was that perceptions of what is actually the practice varies according to the position of the viewer. Thompson observed that actual practices were perceived as much closer to what is desired by those responsible for staff development than those merely participating or observing.

10. Planning of staff development activities relies, in part, upon information gathered directly from school staff members. (p.36)

A number of researchers identified evidence to support this statement (Holly, 1989; Hoover et al., 1989; Kilgore et al., 1984). Showers, Joyce, and Bennett

Kilgore et al., 1984). Showers, Joyce, and Bennett (1987) stated that teachers needed to have a share in the governance of staff development and should be involved in all aspects of decision-making.

> 11. Inservice planners use information about the learning styles of participants when planning staff development activities. (p. 37)

Research has, in recent years, pointed out the critical nature of planning with adult learning styles in mind (Glassberg & Oja, 1981; McKibbin & Joyce, 1980; Oja, 1980, 1989; Oja & Pine, 1983, 1987). Massey (1980) noted that most staff development leaders haven't been trained to work with adults. Pelton (1983) observed that adult learners in small and rural settings must deal with the additional problems of lack of expertise and lack of accessibility in staff development programs. Bradley et al., (1991) and Dean (1991) acknowledged the importance of using adult learning principles in the preparation of staff development in their models.

> 12. Staff development programs include objectives for inservice activities covering as much as five years. (p. 37)

Berman and McLaughlin (1978), in their report of the Rand Study, determined that staff development for

stated staff development program design should be a long range, goal oriented plan that is on-going for implementation, evaluation, and district support (Harris, 1989; Orlich, 1989; Ryan, 1987). Ryan stated that successful inservice must address significant objectives related to well-articulated long range goals. Harris (1989) noted that short-term objectives alone may likely become trivial, while, when combined with long-term goals, they provide a framework for the overall picture.

13. The resources (time, money, and materials) available for use in staff development are identified prior to planning inservice activities. (p. 37)

Allotment of resources prior to planning the activities was essential in order to determine what was available, what had to be procured, and what could not be had (Bradley, et al., 1991; Harris, 1989). Bradley, et al. noted that human resources should be included in this enumeration.

14. Staff development programs include plans for activities to be conducted during the following three to five years. (p. 37)

Again, this issue was addressed for both planning and objectives for all aspects of the staff development program, including the activities selected for the

training (Berman & McLaughlin, 1978; Harris, 1989; Orlich, 1989; Ryan, 1987).

15. Specific objectives are written for staff development activities. (p. 38)

Tyler (1949) stated that an objective should identify the desired behavior and relate it to the content area. Gagne, Briggs, and Wager (1988) stated that objectives should be clear and precise, capable of communicating the intent of the specific activity or idea. Mager (1984) stated the objective should establish in the mind of the reader a picture identical to that of the writer.

16. Staff development objectives include objectives for attitude development (new outlooks and feelings). (p. 38)

Massey (1980) stated that staff developers need to use an andragogical approach to learning when teaching adults. McKibbin and Joyce (1980) noted the need to consider the psychological states of the individual teachers when preparing staff development activities. Bennett (1994) found that attitudes improve with knowledge and understanding of research.

17. Staff development objectives include objectives for increased knowledge (new information and understanding). (p. 38)

Objectives should be based upon desired outcomes, and should be interrelated, clear, concise, and specific (Bradley et al., 1991; Harris, 1989; Thompson, 1982). Several researchers noted the need for learning activities which match the developmental stages of learning (Massey, 1980; Oja, 1980; Oja & Pine, 1983; Wood & Thompson, 1980). A study by Reyes (1987) determined that many adults learn primarily on the concrete level as defined by Piaget.

18. Staff development objectives include objectives for skill development (new work behaviors). (p. 38)

As noted for Practice 11, it was important to meet the needs of developmental learning styles of adults which includes concrete as well as abstract learning styles.

19. Leadership during the planning of inservice programs is shared among teachers and administrators. (p. 39)

A number of studies pointed out the need for shared governance among all concerned parties when planning staff development (Berman & McLaughlin, 1978; Branscome, 1982a, 1982b; Feldens & Duncan, 1978; Hoover et al., 1989; Kilgore et al., 1984; Little, 1982; Thompson, 1982).

20. Staff development activities include the use of learning teams in which two to seven participants share and discuss learning experiences. (p. 39)

Glatthorn (1987) and Langer and Colton (1994) observed the importance of professional dialogue among teachers. Thompson (1982) determined that teachers as helpers for inservice were more effective than outside personnel. Massey (1980) noted the need for teacher interaction to facilitate learning while Oja and Pine (1983) determined that small teams of teachers not only developed collegiality but learned more.

21. Individual school staff members choose objectives for their own professional learning. (p. 40)

Loucks-Horsley, Harding, Arbuckle, Murray, Dubea, and Williams (1987) emphasized the appropriateness of participant involvement in goal setting. Thompson (1982) determined that, when teachers choose the goals and activities of staff development, more effort is placed on the learning and use of the new knowledge and skills. Withall and Wood (1979) observed that teachers assimilate goals which they originate, and Wood and Thompson (1980) stated that adults want to originate their own learning.

22. Individual school staff members choose the staff development activities in which they participate. (p. 40)

McKibbin and Joyce (1980) noted the importance of teachers' involvement in the selection of training. Neale et al. (1981) observed that the best adult learning is self-directed. Wood, et al. (1982) observed that those participating in the inservice should be involved in the decision-making process. Berman and McLaughlin (1978) observed that successful change and participant involvement in determination of staff development activities go hand in hand.

23. Staff development activities include experiential activities in which participants try out new behaviors and techniques. (p. 40)

Reyes (1987) determined that many if not most adults function on Piaget's concrete level of learning or a transitional level approaching the formal operational level. Other researchers also determined that adults learn best when experiential learning methods are included as part of the training experience (Joyce & Weil, 1986; Knowles, 1978; Massey, 1980; Neale et al., 1981; Oja & Pine, 1983). Schoenbach (1994) advocated reflective thinking in peer group discussion.

24. Peers help to teach one another by serving as inservice leaders. (p. 41)

Dunne (1982a) reported a training program in North Dakota designed to be decentralized. Local teachers were trained to serve as change leaders in recognition of the need for teachers to serve as inservice leaders. This concept is further supported by research reported by others (Kilgore et al., 1984; Showers, Joyce, & Bennett, 1987; Thompson, 1982).

25. School principals participate in staff development activities with their staffs. (p. 41)

Lawson (1989) determined in a study of southwestern states that principals' participation in inservice activities with teachers was an essential feature of implementation of staff development. Hoover et al. (1989) showed that teachers preferred principals participate and considered this a supportive act. Research by Kilgore et al. (1984) and Thompson (1982) support these studies.

26. Leaders of staff development activities are selected according to their expertise rather than their position. (p. 41)

Research showed that conductors of staff development activities should be selected according to their

expertise rather than their position or role (Showers, Joyce, & Bennett, 1987; Thompson, 1982).

27. As participants in staff development activities become increasingly competent, leadership behavior becomes less directive or task-oriented. (p. 42)

Showers, Joyce, and Bennett (1987) noted an increase in the advocacy or teacher involvement in governance over the previous 15 years. Joyce, Brown, and Peck (1981) observed that students and, by extension, teachers can learn leadership skills. Nelson and Hegg (1987) noted the need to train teachers to develop professional decision-making skills. Pelton (1983) determined that top down decision-making often meets resistance and even failure. Other researchers have noted the willingness and capability of teachers to assume leadership in their own staff development once taught the process (Burden, 1980; Knowles, 1978; Massey, 1980; McKibbin & Joyce, 1980; Oja & Pine, 1987; Wood & Thompson, 1980). Dunne, (1982a) reported a program designed to empower teachers on the local level and utilize their leadership skills to promote change.

28. As participants in staff development activities become increasingly confident in their abilities, the leader transfers

increasing responsibility to the participants. (p. 42)

The research and writings discussed in Practice 27 apply to this practice also. Harris (1989) also noted the need to train teachers as leaders for staff development.

29. After participating in inservice activities, participants have access to support services to help implement new behaviors as part of their regular work. (p. 42)

Berman and McLaughlin (1978) determined in the Rand Study the need for follow-up to inservice that was frequent and ongoing. Joyce and Showers (1983, 1988) noted the importance of follow through also, and observed that supervised practice with feedback was essential to successful implementation of change.

30. School staff members who attempt to implement new learnings are recognized and rewarded for their efforts. (p. 43)

Thompson's (1982) research indicated that recognition for implementing change was itself an important reward. Orlich (1989), citing Herzberg in his model of staff development, observed that recognition is an intrinsic motivator and not merely a maintenance factor.

31. The leaders of staff development activities visit the job setting, when needed, to help the inservice participants refine or review previous learning. (p. 43)

Joyce and Weil (1986) noted the need for follow-up by trainers and peers through observation and feedback to provide formative evaluation and collegial support during implementation of new knowledge and skills. Joyce and Showers (1983) observed that it did not appear to make a difference whether coaching was by peers or instructors of inservice as long as it was competent and frequent. Other authors also support the need for feedback and support from either peer coaching or experts/instructors (Anderson, Evertson, & Brophy, 1979; Burden & Wallace, 1983; Mohlman, Coladarci, & Gage, 1982; Sparks, 1983).

32. School staff members use peer supervision to assist one another in implementing new work behaviors. (p. 43)

Research by a number of authors confirmed the value of peer supervision and/or peer coaching provided the coaches have received training and were skillful in the provision of observation, feedback and collegiality (Decker & Dedrick, 1989; Glassberg & Oja, 1981; Hoover et al., 1989; Joyce & Showers, 1983; Kerman, 1979; Phelps & Wright, 1986; Roper, Deal, & Dornbusch, 1976; Thompson, 1982). Showers (1984) noted that there were benefits for

the peer coach as well as the trainee. Showers, Joyce, and Bennett (1987) stated that "...the coaching process enables nearly all teachers to sustain practice and [master a wide] range of curricular and instructional practices" (p. 86)

> 33. Resources (time, money, and materials) are allocated to support the implementation of new practices following staff development activities (funds to purchase new instructional materials, time for planning, etc.). (p. 37)

Orlich (1989) stated that the school district staff development program should have its own budget. Other designers of staff development models defined resources to include time, human/personnel resources, direct costs, related costs and material costs (Harris, 1989; Ryan, 1987). Several authors stated that allocation of materials is an important part of preparation for staff development (Bernal & Villareal, 1990; Drake & Roe, 1986), while others noted the importance of time away from the classroom (Kimmet, 1986; Nachtigal, 1979; Showers, 1983). Research also supported the need to allocate resources (Huberman & Miles, 1984; Thompson, 1982). Several authors noted that outside funding of district programs could result in too heavy reliance on the resource and result in subsequent failure when

the district had to assume the responsibility (Berman & McLaughlin, 1978; Dunne, 1982b; Nachtigal, 1982).

34. The school principal actively supports efforts to implement changes in professional behavior. (p. 41)

The research cited for Practice 25 are valid here as well. Lawson (1989) determined that administrator participation, especially that of the building principal, is an important factor in implementation of staff development. This research was supported by the work of Hoover et al. (1989), Kilgore et al. (1984), and Thompson (1982).

35. A systematic program of instructional supervision is used to monitor new work behavior. (p. 44)

The concept of a systematic evaluation program was deeply rooted in research (Huberman & Miles, 1984; Lawson, 1989; Mohlman, Coladaci, & Gage, 1982; Thompson, 1982). Castetter (1986) and Joyce and Showers (1988) stated that evaluation was an extremely complex process yet critical to any program of staff development. Duke and Corno (1981) stated that evaluation was better left undone than to perform it haphazardly. Bradley et al. (1991) observed that evaluation should be formative as well as summative. Harris (1989) and Ryan (1987) noted that evaluation was an on-going process with feedback and

subsequent adjustment. Dean (1991) and Joyce and Showers (1988) stated that evaluation should be a joint activity that includes the whole staff. Orlich (1989) discussed a number of evaluation models in his text. All of these supported the concept of a systematic process.

36. School staff members utilize systematic techniques of self-monitoring to maintain new work behaviors. (p. 44)

Thompson (1982) determined strong support for self-monitoring techniques in evaluation of new programs, a concept also supported by others (Dean, 1991; Harris, 1989; Joyce & Weil, 1986; Ryan, 1987).

37. Student feedback is used to monitor new practices. (p. 44)

A number of authors suggested utilizing feedback from students through either formal or informal methods (Dean, 1991; Duke & Corno, 1981; Joyce & Weil, 1986; Thompson, 1982).

38. Responsibility for the maintenance of new school practices is shared by both teachers and administrators. (p. 44)

Staff development was to be a shared process with administrators, teachers, and others having responsibility for planning, implementation, and maintenance of implemented programs (Berman & McLaughlin, 1978; Gjelten & Cromer, 1982; Holly, 1989; Massey, 1980;

McKibbin & Joyce, 1980; Medved, Sarachan-Deily, Burns, Lyon, & Grippin, 1986; Orlich, 1989; Thompson, 1982). Withall and Wood (1979) noted the need of teachers to see themselves as originators of new ideas. Knowles (1978) observed that teachers have a deep need to be self-directing. Oja and Pine (1987) stated that teacher governance provided them a holistic view and a better understanding of the school district operation.

Summary

Staff development has often been maligned by teachers and administrators across the United States. This was true when surveys were conducted during the 1970's and has remained true (Amos & Benton, 1988; Branscome, 1982a; Doyle & Ponder, 1977; Drake & Roe, 1986; Hoover et al., 1989; Lawrence, 1974; McBride, Reed, & Dollar, 1994; Neale, et al., 1981; Ryan, 1987; Thompson, 1982; Withall & Wood, 1979). Boyer (1983) wrote in High School "Unfortunately, 'inservice training' is seldom more than an occasional day-long workshop in which teachers are lectured to by 'experts'" (p. 178-179). Neale et al. (1981) stated:

> No single expectation of the profession has received more criticism than that of inservice education. This is true despite the fact that the vast majority of school

> personnel feel the need for continuous professional development activities. (p. 198)

While educators accepted the need for staff development as a source of improvement and for updating knowledge and skills, the quality of inservice programs left much to be desired (Hoover et al., 1989; Little, 1982).

If staff development is to have value, then the critical components must be identified and employed. It is expected that this study will identify the staff development practices which educators in Virginia consider desirable and determine to what extent they believe these practices are utilized within Virginia's school districts. It is hoped that the results of this study can serve as a foundation for the improvement of staff development in Virginia.

Chapter 3

Methodology

Introduction

This study was designed to investigate the current status of staff development in Virginia as perceived by educators in the field, including teachers, principals and district level administrators. It was expected to identify those staff development practices and beliefs seen as important to these same educators. Further, it was anticipated that it would identify differences in perception among educators in small rural school districts compared to districts of other sizes and types. Finally, it was expected that this study would identify perceptual differences among the different categories of educators within each size and type of school district.

Research Questions and Hypotheses

This study was conducted in four phases: (a) Phase I - Identification of Important Staff Development Beliefs; (b) Phase II - Identification of Staff Development Practices Considered Desirable; (c) Phase III - Identification of Staff Development Practices Currently Employed; and (d) Phase IV - Identification of Discrepancies Between Desirable and Employed Practices.

Research Question I: Identification of Important Staff Development Beliefs.

To what degree was each research-based staff development belief perceived as important?

Research Hypotheses for Phase I.

1.1 There are no significant differences in perception among teachers, principals, and supervisors as to what degree each research-based staff development belief is considered important.

1.2 There are no significant differences in personnel perceptions among small rural school districts, large urban school districts, and all other types of school districts as to what degree each research-based staff development belief is considered important.

Research Question II: Identification of Staff Development Practices Considered Desirable.

To what degree was each research-based staff development practice perceived as desirable?

Research Hypotheses for Phase II.

2.1 There are no significant differences in perception among teachers, principals,

and supervisors as to what degree each research-based staff development practice is perceived as desirable.

2.2 There are no significant differences among personnel perceptions in small rural school districts, large urban school districts, and all other types of school districts as to what degree each research-based staff development practice is perceived as desirable.

Research Question III: Identification of Staff Development Practices Currently Employed.

To what degree was each research-based staff development practice perceived as currently employed?

Research Hypotheses for Phase III.

3.1 There are no significant differences in perception among teachers, principals, and supervisors as to what degree each research-based staff development practice is perceived as currently employed.

3.2 There are no significant differences in personnel perceptions among small rural school districts, large urban school districts, and all other types

of school districts as to what degree each research-based staff development practice is perceived as currently employed.

Research Question IV: Identification of Discrepancies Between Desired and Employed Practices.

To what degree did discrepancies exist between desirable and currently employed practices?

Research Hypotheses for Phase IV.

4.1 There are no significant differences in perception among teachers, principals, and supervisors as to discrepancies between desirability and current use for each practice.

4.2 There are no significant differences in perception among personnel for small rural school districts, large urban school districts, and all other types of school districts as to discrepancies between desirability and current use for each practice.

Sample and Accessible Population

The population for this study included teachers, building principals and district level administrators responsible for staff development of public school

districts in Virginia. In order to ensure adequate and appropriate representation among the groups to be surveyed, the accessible population for this study included:

1. School district level administrators, hereafter referred to as supervisors, responsible for staff development as identified by each district. These school districts were selected from the 1993-94 Virginia Educational Directory. School districts were divided by size according to student population using data from the Virginia Statistical Abstract (Spar, 1992) into three categories with 20 rural districts, 10 large urban and 30 other districts chosen. Only 10 large urban districts were identified in the state. Otherwise, districts were chosen randomly. This process was carried out using a table of random numbers (Borg & Gall, 1989). A total of 60 district supervisors were surveyed.

2. Principals drawn from the school districts which were included in the survey. Specifically, three principals were selected from each district, one for each of three levels (elementary, middle/junior high, and secondary). These principals were selected using a table of random numbers except where only one existed at a given level. Where a district had only one school, only one principal was surveyed. Similarly, where a district had only two schools, only two principals were surveyed.

Finally, where there was no middle/junior high school, no questionnaire was administered for that level. A total of 171 principals were surveyed.

3. Teachers were selected from the same schools as the principals. Each principal was asked to distribute a survey questionnaire to three teachers, one beginning teacher, one with 5 years of experience, and one with 15 years of experience. Where there was more than one teacher in one of the three categories the principal was requested to assign the questionnaire to the teacher closest to the given year(s) of experience (1, 5 and 15) and further, to the teacher in the given experience category whose last name began with the letter closest to a letter randomly selected and assigned to the principal for this purpose. A total of 513 teachers were surveyed.

Generalizability

Results of the study were expected to be generalizable to school district staff developers or supervisors, principals and teachers in Virginia's public schools. To a lesser extent, it was further expected that the results might be generalizable to the population of supervisors, principals, and teachers in the United States. Finally, it was expected that the results of this study might be included with results from other studies accumulating similar data to generalize to some

extent to all public school educators in the United States.

Instrumentation

A review of the literature led to the discovery of a survey instrument suitable for the purposes of this study. This instrument, developed by Thompson in 1982, was the Survey of School-based Staff Development Practices (SSSDP). The SSSDP was based upon a five stage model for school-based inservice (Wood, Thompson, & Russell, 1981). The five stage model, in turn, was based upon a set of assumptions outlined by Wood et al. These assumptions or beliefs were founded in research on teacher learning and appeared to be common to successful programs of inservice.

The model developed by Wood et al. (1981) consisted of five stages or steps: Readiness, Planning, Training, Implementation, and Maintenance. Each step was described and outlined regarding sub-tasks, authority, responsibility, and procedures. Thompson (1982) analyzed the steps and sub-tasks of the model and developed the 38 staff development practices used in the SSSDP. Thus, the several practices fit within each of the five steps of the model. Thompson stated:

> This model describes practices and beliefs that have been shown in the professional

> literature to contribute to successful school-based staff development programs. The practices are organized into five steps: Readiness, Planning, Training, Implementation, and Maintenance. The model assumes that the steps are sequential. It is important to understand, however that in practice, there is overlap between the steps during the conduct of professional development programs. (p. 51)

Thompson (1982) divided the SSSDP into two parts, corresponding to the 38 staff development practices and the 10 beliefs about staff development (See Appendix A). In the first part, the 38 practices were classified according to the five steps of the staff development model and were accompanied by two four-part response scales. The first of these four-part scales asked respondents to indicate to what degree each practice was perceived to currently exist in their school or school district. The four choices presented were: (a) almost never, (b) sometimes, (c) often, and (d) almost always. The second of these four-part scales asked respondents to indicate to what degree each practice should exist in a school or school district. The second scale presented the same response options as the first scale.

In the second part of the SSSDP, each of the ten beliefs was also accompanied by a four-part response scale. (See Part I of the SSSDP in Appendix A.) Respondents were asked to indicate whether they agreed with each statement and were presented with four choices: (a) strongly disagree, (b) disagree, (c) agree, and (d) strongly agree. Thompson's design of the SSSDP was comparable to a Likert type scale in which respondents select one of several choices (in this case four). Such scales have been used to measure attitude, opinion or belief regarding a particular topic (Borg & Gall, 1989).

Thompson (1982) established content validity of the SSSDP by identifying a panel of 20 experts to judge the instrument. In selecting these panelists Thompson stated:

> The jury was selected using two criteria. The first criterion was familiarity with school-based staff development practice as evidenced either by membership in the network of staff development facilitators identified by the Institute for the Development of Educational Activities (/I/D/E/A/) or by having participated in the /I/D/E/A/ Change Program for Schools

> as a school administrator. /I/D/E/A/ school improvement programs are primarily school-based and use a wide range of staff development practices. Network facilitators experience intensive training and work closely with principals when practicing staff development programs. Both facilitators and participating administrators can be considered intimately familiar with school-based staff development programs. (pp. 58-59)

Thompson's (1982) other criterion used to qualify panel members was membership in any of four role groups. These groups were public school principals, school district staff development coordinators, staff development coordinators for intermediate agencies (e.g., regional or state agencies), and members of an institution of higher education or an educational foundation.

Thompson's (1982) draft of the questionnaire presented to the panel consisted of 50 items, 40 practices and 10 beliefs. The cover letter accompanying the draft requested the panel to evaluate the questionnaire for face validity. (In actuality, Thompson

evaluated the questionnaire for content validity.) In his dissertation Thompson wrote:

> The jury of experts was asked to judge the face [sic] validity of the instrument by first reading the article "Designing Effective Staff Development Programs" (Wood, Thompson, & Russell, 1981) in which the five-step staff development model was described and then reviewing the initial draft of the instrument to confirm or deny that the items did, in fact, reflect the practices described in the model. A checklist ... was provided for each reviewer to indicate whether each item was judged valid.
>
> Seventeen of the twenty invited jurors responded. Those items that were judged to be valid by 80% (sixteen) or more of the original panel of twenty experts were retained in the final draft of the questionnaire. Two of the original fifty items were deleted (numbers twenty-seven and twenty-nine) since two or more of the seventeen respondents found them to misrepresent or inadequately represent

> practices described in the model. Some small changes in wording or sequence of items were suggested by some jurors. Those changes not affecting the meaning of the statement were incorporated in the final draft of the instrument. (pp. 59-60)

In addition to the two items which were rejected (fewer than 16 panelists approved them), 13 of the practices were approved by the minimum number of panelists (16) Thompson established as the requirement for retention.

Thompson (1982) used a test-retest method to establish reliability for each item of the questionnaire by administering it to graduate students attending two different supervision courses at the Pennsylvania State University. The test given was the revised, validated draft; the two administrations were conducted one week apart. Thompson stated:

> Thirty-one matched pairs of the questionnaire were obtained. A Pearson product-moment correlation was computed for each item....A correlation of 0.355 was used to indicate significance at the .05 level; a correlation of 0.456 was used to indicate significance at the .01 level.

The "what-exists" scale was found to be much more stable than the "what should-be" scale. Among the "what-exists" items, thirty-five of the thirty-eight items were found to have significant positive correlations of scores on each administration of the instrument. Only items thirteen, thirty-two, and thirty-six failed to generate significant correlations. These three items were retained in the instrument after some modification to clairfy [sic] meaning or, when the "should-be" scale of the item revealed significant correlations, to allow later discrepancy analysis of the two scales. For the "what should-be" scale, twenty-one of the thirty-eight items were found to have such significant positive correlations. The following items failed to generate significant correlations between scores for repeat administrations of the "what should-be" scale: two, six, eight, ten, twelve, thirteen, fourteen, sixteen, seventeen, nineteen, twenty, twenty-one, twenty-two, twenty-five, thirty-one, thirty-seven, and thirty-eight.

Eight of the ten "beliefs" items were found to have significant positive

> correlations between scores of repeat administrations of the instrument. Only items forty-two and forty-five failed to generate significant correlations. (pp. 60, 64)

Thompson noted that the "what-exists" scale was more reliable than the "what should-be" scale and that data generated by the latter must be treated with caution.

Thompson (1982) also stated that the practices and beliefs were assumed to be independent of each other. Consequently, there was no single total score for either part of the questionnaire or the whole instrument. Scores were obtained for each item by recording the number selected on both scales for each practice and the number on the scale for each belief. Mean scores could then be computed for each item.

Data Collection Procedures

An initial mailing was distributed to the designated supervisor responsible for staff development and to the identified principals for each of 60 school districts randomly selected from the 1993-94 Virginia Educational Directory. Each supervisor responsible for staff development was asked to complete the survey. Each principal was asked to complete a copy of the survey and to distribute a survey packet to each of three teachers

according to the procedure outlined in Sample and Accessible Population, section three.

In an effort to increase the response rate for the survey, a follow-up mailing was made to each intended respondent where no response was received or where only one response was received. Additionally, a phone call was made to the principal of each school where subsequent response still totaled no more than two of a possible four. Each survey respondent received a packet which included: (a) a cover letter explaining the purpose, data collection method, and safeguards for identity of respondents; (b) a copy of the survey with instructions to be completed and returned; and (c) a self addressed, stamped envelope to use in returning the survey; The envelope was coded to allow identification of non-respondents. In addition, principals received a letter of instruction for distribution of survey packets to the three teachers in his/her school.

Data Analysis

Descriptive statistics were used to analyze the data. Mean scores and standard deviations were computed for each of the items in the questionnaire to determine the degree to which they were accepted by Virginia school district personnel. Analysis of Variance (ANOVA) was used to identify the items for which statistically significant differences in mean scores existed among the

classifications of personnel and the classifications of school districts. The Tukey wholly significant difference (WSD) method was used to determine pair-wise differences among the different classifications of school districts for items with significant F-ratios. The use of the Tukey method in these analyses was to "take into account the probability that the researcher will find a significant difference between mean scores simply because many comparisons are made on the same data" (Borg & Gall, p. 553). These procedures were applied to the 10 beliefs, to the 38 practices to determine to what degree each was considered desirable, and to the 38 practices to determine to what degree each was currently being employed as perceived by the survey respondents.

A discrepancy analysis was conducted for each of the 38 practices by comparing the mean scores for desirability and current use among the various types of personnel and districts. In addition, these data were analyzed according to the different classifications of school districts and according to the different classifications of personnel using analysis of variance and, where significant differences were identified, the Tukey test. These discrepancies were used to delineate the need for change and show where stability was present in staff development practice.

The .05 level of significance was accepted as the level of risk of a Type I error. Data were analyzed using the IBM version of the Advanced Statistical Package for the Social Sciences (SPSS-X).

Ethical Safeguards and Considerations

This research design was ethical in terms of providing results that could be interpreted meaningfully (i.e., empirically). The data were translated into meaningful statistical units that could be logically interpreted. The research design was ethical in terms of its use of human subjects. Subjects were afforded the opportunity to receive feedback from survey results. The results of this survey were made available to practicing teachers and school administrators in Virginia upon request. In reporting results, only statistical summaries of responses were utilized. In no instance was the identity of an individual respondent or school district divulged or reported. These procedures are in keeping with acceptable research practices as determined by the Human Subjects Review Committee for the School of Education, The College of William and Mary.

Chapter 4

Analysis of Results

Introduction

This chapter reports the data collected and describes the findings related to the investigation. A review of the purposes of the study will be followed by a report of the findings in subsections reflecting the four questions and each pair of hypotheses. A summary of the findings will conclude the chapter.

Data obtained for the study were analyzed using an analysis of variance technique to identify items for which statistically significant differences existed among mean scores of the different types of respondents. The data were computed using the Statistical Package for the Social Sciences (SPSS). The Tukey method was used to determine pair-wise differences between types of personnel and types of school districts for items with significant F-ratios.

The purposes of the study were to compare the perceptions of three different types of personnel and to compare the perceptions of three types of school districts regarding four questions. The first question asked whether respondents agreed with 10 beliefs about staff development. The second question asked to what extent 38 staff development practices should be employed.

The third question asked to what extent the 38 staff development practices actually were employed. The fourth question asked the extent of the discrepancy between what was desired and what actually existed for each of the 38 practices.

The survey was mailed to supervisors, principals, and teachers randomly selected from public school districts in Virginia. The population was identified using the 1993-94 Virginia Educational Directory. A total of 744 surveys were sent to 60 school districts. Recipients included 60 district supervisors, 171 principals, and 513 teachers. A second mailing was sent to all non-respondents. This was followed up by telephone calls to principals of schools from which no responses or only 1 response out of 4 had been received. The total number of responses was 405 of which 13 were so incomplete as to be invalid leaving 392 useable responses or 53%. A breakdown of responses by personnel type revealed 40 returns by supervisors (a 67% rate of return), 93 returns by principals (a 54% rate of return), and 259 teachers (a 50% rate of return). Return rates by district type were 122 or 53% for small rural districts, 51 or 39% for large urban districts, and 219 or 57% for other districts. A breakdown of personnel by district type may be seen in Table 1.

Table 1

Number and Percent Returns of Personnel Types by District Types

Personnel Type	Total		Large Urban Districts		Small Rural Districts		Other Districts	
	Number	%	Number	%	Number	%	Number	%
Supervisors	40	67	6	60	10	50	24	80
Principals	93	54	12	40	31	58	50	57
Teachers	259	50	33	37	81	51	145	55
Total	392		51		122		219	

The low response rate may be attributed to any of several circumstances. Foremost of these may be the number of survey requests received by non-respondents. A number of unsolicited oral comments by principals indicated that some schools and districts had been inundated by requests for survey responses. As one principal put it, his school had been "surveyed to death." A second, related cause was the restriction placed on personnel in 3 of the 10 large urban districts in the state. These 3 districts did not permit personnel to respond to surveys until the surveys were approved on the district level. The lengthy application process, coupled with time restrictions, eliminated 26 responses from 2 of these districts and so severely delayed the third that only 1 of 13 responses was received. The

Table 2

Comparison of Surveys Sent and Returned by Type of District

District Type	Surveys Sent Number	Surveys Sent % of Total	Surveys Returned Number	Surveys Returned % of Total	Difference
Large Urban	130	17.47	51	13.01	-4.46
Small Rural	228	30.65	122	31.12	0.47
Other	386	51.88	219	55.87	3.99
Total	744	100.00	392	100.00	

effect of the low return rate for large urban districts was a 4.46% difference between surveys sent and surveys returned as may be seen in Table 2.

A third cause of the low response rate may be attributed to the length of the questionnaire. The questionnaire took up to 20 minutes to complete, time many practitioners are reluctant or unwilling to devote to an activity that provides no immediate tangible return for them or their students. A fourth, related problem may be the difficulty of the questions. Many of them are lengthy, often complicated, and appear obscure at first glance. Educators are often reluctant to expend the effort required to understand and provide thoughtful answers to questions with these characteristics.

This fourth issue raises a concern regarding the effect of question length and difficulty on the results of the survey. Whether the questions themselves influenced respondents answers or discouraged educators from responding is unknown. However, it should be noted that in the first case, the response rate for the Thompson study ranged from a low of 74% to a high of 81% with an overall rate of 77%. Despite a 12 year time difference and a different population (Virginians rather than Pennsylvanians), many of the results were similar or the same. As for not responding at all, if an effect were present, then both surveys must have been affected similarly. It is more likely that the length of the questionnaire would discourage those who might be put off by the individual questions.

A fifth problem may have been weather related. Severe ice and snow conditions which occurred before and throughout most of the survey solicitation process made continuity of the education process difficult to maintain. Much extra effort was required to re-establish a learning atmosphere with students, limiting the time available to address outside requests. Finally, a complicated distribution system, the consequence of the randomization of the teacher sampling process, may have hindered some principals from following through with distribution of the survey.

The conclusion of the researcher was that a combination of factors was responsible for the low response rate. Principal among these would most likely be the timing of the survey and the weather conditions. It would have received better response had it been mailed early in the year before so many other requests. Additionally, an earlier mailing date would have avoided the severe weather conditions experienced during the winter.

While the low percentage of responses to the survey call into question the validity of the study, it is hoped that the large number of both total responses and sub-set responses will at least in part counter the problem. The smallest number of responses was 40 and it was of a group with a 60% return rate. The lowest percentage of responses was 39% from large urban districts. However, a total of 51 responses were received from this group. Obviously, caution must be used in interpreting the data. The reader must make his/her own decision whether to accept or reject the findings of this study.

Beliefs

Beliefs by personnel. The first question concerned the 10 Beliefs. Respondents were asked to state whether they strongly agreed (4.000), agreed (3.000), disagreed (2.000), or strongly disagreed (1.000) with each item. In the comparison of personnel types the respondents'

Table 3

Means and Standard Deviations of Beliefs for the Three Types of School Personnel

	Supervisors		Principals		Teachers			
Item	M	SD	M	SD	M	SD	F	p
1	3.750	.899	3.828	.379	3.714	.593	1.26986	.282
2	3.550	.932	3.634	.527	3.483	.733	1.57373	.209
3	3.475	1.086	3.710	.456	3.618	.674	1.68622	.187
4	3.475	.960	3.355	.789	3.479	.744	.84820	.429
5	3.575	.931	3.559	.634	3.490	.717	.46139	.631
6	3.275	1.109	3.430	.597	3.340	.840	.62200	.537
7	3.625	.925	3.634	.604	3.598	.788	.08466	.919
8	3.025	1.074	2.946	1.136	2.892	1.076	.29788	.743
9	3.175	1.196	3.344	.773	3.286	.828	.54412	.581
10	3.425	.958	3.559	.580	3.232	.863	5.82324*	.003

collective means ranged from a low of 2.892 to a high of 3.828 for each of the 10 Beliefs. All means for personnel Beliefs are shown in Table 3.

The first hypothesis addressed differences among supervisors, principals, and teachers in their agreement with the 10 Beliefs.

Hypothesis 1.1 There are no significant differences in perception among teachers, principals, and supervisors as to what degree each research-based staff development belief is considered important.

Teachers, principals, and supervisors agreed with each other on all items except Item 10. Analysis of

variance for Beliefs by personnel may be found in Table A of Appendix D. Analysis of variance for Item 10 follows.

Item 10 - The school principal is the "gate-keeper" or key element for adoption and continued use of new practices and programs in a school.

The group mean scores for Item 10, Beliefs, were 3.425 for supervisors, 3.559 for principals, and 3.232 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 4.

Table 4

Analysis of Variance for Item 10, Beliefs by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	7.74835	3.87418	5.82324*
Error	389	258.80012	.66530	

*p<.05

A Tukey test was conducted to determine the difference between pairs among the types of personnel on Item 10. The results, as shown in Table 5, revealed that the scores of the teachers differed significantly from that of principals.

Table 5

T Statistics Among Personnel Types for Item 10, Beliefs

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	3.232	--	
Principals	3.559	4.69*	--
Supervisors	3.425	1.97	1.23

*$p<.05$

Beliefs by districts. When respondents views were considered according to type of school district the means for each group fell between a low of 2.900 and a high of 3.800. The means of Beliefs by school districts are shown in Table 6.

Table 6

Means and Standard Deviations of Beliefs for the Three Types of School Districts

Item	Small Rural Districts M	Small Rural Districts SD	Other Districts M	Other Districts SD	Large Urban Districts M	Large Urban Districts SD	F	p
1	3.779	.417	3.714	.658	3.800	.639	.72391	.486
2	3.607	.554	3.491	.785	3.480	.735	1.14434	.320
3	3.680	.468	3.609	.735	3.560	.884	.67977	.507
4	3.418	.702	3.459	.840	3.480	.839	.14654	.864
5	3.582	.628	3.486	.755	3.480	.789	.75527	.471
6	3.443	.681	3.318	.810	3.300	1.129	1.02772	.359
7	3.648	.726	3.591	.797	3.600	.700	.22025	.802
8	2.902	1.032	2.900	1.114	3.040	1.124	.35662	.700
9	3.328	.698	3.241	.951	3.400	.782	.88672	.413
10	3.303	.748	3.336	.825	3.360	1.005	.10272	.902

Hypothesis 1.2 addressed the comparison among different types of school districts of the value attached to the 10 Beliefs by district personnel.

Hypothesis 1.2 There are no significant differences in personnel perceptions among small rural school districts, large urban school districts, and all other types of school districts as to what degree each research-based staff development belief is considered important.

There were no significant differences among respondents of the three types of districts in their agreement with any of the 10 Beliefs. Generally, all three district types support the 10 Beliefs. Analysis of

variance for the Beliefs by district type may be found in Table B of Appendix D.

Practices as They Should Be

Should Be by personnel. The second research question was concerned with whether Virginia educators viewed the 38 Practices with similar levels of desirability. The mean scores of the respondents for the desirability of the 38 Practices, as shown in Table 7, indicate general agreement of their acceptance among all three groups of personnel. Respondents were asked to record their answers on a 4 point Likert type scale consisting of almost always (4.000), often (3.000), sometimes (2.000), and almost never (1.000). Mean scores ranged from a low of 2.757 to a high of 3.900. The means of the 38 Practices as they Should Be by personnel are listed in Table 7.

Table 7

Means and Standard Deviations of Practices as They Should Be for the Three Types of School Personnel

	Supervisors		Principals		Teachers			
Item	M	SD	M	SD	M	SD	F	p
1	3.725	.599	3.796	.405	3.803	.517	.42043	.657
2	3.700	.464	3.677	.645	3.618	.638	.51517	.598
3	3.825	.675	3.817	.551	3.699	.759	1.28419	.278
4	3.725	.716	3.656	.699	3.710	.645	.26366	.768
5	3.850	.362	3.634	.639	3.602	.704	2.42194	.090
6	3.675	.474	3.505	.746	3.440	.936	1.35546	.259
7	3.825	.385	3.656	.617	3.668	.602	1.35075	.260
8	3.225	.832	3.301	.831	3.189	.940	.52435	.592
9	3.700	.516	3.548	.562	3.525	.728	1.17124	.311
10	3.625	.586	3.387	.794	3.494	.712	1.62981	.197
11	3.450	.597	3.247	.717	3.232	.858	1.35546	.259
12	3.275	.716	3.118	.720	2.757	1.030	8.75330*	.000
13	3.725	.554	3.624	.550	3.247	1.175	7.29195*	.001
14	3.375	.705	3.290	.802	2.958	1.050	6.14962*	.002
15	3.450	.749	3.505	.868	3.363	.956	.87794	.416
16	3.225	.947	3.258	.690	3.154	.984	.47456	.623
17	3.650	.736	3.473	.701	3.436	.875	1.16947	.312
18	3.600	.744	3.398	.628	3.351	.851	1.71116	.182
19	3.650	.483	3.602	.554	3.456	.721	2.65224	.072
20	3.150	.802	3.011	.730	3.050	.831	.41826	.658
21	3.325	.656	3.247	.637	3.255	.800	.16933	.844
22	3.175	.594	3.032	.683	3.147	.789	.91337	.402
23	3.025	.698	2.946	.757	2.927	.825	.26594	.767
24	3.100	.591	3.172	.636	2.961	.816	2.87096	.058
25	3.650	.533	3.602	.554	3.514	.673	1.24216	.290
26	3.650	.533	3.538	.608	3.448	.858	1.39502	.249
27	3.375	.807	3.215	.883	2.768	1.267	8.45893*	.000
28	3.525	.554	3.376	.606	3.012	1.146	7.76027*	.000
29	3.800	.405	3.419	.712	3.355	.892	5.16150*	.006
30	3.700	.564	3.613	.590	3.452	.812	2.98797	.052
31	3.625	.540	3.247	.843	3.097	1.001	5.87776*	.003
32	3.375	.540	3.194	.664	3.046	.947	3.08844*	.047
33	3.750	.439	3.548	.668	3.456	.890	2.46646	.086
34	3.900	.304	3.785	.463	3.649	.765	3.27667*	.039
35	3.750	.439	3.376	.793	2.977	1.056	14.83078*	.000
36	3.375	.897	3.290	.701	2.981	1.065	5.30047*	.005
37	3.200	.911	3.290	.685	3.046	.943	2.78002	.063
38	3.800	.405	3.559	.598	3.436	.848	4.29919*	.014

Hypothesis 2.1 addressed the question of differing levels of support among the three types of personnel for each of the 38 Practices.

Hypothesis 2.1 There are no significant differences in perception among teachers, principals, and supervisors as to what degree each research-based staff development practice is perceived as desirable.

There was no significant difference among personnel types in their perception of 26 of the 38 Practices. For 12 items a significant difference was observed at the .05 level of significance among the perceptions of the personnel types.

Teachers' scores were significantly less supportive than those of supervisors on 12 items, Items 12, 13, 14, 27, 28, 29, 31, 32, 34, 35, 36, and 38. Teachers' scores were significantly less supportive than principals' scores on 7 items, Items 12, 13, 14, 27, 28, 35, and 36. However, teachers' scores were still very near to a 3.000 or above for all practices.

Principals' and supervisors' scores differed significantly on two items, Items 29 and 31. In both cases principals were less supportive.

The 12 Practices showing specific differences involved four areas of staff development. First, there was a difference in perception as to how time and

resources should be used. Items 12, 13, 14, 29, and 31 address this issue. Both principals and supervisors perceived long range planning objectives and the planning for and use of resources as more important than did teachers.

Second, there was a difference in perception as to whether leadership and responsibility for staff development should be gradually turned over to participants as skills were developed. Teachers were less supportive of this idea, expressed in Items 27 and 28, than either supervisors or principals.

Third, there was a difference in perception as to whether support services and staff development leaders should be available. This idea, expressed in Items 29 and 31, received significantly greater support from supervisors than from teachers. Principals did not differ significantly with the other personnel types.

Finally, there was a difference in perception as to supervision and maintenance of new practices and programs. Teachers disagreed with supervisors and principals on the degree to which supervision and self monitoring should occur. As reflected in Items 35 and 36, teachers gave this idea less support than other personnel types. Additionally, teachers gave less support than supervisors regarding shared responsibility for maintenance of new behaviors, peer supervision and

principals' support. Principals did not differ significantly with the other personnel types on this item. Generally, the hypothesis is supported for 26 Practices and rejected for 12. Analysis of variance for Should Be by personnel may be found in Table C of Appendix D. The analysis of variance for items with significant differences follows.

Item 12 - Staff development programs include objectives for inservice activities covering as much as five years.

The group mean scores for Item 12, Should Be, were 3.275 for staff development leaders, 3.118 for principals, and 2.757 for teachers. Analysis of variance revealed significant differences for the groups as shown in Table 8.

Table 8

Analysis of Variance for Item 12, Should Be by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	15.36213	7.68107	8.75330*
Error	389	341.34960	.87751	

*p<.05

Tukey tests were conducted for each of the twelve items showing differences of opinion among personnel types. Results of the Tukey test for Item 12 may be found in Table 9. As shown, teachers scores differ significantly from those of both supervisors and principals.

Table 9

T Statistics Among Personnel Types for Item 12, Should Be

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.757	--	
Principals	3.118	4.509*	--
Supervisors	3.275	4.603*	1.120

*p<.05

Item 13 - The resources (time, money, and materials) available for use in staff development are identified prior to planning inservice activities.

The group mean scores for Item 13, Should Be, were 3.725 for supervisors, 3.624 for principals, and 3.247 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 10.

Table 10

Analysis of Variance for Item 13, Should Be by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	14.84590	7.42295	7.29195*
Error	389	395.98829	1.01796	

*p<.05

As shown in Table 11, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 11

T Statistics Among Personnel Types for Item 13, Should Be

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	3.247	--	
Principals	3.624	4.37*	--
Supervisors	3.725	3.94*	0.75

*p<.05

Item 14 - Staff development programs include plans for activities to be conducted during the following three to five years.

The group mean scores for Item 14, Should Be, were 3.375 for supervisors, 3.290 for principals, and 2.958 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 12.

Table 12

Analysis of Variance for Item 14, Should Be by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio*
Among Three Personnel Types	2	11.47936	5.73968	6.14962
Error	389	363.06911	.93334	

*p<.05

As shown in Table 13, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 13

T Statistics Among Personnel Types for Item 14, Should Be

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.958	--	
Principals	3.290	4.02*	--
Supervisors	3.375	3.59*	0.65

*p<.05

Item 27 - As participants in staff development activities become increasingly competent, leadership behavior becomes less directive or task-oriented.

The group mean scores for Item 27, Should Be, were 3.375 for supervisors, 3.215 for principals, and 2.768 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 14.

Table 14

Analysis of Variance for Item 27, Should Be by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	22.23130	11.11565	8.45893*
Error	389	511.17431	1.31407	

*p<.05

As shown in Table 15, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 15

T Statistics Among Personnel Types for Item 27, Should Be

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.768	--	
Principals	3.215	4.56*	--
Supervisors	3.375	4.40*	1.04

*$p<.05$

Item 28 - As participants in staff development activities become increasingly confident in their abilities, the leader transfers increasing responsibility to the participants.

The group mean scores for Item 28, Should Be, were 3.525 for supervisors, 3.376 for principals, and 3.012 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 16.

Table 16

Analysis of Variance for Item 28, Should Be by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	15.35169	7.67585	7.76027*
Error	389	384.76821	.98912	

*p<.05

As shown in Table 17, results of the Tukey tests revealed that scores of teachers differed significantly from those of both supervisors and principals.

Table 17

T Statistics Among Personnel Types for Item 28, Should Be

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	3.012	--	
Principals	3.376	4.28*	--
Supervisors	3.525	4.29*	1.12

*p<.05

Item 29 - After participating in inservice activities, participants have access to support services to help implement new behaviors as part of their regular work.

The group mean scores for Item 29, Should Be, were 3.800 for supervisors, 3.419 for principals, and 3.355 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 18.

Table 18

Analysis of Variance for Item 29, Should Be by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	6.85631	3.42816	5.16150*
Error	389	258.36562	.66418	

*$p<.05$

As shown in Table 19, results of the Tukey tests revealed that scores of supervisors differed significantly from those of both teachers and principals.

Table 19

T Statistics Among Personnel Types for Item 29, Should Be

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	3.355	--	
Principals	3.419	0.92	--
Supervisors	3.800	4.55*	3.50*

*p<.05

Item 31 - The leaders of staff development activities visit the job setting, when needed, to help the inservice participants refine or review previous learning.

The group mean scores for Item 31, Should Be, were 3.625 for supervisors, 3.247 for principals, and 3.097 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 20.

Table 20

Analysis of Variance for Item 31, Should Be by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	10.13191	5.06596	5.87776*
Error	389	335.27370	.86189	

*p<.05

As shown in Table 21, results of the Tukey tests revealed that supervisors' scores differed significantly from those of both teachers and principals.

Table 21

T Statistics Among Personnel Types for Item 31, Should Be

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	3.097	--	
Principals	3.247	1.89	--
Supervisors	3.625	4.73*	3.05*

*p<.05

Item 32 - School Staff members use peer supervision to assist one another in implementing new work behaviors.

The group mean scores for Item 32, Should Be, were 3.375 for supervisors, 3.194 for principals, and 3.046 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 22.

Table 22

Analysis of Variance for Item 32, Should Be by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	4.49904	2.24952	3.08844*
Error	389	283.33514	.72837	

*p<.05

As shown in Table 23, results of the Tukey tests revealed that teachers' scores differed significantly from those of supervisors.

Table 23

T Statistics Among Personnel Types for Item 32, Should Be

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	3.046	--	
Principals	3.194	2.03	--
Supervisors	3.375	3.21*	1.59

*$p<.05$

Item 34 - The school principal actively supports efforts to implement changes in professional behavior.

The group mean scores for Item 34, Should Be, were 3.900 for supervisors, 3.785 for principals, and 3.649 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 24.

Table 24

Analysis of Variance for Item 34, Should Be by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	2.93680	1.46840	3.27667*
Error	389	174.32595	.44814	

*p<.05

As shown in Table 25, results of the Tukey tests revealed that teachers' scores differed significantly from those of supervisors.

Table 25

T Statistics Among Personnel Types for Item 34, Should Be

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	3.649	--	
Principals	3.785	2.38	--
Supervisors	3.900	3.12*	1.34

*p<.05

Item 35 - A systematic program of instructional supervision is used to monitor new work behavior.

The group mean scores for Item 35, Should Be, were 3.750 for supervisors, 3.376 for principals, and 2.977 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 26.

Table 26

Analysis of Variance for Item 35, Should Be by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	26.93094	13.46547	14.83078*
Error	389	353.18896	.90794	

*p<.05

As shown in Table 27, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and building administrators.

Table 27

T Statistics Among Personnel Types for Item 35, Should Be

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.977	--	
Principals	3.376	4.90*	--
Supervisors	3.750	6.75*	2.94

*$p<.05$

Item 36 - School staff members utilize systematic techniques of self-monitoring to maintain new work behaviors.

The group mean scores for Item 36, Should Be, were 3.375 for supervisors, 3.290 for principals, and 2.981 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 28.

Table 28

Analysis of Variance for Item 36, Should Be by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	10.06789	5.03394	5.30047*
Error	389	369.43977	.94972	

*p<.05

As shown in Table 29, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and building administrators.

Table 29

T Statistics Among Personnel Types for Item 36, Should Be

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.981	--	
Principals	3.290	3.71*	--
Supervisors	3.375	3.36*	0.65

*p<.05

Item 38 - Responsibility for the maintenance of new school practices is shared by both teachers and administrators.

The group mean scores for Item 38, Should Be, were 3.800 for supervisors, 3.559 for principals, and 3.436 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 30.

Table 30

Analysis of Variance for Item 38, Should Be by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	4.97388	2.48694	4.29919*
Error	389	225.02357	.57847	

*$p<.05$

As shown in Table 31, results of the Tukey tests revealed that teachers' scores differed significantly from those of supervisors.

Table 31

T Statistics Among Personnel Types for Item 38, Should Be

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	3.436	--	
Principals	3.559	1.89	--
Supervisors	3.800	3.98*	2.37

*$p<.05$

Should Be by district. The mean scores of the respondents for the desirability of the 38 Practices, as shown in Table 32, indicate general agreement of their acceptance among all three types of school districts. Mean scores fell between a range of 2.620 and 3.840. The means of the 38 Practices for desirability or Should Be are listed in Table 32.

Table 32

Means and Standard Deviations of Practices as they Should Be for the Three Types of School Districts

Item	Small Rural Districts M	SD	Other Districts M	SD	Large Urban Districts M	SD	F	p
1	3.828	.420	3.777	.549	3.780	.465	.41884	.658
2	3.680	.534	3.591	.693	3.760	.476	1.86790	.156
3	3.746	.767	3.714	.731	3.840	.370	.65612	.519
4	3.689	.717	3.709	.632	3.680	.683	.06073	.941
5	3.664	.508	3.591	.774	3.760	.431	1.48668	.227
6	3.467	.855	3.445	.892	3.660	.688	1.29408	.275
7	3.697	.588	3.641	.622	3.820	.388	1.96229	.142
8	3.287	.798	3.205	.921	3.120	1.062	.67161	.511
9	3.541	.532	3.545	.730	3.580	.731	.06433	.938
10	3.516	.707	3.464	.730	3.480	.735	.20886	.812
11	3.221	.674	3.259	.897	3.340	.658	.38567	.680
12	2.959	.837	2.923	.974	2.620	1.105	2.45721	.087
13	3.410	.898	3.355	1.115	3.460	.908	.26573	.767
14	3.098	.904	3.068	1.025	3.080	.966	.03715	.964
15	3.303	1.028	3.368	.915	3.820	.388	6.21480*	.002
16	3.180	.909	3.168	.976	3.280	.640	.30489	.737
17	3.426	.862	3.468	.819	3.560	.760	.46658	.627
18	3.385	.847	3.364	.779	3.500	.735	.59912	.550
19	3.451	.772	3.518	.623	3.620	.567	1.17771	.309
20	3.082	.756	3.045	.793	3.000	.969	.19533	.823
21	3.270	.643	3.236	.816	3.340	.688	.40527	.667
22	3.115	.658	3.091	.777	3.280	.809	1.31715	.269
23	2.943	.764	2.909	.811	3.080	.804	.93938	.392
24	3.000	.782	3.014	.767	3.140	.670	.66206	.516
25	3.582	.628	3.545	.599	3.480	.789	.46333	.630
26	3.574	.559	3.427	.881	3.560	.760	1.62096	.199
27	2.967	1.185	2.891	1.200	3.060	.978	.48799	.614
28	3.238	.910	3.036	1.097	3.440	.760	3.96020*	.020
29	3.443	.750	3.359	.883	3.600	.700	1.84466	.159
30	3.566	.560	3.482	.796	3.540	.908	.52399	.593
31	3.230	.821	3.150	.998	3.240	.960	.37340	.689
32	3.107	.841	3.109	.864	3.160	.889	.07951	.924
33	3.500	.846	3.486	.773	3.620	.878	.56234	.570
34	3.680	.646	3.700	.728	3.800	.452	.58325	.559
35	3.057	1.093	3.173	.954	3.280	.834	1.03145	.357
36	3.049	1.027	3.127	.952	3.060	.038	.28042	.756
37	3.115	.874	3.105	.872	3.200	1.010	.23662	.789
38	3.541	.762	3.450	.807	3.640	.563	1.47611	.230

Hypothesis 2.2 addressed the question of differing levels of support among the three types of school districts for each of the 38 Beliefs.

Hypothesis 2.2 There are no significant differences among personnel perceptions in small rural school districts, large urban school districts, and all other types of school districts as to what degree each research-based staff development practice is perceived as desirable.

There was no significant difference among the three types of districts in their perception of desirability for 36 of the 38 Practices. For 2 items a significant difference was found among the perceptions of respondents in the three types of districts at the .05 level of significance. They were Items 15, which addressed written objectives for staff development activities, and Item 28, which addressed transfer of responsibility from staff development leaders to participants as skills were developed. Scores of large urban district respondents differed significantly from those of other types of districts for both items. Large urban districts' scores differed significantly from those of small rural districts for Item 15. It should be noted that with a significance level of .05 that, for 38 items there is a

chance of two significant differences due to a Type I error.

Generally, all three types of districts supported the 38 practices. Items 12, 23, and 27 were least well supported while Items 1 and 3 were most strongly supported. The hypothesis is supported for 36 of the 38 Practices and not supported for 2 of them. Generally, the three district types agreed on support of the Practices. Analysis of variance for Should Be Practices by districts may be found in Table D of Appendix D. The analysis of variance for items with significant differences follows.

Item 15 - Specific objectives are written for staff development activities.

The group mean scores for Item 15, Should Be, were 3.303 for small rural districts, 3.820 for large urban districts, and 3.368 for other districts. Analysis of variance revealed significant differences among the scores of the three groups as shown in Table 33.

Table 33

Analysis of Variance for Item 15, Should Be by District Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three District Types	2	10.17169	5.08585	6.21480*
Error	389	318.33596	.81834	

*p<.05

As shown in Table 34, results of the Tukey tests revealed that scores for large urban districts differed significantly from those of both small rural districts and other districts.

Table 34

T Statistics Among District Types for Item 15, Should Be

District Type	Mean	T-Scores	
		Small Rural	Other
Small Rural	3.303	--	
Other	3.368	0.90	--
Large Urban	3.820	4.81*	4.51*

*p<.05

Item 28 - As participants in staff development activities become increasingly confident in their abilities, the leader transfers increasing responsibility to the participants.

The group mean scores for Item 28, Should Be, were 3.328 for small rural districts, 3.440 for large urban districts, and 3.036 for other districts. Analysis of variance revealed significant differences among the scores of the three groups as shown in Table 35.

Table 35

Analysis of Variance for Item 28, Should Be by District Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three District Types	2	7.98425	3.99212	3.96020*
Error	389	392.13565	1.00806	

*$p<.05$

As shown in Table 36, results of the Tukey tests revealed that the scores of large urban districts differed from those of other districts.

Table 36

T Statistics Among District Types for Item 28, Should Be

District Type	Mean	T-Scores	
		Small Rural	Other
Small Rural	3.238	--	
Other	3.036	2.52	--
Large Urban	3.440	1.69	3.63*

*p<.05

Practices as they Exist

Exists by personnel. The third research question was concerned with whether Virginia educators viewed the 38 Practices as existing to a similar degree. The mean scores of the respondents for the 38 Practices, as shown in Table 37, generally indicated disagreement as to the current use of the Practices among the three types of personnel. Scores ranged from a low of 1.649 to a high of 3.570. The means of the 38 Practices for current use or Exists are listed in Table 37.

Table 37

Means and Standard Deviations of Practices as they Exist for the Three Types of School Personnel

	Supervisors		Principals		Teachers			
Item	M	SD	M	SD	M	SD	F	p
1	2.900	.810	3.140	.731	2.637	.902	12.23156*	.000
2	2.950	.714	2.871	.875	2.595	.997	4.53796*	.011
3	3.400	.982	3.430	.877	3.228	1.041	1.65806	.192
4	2.975	1.050	3.280	.728	2.934	.944	4.98747*	.007
5	2.975	.733	2.839	.888	2.552	.981	5.66475*	.004
6	2.775	.800	2.731	.782	2.490	.998	3.29383*	.038
7	3.200	.723	3.086	.830	2.830	.941	4.83581*	.008
8	3.175	.844	3.323	.725	2.981	.986	4.98840*	.007
9	2.900	.744	2.785	.735	2.309	.879	16.73842*	.000
10	3.150	.770	2.892	.853	2.436	.964	15.85529*	.000
11	2.425	.781	2.215	.895	1.884	.970	8.50996*	.000
12	2.300	.911	2.161	.981	1.788	.983	8.24581*	.000
13	3.300	.911	2.903	.956	2.405	1.264	13.92586*	.000
14	2.400	.955	2.398	.957	1.954	.979	9.20713*	.000
15	2.350	.975	2.495	.916	2.266	1.097	1.64007	.195
16	2.325	.859	2.409	.875	2.058	1.042	4.87474*	.008
17	3.225	.832	3.032	.840	2.788	1.006	5.00265*	.007
18	3.050	.815	2.914	.747	2.537	1.028	8.83819*	.000
19	2.850	.834	2.903	.848	2.456	1.008	9.00084*	.000
20	2.350	.864	2.301	.882	2.189	.988	.81431	.444
21	2.600	.841	2.763	.925	2.544	1.093	1.54015	.216
22	2.650	.893	2.559	.800	2.228	.947	6.97676*	.001
23	2.350	.662	2.473	.829	2.143	.844	5.87924*	.003
24	2.600	.709	2.624	.859	2.390	.935	2.81274	.061
25	3.100	.841	3.355	.761	2.938	1.051	6.36446*	.002
26	3.325	.730	3.226	.796	2.695	.994	16.24887*	.000
27	2.675	.797	2.667	.851	2.073	1.067	15.75863*	.000
28	3.025	.660	2.839	.838	2.201	1.037	23.44630*	.000
29	2.800	.723	2.462	.815	2.027	1.009	16.10878*	.000
30	2.575	.874	2.538	.867	1.981	.990	15.70573*	.000
31	2.450	.846	2.118	.942	1.649	.900	19.27012*	.000
32	2.250	.840	2.312	.884	1.884	.970	8.42382*	.000
33	2.625	.807	2.484	.802	1.923	.965	19.48614*	.000
34	3.050	.783	3.570	.666	3.151	.955	8.84594*	.000
35	2.550	.876	2.484	.940	1.799	.956	24.53953*	.000
36	2.325	.888	2.172	.761	1.985	.992	3.13370*	.045
37	1.800	.883	2.108	.814	1.938	.978	1.81871	.164
38	2.975	.800	2.882	.778	2.421	1.048	11.36077*	.000

Hypothesis 3.1 addressed the question of differing opinions of current use among the three types of personnel for each of the 38 Practices.

Hypothesis 3.1 There are no significant differences in perception among teachers, principals, and supervisors as to what degree each research-based staff development practice is perceived as currently employed.

No significant difference among personnel types was observed for Items 3, 15, 20, 21, 24, and 37. There was significant difference among personnel types in their perception of 32 of the 38 Practices at the .05 level of significance. Of these, 29 were significant at the .01 level.

Of the 32 Practices where pair-wise statistics revealed significant differences, 30 differences were observed between teachers and principals. These were Items 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, and 38. In all cases, teachers' perceptions of existence were lower than those of principals.

For 24 items, pair-wise differences were revealed between teachers and supervisors. These were Items 2, 5, 7, 9, 10, 11, 12, 13, 14, 17, 18, 19, 22, 26, 27, 28, 29,

30, 31, 32, 33, 35, 36, and 38. In all cases teachers' perceptions of existence were lower than those of supervisors.

For Item 34 a pair-wise difference was also observed between principals and supervisors. Supervisors' perceptions were lower than those of principals.

Generally, all three personnel types perceived that the practices were employed to a lesser extent than they should have been. Teachers particularly disagreed with either principals, supervisors or both as to the extent of the disparity for 32 Practices. Hypothesis 3.1 is rejected for 32 of the 38 Practices. It is not rejected for 6. Analysis of variance for Exists Practices by personnel may be found in Table E of Appendix D. The analysis of variance for items with significant differences follows.

Item 1 - A positive school climate is developed before other staff development efforts are attempted. (A positive climate is characterized by open communications, trust, and supportive relationships.)

The group mean scores for Item 1, Exists, were 2.900 for supervisors, 3.140 for principals, and 2.637 for teachers. Analysis of variance revealed significant

differences among the scores of the groups as shown in Table 38.

Table 38

Analysis of Variance for Item 1, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	17.90191	8.95096	12.23056*
Error	389	284.66697	.73179	

*p<.05

As shown in Table 39, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 39

T Statistics Among Personnel Types for Item 1, Exists

Personnel Types	Mean	T-Scores	
		Teachers	Principals
Teachers	2.637	--	
Principals	3.140	6.88*	--
Supervisors	2.900	2.56	2.10

*p<.05

Item 2 - Goals for school improvement are written collaboratively by teacher, parents, building administrators and central office administrators.

The group mean scores for Item 2, Exists, were 2.950 for supervisors, 2.871 for principals, and 2.595 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 40.

Table 40

Analysis of Variance for Item 2, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	8.09095	4.04548	4.53796*
Error	389	346.78405	.89148	

*p<.05

As shown in Table 41, results of the Tukey tests revealed that teachers' scores differed significantly from those of both principals and supervisors.

Table 41

T Statistics Among Personnel Types for Item 2, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.595	--	
Principals	2.871	3.42*	--
Supervisors	2.950	3.13*	0.63

*p<.05

Item 4 - The school staff adopts and supports goals for the improvement of school programs.

The group mean scores for Item 4, Exists, were 2.975 for supervisors, 3.280 for principals, and 2.934 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 42.

Table 42

Analysis of Variance for Item 4, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	8.24638	4.12319	4.98747*
Error	389	321.59035	.82671	

*p<.05

As shown in Table 43, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 43

T Statistics Among Personnel Types for Item 4, Exists

	Mean	T-Scores	
Personnel Type		Teachers	
Principals			
Teachers	2.934	--	
Principals	3.280	4.45*	--
Supervisors	2.975	0.38	2.51

*p<.05

Item 5 - Current school practices are examined to determine which ones are congruent with the school's goals for improvement before staff development activities are planned.

The group scores for Item 5, Exists, were 2.975 for supervisors, 2.839 for principals, and 2.552 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 44.

Table 44

Analysis of Variance for Item 5, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	9.94904	4.97452	5.66475*
Error	389	341.60198	.87815	

*p<.05

As shown in Table 45, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 45

T Statistics Among Personnel Types for Item 5, Exists

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	2.552	--	
Principals	2.839	3.58*	--
Supervisors	2.975	3.52*	1.09

*p<.05

Item 6 - Current educational practices not yet found in the school are examined to determine which ones are congruent with the school's goals for improvement before staff development activities are planned.

The group mean scores for Item 6, Exists, were 2.775 for supervisors, 2.731 for principals, and 2.490 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 46.

Table 46

Analysis of Variance for Item 6, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	5.72364	2.86182	3.29383*
Error	389	337.98044	.86884	

*p<.05

As shown in Table 47, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 47

T Statistics Among Personnel Types for Item 6, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.490	--	
Principals	2.731	3.02*	--
Supervisors	2.775	2.55	0.35

*p<.05

Item 7 - The school staff identifies specific plans to achieve the school's goals for improvement.

The group mean scores for Item 7, Exists, were 3.200 for supervisors, 3.086 for principals, and 2.830 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 48.

Table 48

Analysis of Variance for Item 7, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	7.76308	3.88154	4.83581*
Error	389	312.23692	.80267	

*p<.05

As shown in Table 49, results of the Tukey tests revealed that teachers' scores differed significantly from those of both principals and supervisors.

Table 49

T Statistics Among Personnel Types for Item 7, Exists

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	2.830	--	
Principals	3.086	3.34*	--
Supervisors	3.200	3.44*	0.95

*p<.05

Item 8 - Leadership and support during the initial stage of staff development activity is the responsibility of the principal and central office staff.

The group mean scores for Item 8, Exists, were 3.175 for supervisors, 3.323 for principals, and 2.981 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 50.

Table 50

Analysis of Variance for Item 8, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	8.38670	4.19335	4.98840*
Error	389	327.00106	.84062	

*p<.05

As shown in Table 51, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 51

T Statistics Among Personnel Types for Item 8, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.981	--	
Principals	3.323	4.36*	--
Supervisors	3.175	1.76	1.21

*p<.05

Item 9 - Differences between desired and actual practices in the school are examined to identify the inservice needs of the staff.

The group mean scores for Item 9, Exists, were 2.900 for supervisors, 2.785 for principals, and 2.309 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 52.

Table 52

Analysis of Variance for Item 9, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	23.28650	11.64325	16.73842*
Error	389	270.58850	.69560	

*p<.05

As shown in Table 53, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 53

T Statistics Among Personnel Types for Item 9, Exists

	Mean	T-Scores	
Personnel Types		Teachers	Principals
Teachers	2.309	--	
Principals	2.785	6.68*	--
Supervisors	2.900	5.90*	1.03

*p<.05

Item 10 - Planning of staff development activities relies, in part, upon information gathered directly from school staff members.

The group mean scores for Item 10, Exists, were 3.150 for supervisors, 2.892 for principals, and 2.436 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 54.

Table 54

Analysis of Variance for Item 10, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	26.87847	13.43923	15.85529*
Error	389	329.72357	.84762	

*p<.05

As shown in Table 55, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 55

T Statistics Among Personnel Types for Item 10, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.436	--	
Principals	2.892	5.79*	--
Supervisors	3.150	6.46*	2.10

*$p<.05$

Item 11 - Inservice planners use information about the learning styles of participants when planning staff development activities.

The group mean scores for Item 11, Exists, were 2.425 for supervisors, 2.215 for principals, and 1.884 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 56.

Table 56

Analysis of Variance for Item 11, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	14.87598	7.43799	8.50996*
Error	389	339.99902	.87403	

*p<.05

As shown in Table 57, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 57

T Statistics Among Personnel Types for Item 11, Exists

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	1.884	--	
Principals	2.215	4.14*	--
Supervisors	2.425	4.82*	1.68

*p<.05

Item 12 - Staff development programs include objectives for inservice activities covering as much as five year.

The group mean scores for Item 12, Exists, were 2.300 for supervisors, 2.161 for principals, and 1.788 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 58.

Table 58

Analysis of Variance for Item 12, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	15.698897	7.84945	8.24581*
Error	389	370.30111	.95193	

*$p<.05$

As shown in Table 59, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 59

T Statistics Among Personnel Types for Item 12, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	1.788	--	
Principals	2.161	4.47*	--
Supervisors	2.300	4.37*	2.55

*$p<.05$

Item 13 - The resources (time, money, and materials) available for use in staff development are identified prior to planning inservice activities.

The group mean scores for Item 13, Exists, were 3.300 for supervisors, 2.903 for principals, and 2.405 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 60.

Table 60

Analysis of Variance for Item 13, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	37.87272	18.93636	13.92586*
Error	389	528.96146	1.35980	

*p<.05

As shown in Table 61, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 61

T Statistics Among Personnel Types for Item 13, Exists

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	2.405	--	
Principals	2.903	5.00*	--
Supervisors	3.300	6.39*	2.55

*p<.05

Item 14 - Staff development programs include plans for activities to be conducted during the following three to five years.

The group mean scores for Item 14, Exists, were 2.400 for supervisors, 2.398 for principals, and 1.954 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 62.

Table 62

Analysis of Variance for Item 14, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	17.38815	8.69407	9.20713*
Error	389	367.32359	.94428	

*$p<.05$

As shown in Table 63, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 63

T Statistics Among Personnel Types for Item 14, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	1.954	--	
Principals	2.398	5.35*	--
Supervisors	2.400	3.82*	0.02

*p<.05

Item 16 - Staff development objectives include objectives for attitude development (new outlooks and feelings).

The group mean scores for Item 16, Exists, were 2.325 for supervisors, 2.409 for principals, and 2.058 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 64.

Table 64

Analysis of Variance for Item 16, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	9.50836	4.75418	4.87474*
Error	389	379.37939	.97527	

*p<.05

As shown in Table 65, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 65

T Statistics Among Personnel Types for Item 16, Exists

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	2.058	--	
Principals	2.409	4.16*	--
Supervisors	2.325	2.25	0.64

*p<.05

Item 17 - Staff development objectives include objectives for increased knowledge (new information and understanding).

The group mean scores for Item 17, Exists, were 3.225 for supervisors, 3.032 for principals, and 2.788 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 66.

Table 66

Analysis of Variance for Item 17, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	9.08447	4.54224	5.00265*
Error	389	353.19869	.90797	

*p<.05

As shown in Table 67, results of the Tukey tests revealed that teachers' scores differed significantly from those of supervisors.

Table 67

T Statistics Among Personnel Types for Item 17, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.788	--	
Principals	3.032	3.00	--
Supervisors	3.225	4.50*	1.07

*$p<.05$

Item 18 - Staff development activities include objectives for skill development (new work behaviors).

The group mean scores for Item 18, Exists, were 3.050 for supervisors, 2.914 for principals, and 2.537 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 68.

Table 68

Analysis of Variance for Item 18, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	15.88663	7.94331	8.83819*
Error	389	349.61337	.89875	

*p<.05

As shown in Table 69, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 69

T Statistics Among Personnel Types for Item 18, Exists

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	2.537	--	
Principals	2.914	4.65*	--
Supervisors	3.050	4.50*	1.07

*p<.05

Item 19 - Leadership during the planning of inservice programs is shared among teachers and administrator.

The group mean scores for Item 19, Exists, were 2.850 for supervisors, 2.903 for principals, and 2.456 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 70.

Table 70

Analysis of Variance for Item 19, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	16.44995	8.22498	9.00084*
Error	389	355.46841	.91380	

*p<.05

As shown in Table 71, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 71

T Statistics Among Personnel Types for Item 19, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.456	--	
Principals	2.903	5.47*	--
Supervisors	2.850	3.43*	0.42

*$p<.05$

Item 22 - Individual school staff members choose the staff development activities in which they participate.

The group mean scores for Item 22, Exists, were 2.650 for supervisors, 2.559 for principals, and 2.228 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 72.

Table 72

Analysis of Variance for Item 22, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	11.53532	5.76766	6.97676*
Error	389	321.58458	.82670	

*p<.05

As shown in Table 73, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 73

T Statistics Among Personnel Types for Item 22, Exists

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	2.228	--	
Principals	2.559	4.26*	--
Supervisors	2.650	3.86*	0.75

*p<.05

Item 23 - Staff development activities include experimental activities in which participants try out new behaviors and techniques.

The group mean scores for Item 23, Exists, were 2.350 for supervisors, 2.473 for principals, and 2.143 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 74.

Table 74

Analysis of Variance for Item 23, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	7.97996	3.98998	5.87924*
Error	389	263.99708	.67866	

*p<.05

As shown in Table 75, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 75

T Statistics Among Personnel Types for Item 23, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.143	--	
Principals	2.473	4.69*	--
Supervisors	2.350	2.09	1.12

*$p<.05$

Item 25 - School principals participate in staff development activities with their staffs.

The group mean scores for Item 25, Exists, were 3.100 for supervisors, 3.355 for principals, and 2.938 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 76.

Table 76

Analysis of Variance for Item 25, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	11.97309	5.98655	6.36446*
Error	389	365.90191	.94062	

*p<.05

As shown in Table 77, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 77

T Statistics Among Personnel Types for Item 25, Exists

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	2.938	--	
Principals	3.355	5.03*	--
Supervisors	3.100	1.39	1.97

*p<.05

Item 26 - Leaders of staff development activities are selected according to their expertise rather than their position.

The group mean scores for Item 26, Exists, were 3.325 for supervisors, 3.226 for principals, and 2.695 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 78.

Table 78

Analysis of Variance for Item 26, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	27.89764	13.94882	16.24887*
Error	389	333.93654	.85845	

*$p<.05$

As shown in Table 79, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 79

T Statistics Among Personnel Types for Item 26, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.695	--	
Principals	3.226	6.70*	--
Supervisors	3.325	5.66*	0.80

*$p<.05$

Item 27 - As participants in staff development activities become increasingly competent, leadership behavior becomes less directive or task-oriented.

The group mean scores for Item 27, Exists were 2.675 for supervisors, 2.667 for principals, and 2.073 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 80.

Table 80

Analysis of Variance for Item 27, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	31.19705	15.59853	15.75863*
Error	389	385.04784	.98984	

*p<.05

As shown in Table 81, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 81

T Statistics Among Personnel Types for Item 27, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.073	--	
Principals	2.667	6.99*	--
Supervisors	2.675	5.04*	0.06

*p<.05

Item 28 - As participants in staff development activities become increasingly confident in their abilities, the leader transfers increasing responsibility to the participants.

The group mean scores for Item 28, Exists, were 3.025 for supervisors, 2.839 for principals, and 2.201 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 82.

Table 82

Analysis of Variance for Item 28, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	43.29012	21.64506	23.44630*
Error	389	359.11549	.92318	

*p<.05

As shown in Table 83, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 83

T Statistics Among Personnel Types for Item 28, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	2.201	--	
Principals	2.839	7.77*	--
Supervisors	3.025	7.14*	1.45

*$p<.05$

Item 29 - After participating in inservice activities participants have access to support services to help implement new behaviors as part of their regular work.

The group mean scores for Item 29, Exists, were 2.800 for supervisors, 2.462 for principals, and 2.027 for teachers. Analysis of variance revealed significant differences among the scores of the three groups as shown in Table 84.

Table 84

Analysis of Variance for Item 29, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	28.51785	14.25892	6.10878*
Error	389	344.32909	.88516	

*p<.05

As shown in Table 85, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 85

T Statistics Among Personnel Types for Item 29, Exists

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	2.027	--	
Principals	2.462	5.41*	--
Supervisors	2.800	6.84*	2.69

*p<.05

Item 30 - School staff members who attempt to implement new learnings are recognized and rewarded for their efforts.

The group mean scores for Item 30, Exists, were 2.575 for supervisors, 2.538 for principals, and 1.981 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 86.

Table 86

Analysis of Variance for Item 30, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	28.40733	14.20366	15.70573*
Error	389	351.79675	.90436	

*p<.05

As shown in Table 87, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 87

T Statistics Among Personnel Types for Item 30, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	1.981	--	
Principals	2.538	6.85*	--
Supervisors	2.575	5.20*	0.29

*p<.05

Item 31 - The leaders of staff development activities visit the job setting, when needed, to help the inservice participants refine or review previous learning.

The group mean scores for Item 31, Exists, were 2.450 for supervisors, 2.118 for principals, and 1.649 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 88.

Table 88

Analysis of Variance for Item 31, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	31.56793	15.78396	9.27012*
Error	389	318.62595	.81909	

*p<.05

As shown in Table 89, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 89

T Statistics Among Personnel Types for Item 31, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	1.649	--	
Principals	2.118	6.06*	--
Supervisors	2.450	7.37*	2.74

*p<.05

Item 32 - School staff members use peer supervision to assist one another in implementing new work behaviors.

The group mean scores for Item 32, Exists, were 2.250 for supervisors, 2.312 for principals, and 1.884 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 90.

Table 90

Analysis of Variance for Item 32, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	14.81128	7.40564	8.42382*
Error	389	341.98209	.87913	

*p<.05

As shown in Table 91, results of the Tukey tests revealed that teachers' scores differed significantly from those of both principals and supervisors.

Table 91

T Statistics Among Personnel Types for Item 32, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	1.884	--	
Principals	2.312	5.34*	--
Supervisors	2.250	3.25*	0.49

*$p<.05$

Item 33 - Resources (time, money, and materials) are allocated to support the implementation of new practices following staff development activities (funds to purchase new instructional materials, time for planning, etc.).

The group mean scores for Item 33, Exists, were 2.625 for supervisors, 2.484 for principals, and 1.923 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 92.

Table 92

Analysis of Variance for Item 33, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	32.56604	16.28302	19.48614*
Error	389	325.05640	.83562	

*p<.05

As shown in Table 93, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 93

T Statistics Among Personnel Types for Item 33, Exists

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	1.923	--	
Principals	2.484	7.18*	--
Supervisors	2.625	6.39*	1.15

*p<05

Item 34 - The school principal actively supports efforts to implement changes in professional behavior.

The group mean scores for Item 34, Exists, were 3.050 for supervisors, 3.570 for principals, and 3.151 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 94.

Table 94

Analysis of Variance for Item 34, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	13.63607	6.81804	8.84594*
Error	389	299.82311	.77075	

*p<.05

As shown in Table 95, results of the Tukey tests revealed that principals' scores differed significantly from those of both supervisors and teachers.

Table 95

T Statistics Among Personnel Types for Item 34, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	3.151	--	
Principals	3.570	5.58*	--
Supervisors	3.050	0.96	4.43*

*$p<.05$

Item 35 - A systematic program of instructional supervision is used to monitor new work behavior.

The group mean scores for Item 35, Exists, were 2.550 for supervisors, 2.484 for principals, and 1.799 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 96.

Table 96

Analysis of Variance for Item 35, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	43.74037	21.87018	24.53953*
Error	389	346.68565	89122	

*p<.05

As shown in Table 97, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 97

T statistics Among Personnel Types for Item 35, Exists

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	1.799	--	
Principals	2.484	8.49*	--
Supervisors	2.550	6.62*	0.52

*p<.05

Item 36 - School staff members utilize systematic techniques of self-monitoring to maintain new work behaviors.

The group mean scores for Item 36, Exists, were 2.325 for supervisors, 2.172 for principals, and 1.985 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 98.

Table 98

Analysis of Variance for Item 36, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	5.44508	2.72254	3.13370*
Error	389	337.96054	.86879	

*p<.05

As shown in Table 99, results of the Tukey tests revealed that teachers' scores differed significantly from those of supervisors.

Table 99

T Statistics Among Personnel Types for Item 36, Exists

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	1.985	--	
Principals	2.172	2.35	--
Supervisors	2.325	3.04*	1.23

*p<.05

Item 38 - Responsibility for the maintenance of new school practices is shared by both teachers and administrators.

The group mean scores for Item 38, Exists, were 2.975 for supervisors, 2.882 for principals, and 2.421 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 100.

Table 100

Analysis of Variance for Item 38, Exists by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	21.24968	10.62484	11.36077*
Error	389	363.80134	.93522	

*p<.05

As shown in Table 101, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 101

T Statistics Among Personnel Types for Item 38, Exists

	Mean	T-Scores	
Personnel Types		Teachers	Principals
Teachers	2.421	--	
Principals	2.882	5.58*	--
Supervisors	2.975	4.77*	0.72

*p<.05

Exists by districts. The second part of the third question was concerned with the perception of respondents regarding current use of the 38 Practices according to the type of school district. Districts were classified by size and location as small and rural, large and urban, or other. As can be seen in Table 102, there is little disagreement among the three types of districts regarding what Exists concerning the Practices. Scores of the districts for the Practices as they Exist fell between a range of 1.760 and 3.520. The means of the three types of districts for each Practice are listed in Table 102.

Table 102

Means and Standard Deviations of Practices as they Exist for the Three Types of School Districts

Item	Small Rural Districts M	SD	Other Districts M	SD	Large Urban Districts M	SD	F	p
1	2.697	.953	2.818	.857	2.840	.792	.86711	.421
2	2.582	1.027	2.709	.895	2.920	.986	2.29183	.102
3	3.148	1.133	3.323	.979	3.520	.646	2.69749	.069
4	3.033	.979	3.055	.890	2.840	.889	1.12834	.325
5	2.582	.926	2.632	.963	3.000	.881	3.77509*	.024
6	2.508	.911	2.577	.964	2.740	.876	1.08456	.339
7	2.811	.894	2.941	.922	3.160	.817	2.70182	.068
8	3.115	.874	3.114	.922	2.860	1.050	1.64644	.194
9	2.451	.751	2.473	.919	2.600	.904	.55336	.575
10	2.598	.976	2.609	.932	2.700	1.015	.21872	.804
11	2.025	.857	2.014	1.000	2.020	.979	.00531	.995
12	1.918	.976	1.968	1.027	1.780	.887	.73968	.478
13	2.598	1.176	2.641	1.214	2.540	1.249	.15890	.853
14	2.074	.981	2.105	.985	2.180	1.063	.20255	.817
15	2.098	1.007	2.323	1.064	2.920	.829	11.51966*	.000
16	2.057	.930	2.168	1.049	2.440	.884	2.63195	.073
17	2.779	.966	2.914	.978	3.060	.867	1.66746	.190
18	2.549	1.013	2.714	.958	2.840	.866	1.94347	.145
19	2.541	.963	2.559	.989	2.940	.890	3.49846*	.031
20	2.287	.966	2.227	.933	2.120	1.003	.55098	.577
21	2.516	.973	2.659	1.067	2.560	1.033	.79410	.453
22	2.148	.840	2.468	.928	2.320	1.019	4.85851*	.008
23	2.180	.793	2.223	.822	2.480	.953	2.44602	.088
24	2.270	.882	2.541	.908	2.620	.855	4.43724*	.012
25	3.180	.945	3.018	.988	2.900	1.035	1.77377	.171
26	2.975	.867	2.795	1.011	3.060	.935	2.33509	.098
27	2.172	1.018	2.277	1.051	2.520	.953	2.02705	.133
28	2.434	.936	2.391	1.065	2.640	.964	1.22980	.293
29	2.107	.986	2.209	.952	2.460	1.034	2.33895	.098
30	2.156	.945	2.141	.957	2.360	1.191	1.03438	.356
31	1.836	.991	1.845	.923	1.840	.955	.00395	.996
32	1.975	.940	2.045	.964	2.040	.968	.21922	.803
33	2.238	1.013	2.114	.937	1.920	.877	2.02047	.134
34	3.238	.853	3.223	.922	3.320	.891	.23997	.787
35	1.918	.967	2.064	1.005	2.220	1.036	1.78809	.169
36	1.885	.874	2.177	.961	2.000	.926	4.00342*	.019
37	1.943	.893	2.023	.948	1.760	.960	1.66309	.191
38	2.557	.988	2.591	.996	2.640	1.005	.12679	.881

Hypothesis 3.2 addressed the question of differing levels of support among the three types of districts for each of the 38 Practices.

Hypothesis 3.2 There are no significant differences in personnel perceptions among small rural school districts, large urban school districts, and all other types of school districts as to what degree each research-based staff development practice is perceived as currently employed.

There was no significant difference at the .05 level of significance among the three types of districts in their perception of current use for 32 of the 38 Practices. Of the 6 remaining for which significant differences were observed, Tukey tests revealed no statistically significant pair-wise differences for 1. This was Item 36. It should again be noted that there was the chance of a Type I error occurring 2 times in an analysis of 38 items.

Five items yielded statistically significant pair-wise differences. They were Items 5, 15, 19, 22, and 24. Items 15 and 22 were significant at the .01 level. Items 5, 15, 19, and 24 addressed staff development planning issues. Item 5 addressed needs assessment, Item 15 addressed objectives for staff development activities, and Item 19 addressed shared leadership during planning.

Educators in large urban districts perceived statistically significant greater use for these three Practices than did either small rural district respondents or other district respondents. No statistically significant difference was observed for Items 5, 15, and 19 between small rural districts and other districts.

For the fourth item, Item 22, a statistical difference was observed only between small rural districts and other districts. Item 22 addressed selection by participants of their own staff development activities. Small rural districts perceived greater participant selection than did other districts.

For the fifth item, Item 24, personnel of large urban districts perceived a statistically greater use of peer instructors for inservice than did personnel of small rural schools.

Generally, the three district types perceived the Practices as less used currently than they should have been. Items 3 and 34 were perceived as most used while Items 12 and 31 were perceived as employed the least. Hypothesis 3.2 was accepted for 32 of the 38 Practices and rejected for 6 of them. However, statistical pair-wise differences were observed for only 4 items. Analysis of variance for Exists by districts may be found

in Table F of Appendix D. The analysis of variance for items with significant differences follows.

Item 5 - Current school practices are examined to determine which ones are congruent with the school's goals for improvement before staff development activities are planned.

The group mean scores for Item 5, Exists, were 2.582 for small rural districts, 3.000 for large urban districts, and 2.632 for other districts. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 103.

Table 103

Analysis of Variance for Item 5, Exists by District Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three District Types	2	6.69342	3.34671	3.77509*
Error	389	344.85760	.88652	

*p<.05

As shown in Table 104, results of the Tukey tests revealed that scores of large urban district differed significantly from those of both small rural districts and other districts.

Table 104

T Statistics Among District Types for Item 5, Exists

District Type	Mean	T-Scores	
		Small Rural	Other
Small Rural	2.582	--	
Other	2.632	0.48	--
Large Urban	3.000	3.74*	4.90*

*$p<.05$

Item 15 - Specific objectives are written for staff development activities.

The group mean scores for Item 15, Exists, were 2.098 for small rural districts, 2.920 for large urban districts, and 2.323 for other districts. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 105.

Table 105

Analysis of Variance for Item 15, Exists by District Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three District Types	2	23.96243	11.98122	11.51966*
Error	389	404.58604	1.04007	

*p<.05

As shown in Table 106, results of the Tukey tests revealed that scores of large urban districts differed significantly from those of both small rural districts and other districts.

Table 106

T Statistics Among District Types for Item 15, Exists

District Type	Mean	T-Scores	
		Small Rural	Other
Small Rural	2.098	--	
Other	2.323	0.48	--
Large Urban	2.920	3.74*	4.90*

*p<.05

Item 19 - Leadership during the planning of inservice programs is shared among teachers and administrators.

The group mean scores for Item 19, Exists, were 2.541 for small rural districts, 2.940 for large urban districts, and 2.559 for other districts. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 107.

Table 107

Analysis of Variance for Item 19, Exists, by District Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three District Types	2	6.57147	3.28573	3.49846*
Error	389	365.34690	.93920	

*p<.05

As shown in Table 108, results of the Tukey tests revealed that scores of large urban districts differed significantly from those of both small rural districts and other districts.

Table 108

T Statistics Among District Types for Item 19, Exists

District Type	Mean	T-Scores	
		Small Rural	Other
Small Rural	2.541	--	
Other	2.559	0.17	--
Large Urban	2.940	3.46*	4.93*

*p<.05

Item 22 - Individual school staff members choose the staff development activities in which they participate.

The group mean scores for Item 22, Exists, were 2.418 for small rural districts, 2.320 for large urban districts, and 2.468 for other districts. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 109.

Table 109

Analysis of Variance for Item 22, Exists by District Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three District Types	2	8.11836	4.05918	4.85851*
Error	389	325.00154	.83548	

*p<.05

As shown in Table 110, results of the Tukey tests revealed that scores of small rural districts differed significantly from those of other districts, but not of large urban districts.

Table 110

T Statistics Among District Types for Item 22, Exists

District Type	Mean	T-Score	
		Small Rural	Other
Small Rural	2.148	--	
Other	2.468	3.16*	--
Large Urban	2.320	1.58	2.03

*p<.05

Item 24 - Peers help to teach one another by serving as inservice leaders.

The group mean scores for Item 24, Exists, were 2.270 for small rural districts, 2.620 for large urban districts, and 2.541 for other districts. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 111.

Table 111

Analysis of Variance for Item 24, Exists by District Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three District Types	2	7.08329	3.54164	4.43724*
Error	389	310.48559	.79816	

*p<.05

As shown in Table 112, results of the Tukey tests revealed that scores of small rural districts differed significantly from those of large urban districts but not those of other districts.

Table 112

T Statistics Among District Types for Item 24, Exists

District Types	Mean	T-Scores	
		Small Rural	Other
Small Rural	2.270	--	
Other	2.541	2.74	--
Large Urban	2.620	3.30*	1.11

*$p<.05$

Item 36 - School staff members utilize systematic techniques of self-monitoring to maintain new work behaviors.

The group mean scores for Item 36, Exists, were 1.885 for small rural districts, 2.000 for large urban districts, and 2.177 for other districts. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 113.

Table 113

Analysis of Variance for Item 36, Exists by District Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three District Types	2	6.92581	3.46290	4.00342*
Error	389	336.47981	.86499	

*p<.05

As shown in Table 114, no statistical significance could be differentiated among the district scores using the Tukey test.

Table 114

T Statistics Among District Types for Item 36, Exists

District Types	Mean	T- Scores	
		Small Rural	Other
Small Rural	1.885	--	
Other	2.177	2.83	--
Large Urban	2.000	1.04	2.38

*p<.05

Difference Between Should Be and Exists

Difference by personnel. The fourth research question was concerned with whether Virginia educators viewed differences between Should Be and Exists for the 38 Practices similarly or differently. The question was considered in two parts, one for personnel differences and the other for district differences. Mean Difference scores for the three personnel types indicate that the 38 Practices Should Be utilized more often than they currently Exist as shown in Table 115. Generally, the grand mean for each "practice" ranged from a low of .022 to a high of 1.533. (It should be noted that the grand mean for each item is an average of the three group means.) The means for personnel Difference may be found in Table 115.

Table 115

Means and Standard Deviations of Difference for Personnel Types

Item	Grand Mean M	Supervisors M	Supervisors SD	Principals M	Principals SD	Teachers M	Teachers SD	F	p
1	.882	.825	.844	.656	.684	1.166	.940	12.59254*	.000
2	.860	.750	.707	.806	.784	1.023	1.038	2.68667	.069
3	.428	.425	.675	.387	.723	.471	.864	.37840	.685
4	.634	.750	.840	.376	.658	.776	.942	7.32508*	.001
5	.907	.875	.648	.796	.774	1.050	.977	6.96826	.053
6	.875	.900	.778	.774	.849	.950	1.005	1.17230	.311
7	.678	.625	.705	.570	.682	.838	.955	3.68747*	.026
8	.093	.050	.815	.022	.794	.208	1.205	1.68075	.188
9	.926	.800	.823	.763	.713	1.216	.919	11.48469*	.000
10	.676	.475	.716	.495	.775	1.058	1.093	14.45004*	.000
11	1.135	1.025	.832	1.032	.840	1.347	1.028	4.72379*	.009
12	.967	.975	.947	.957	.896	.969	.927	.00766	.992
13	.662	.425	.813	.720	.982	.842	1.097	2.89263	.057
14	.957	.975	.920	.892	.827	1.004	.962	.49310	.611
15	1.069	1.100	.928	1.011	.961	1.097	1.101	.23816	.788
16	.949	.900	.955	.849	1.032	1.097	1.149	1.96751	.141
17	.505	.425	.594	.441	.699	.649	.900	2.88947	.057
18	.616	.550	.677	.484	.619	.815	.955	5.81474*	.003
19	.833	.800	.758	.699	.749	1.000	.980	4.06192*	.018
20	.790	.800	.823	.710	.746	.861	.970	.96042	.384
21	.640	.725	.751	.484	.761	.710	1.055	1.99136	.138
22	.639	.525	.716	.473	.746	.919	1.059	8.81606*	.000
23	.644	.675	.764	.473	.731	.784	.960	4.16175*	.016
24	.540	.500	.751	.548	.700	.571	.922	.12879	.879
25	.457	.550	.749	.247	.564	.575	.874	5.86733*	.003
26	.463	.325	.616	.312	.571	.753	.890	13.12289*	.000
27	.648	.700	.687	.548	.715	.695	1.017	.90086	.407
28	.616	.500	.679	.538	.685	.811	.952	4.71790*	.009
29	1.095	1.000	.784	.957	.871	1.328	1.014	6.13986*	.002
30	1.224	1.125	.883	1.075	.850	1.471	1.094	6.14759*	.002
31	1.251	1.175	.931	1.129	1.024	1.448	1.093	3.65446*	.027
32	1.056	1.125	.883	.882	.870	1.162	1.048	2.75603	.065
33	1.241	1.125	.791	1.065	.895	1.533	1.083	8.69674*	.000
34	.521	.850	.700	.215	.529	.498	.842	10.27506*	.000
35	1.090	1.200	.823	.892	.787	1.178	1.078	2.99824	.051
36	1.055	1.050	1.011	1.118	.919	.996	1.021	.52202	.594
37	1.230	1.400	.982	1.183	.872	1.108	1.013	1.58863	.206
38	.839	.825	.747	.677	.768	1.015	1.004	4.73819*	.009

Hypothesis 4.1 considers the issue of personnel differences.

Hypothesis 4.1 There are no significant differences in perception among teachers, principals, and supervisors as to discrepancies between desirable and currently employed practices for each practice.

There were significant differences at the .05 level among perceptions of three personnel types for 19 of 38 Practices. Fifteen were significantly different at the .01 level of significance. No significant difference was observed for 19 items.

Pair-wise statistical differences were observed between teachers and principals for all 19 items showing significant differences. These were Items 1, 4, 7, 9, 10, 11, 18, 19, 22, 23, 25, 26, 28, 29, 30, 31, 33, 34, and 38. Item 1 addressed climate. Items 4, 7, 9, 10, 11, 18, 19, and 23 addressed planning to include goal setting, needs assessment, objectives development and leadership functions. Item 22 addressed selection of activities by participants. Items 25, 28, and 38 addressed leadership during activities. Item 26 addressed selection of staff development leaders. Items 29, 30, 31, 33, and 34 addressed support and support structure. In all cases teachers perceived the

discrepancy between what Should Be and what Exists as greater than did principals.

For six items pair-wise differences were observed between teachers and supervisors as well as teachers and principals. These were Items 9, 10, 22, 26, 33, and 34. In all cases except Item 34 teachers perceived the discrepancy between what Should Be and what Exists as greater than did supervisors.

For Items 4 and 34 a pair-wise difference was observed between principals and supervisors. Item 4 addressed the adoption and support of goals for improvement of school programs by the school staff. Item 34 addressed principal support of change. As already noted, teachers perceived a greater discrepancy between what Should Be and what Exists than did principals while supervisors perceived a greater discrepancy than either principals or teachers.

Generally, all three personnel types perceived discrepancies between what Should Be and what Exists. What Exists was perceived as less than what Should Be for all items. Teachers' perceptions disagreed with principals' perceptions for 19 items and with supervisors for 5 items. Principals and supervisors' perceptions were significantly different for 1 item. Hypothesis 4.1 is not rejected for 19 items and is rejected for 19 items. Teachers frequently disagreed with principals

regarding the disparity between what Should Be and what Exists. Analysis of variance for Difference between Should Be and Exists for the 38 Practices by personnel may be found in Table G of Appendix D. The analysis of variance for items with significant differences follows.

Item 1 - A positive school climate is developed before other staff development efforts are attempted. (A positive climate is characterized by open communications, trust, and supportive relationships.)

The group mean scores for Item 1, Difference, were .825 for supervisors, .656 for principals, and 1.166 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 116.

Table 116

Analysis of Variance for Item 1, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	19.33393	9.66697	12.59254*
Error	389	298.62525	.76767	

*p<.05

As shown in Table 117, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 117

T Statistics Among Personnel Types for Item 1, Difference

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	1.166	--	
Principals	.656	6.28*	--
Supervisors	.825	2.86	1.44

*p<.05

Item 4 - The school staff adopts and supports goals for the improvement of school programs.

The group mean scores for Item 4, Difference, were .750 for supervisors, .376 for principals, and .776 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 118.

Table 118

Analysis of Variance for Item 4, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	11.16046	5.58023	7.32508*
Error	389	296.33954	.76180	

p<.05

As shown in Table 119, results of the Tukey tests revealed that principals' scores differed significantly from those of both teachers and supervisors.

Table 119

T Statistics Among Personnel Types for Item 4, Difference

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	.776	--	
Principals	.376	5.36*	--
Supervisors	.750	0.25	3.21*

*$p<.05$

Item 7 - The school staff identifies specific plans to achieve the school's goals for improvement.

The group mean scores for Item 7, Difference, were .625 for supervisors, .570 for principals, and .838 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 120.

Table 120

Analysis of Variance for Item 7, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	5.63756	2.81878	3.68747*
Error	389	297.35989	.76442	

*p<.05

As shown in Table 121, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 121

T Statistics Among Personnel Types for Item 7, Difference

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	.838	--	
Principals	.570	3.59*	--
Supervisors	.625	2.03	0.47

*p<.05

Item 9 - Differences between desired and actual practices in the school are examined to identify the inservice needs of the staff.

The group mean scores for Item 9, Difference, were .800 for supervisors, .763 for principals, and 1.216 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 122.

Table 122

Analysis of Variance for Item 9, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	17.18792	8.59396	11.48469*
Error	389	291.08759	.74830	

*p<.05

As shown in Table 123, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 123

T Statistics Among Personnel Types for Item 9, Difference

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	1.216	--	
Principals	.763	6.13*	--
Supervisors	.800	4.00*	0.32

*p<.05

Item 10 - Planning of staff development activities relies, in part, upon information gathered directly from school staff members.

The group mean scores for Item 10, Difference, were .475 for supervisors, .495 for principals and 1.058 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 124.

Table 124

Analysis of Variance for Item 10, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	28.48060	14.24030	14.45004*
Error	389	383.35359	.98548	

*p<.05

As shown in Table 125, results of the Tukey Tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 125

T Statistics Among Personnel Types for Item 10, Difference

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	1.058	--	
Principals	.495	6.64*	--
Supervisors	.475	4.89*	0.15

*p<.05

Item 11 - Inservice planners use information about the learning styles of participants when planning staff development activities.

The group mean scores for Item 11, Difference, were 1.025 for supervisors, 1.032 for principals, and 1.347 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 126.

Table 126

Analysis of Variance for Item 11, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	8.85509	4.42754	4.72379*
Error	389	364.60409	.93729	

*p<.05

As shown in Table 127, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 127

T Statistics Among Personnel Types for Item 11, Difference

Personnel Type	Mean Mean	T-Scores Teachers	T-Scores Principals
Teachers	1.347	--	
Principals	1.032	3.81*	--
Supervisors	1.025	2.77	0.05

*p<.05

Item 18 - Staff development objectives include objectives for skill development (new work behaviors).

The group mean scores for Item 18, Difference, were.550 for supervisors, .484 for principals, and .815 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 128.

Table 128

Analysis of Variance for Item 18, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	8.61689	4.30844	5.81474*
Error	389	288.23005	.74095	

*p<.05

As shown in Table 129, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 129

T Statistics Among Personnel Types for Item 18, Difference

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	.815	--	
Principals	.484	4.50*	--
Supervisors	.550	2.56	0.57

*p<.05

Item 19 - Leadership during the planning of inservice programs is shared among teachers and administrators.

The group mean scores for Item 19, Difference, were .800 for supervisors, .699 for principals, and 1.000 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 130.

Table 130

Analysis of Variance for Item 19, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	6.72399	3.36199	4.06192*
Error	389	321.96989	.82769	

*p<.05

As shown in Table 131, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 131

T Statistics Among Personnel Types for Item 19, Difference

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	1.000	--	
Principals	.699	3.73*	--
Supervisors	.800	1.83	0.74

*p<.05

Item 22 - Individual school staff members choose the staff development activities in which they participate.

The group mean scores for Item 22, Difference, were .525 for supervisors, .473 for principals, and .919 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 132.

Table 132

Analysis of Variance for Item 22, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	16.33827	8.16914	8.81606*
Error	389	360.45509	.92662	

*p<.05

As shown in Table 133, results of the Tukey tests revealed that teachers' scores differed significantly from those of both staff development leaders and principals.

Table 133

T Statistics Among Personnel Types for Item 22, Difference

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	.919	--	
Principals	.473	5.42*	--
Supervisors	.525	3.41*	0.40

*p<.05

Item 23 - Staff development activities include experimental activities in which participants try out new behaviors and techniques.

The group mean scores for Item 23, Difference, were .675 for supervisors, .473 for principals, and .784 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 134.

Table 134

Analysis of Variance for Item 23, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	6.62990	3.31495	4.16175*
Error	389	309.84969	.79653	

*p<.05

As shown in Table 135, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 135

T Statistics Among Personnel Types for Item 23, Difference

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	.784	--	
Principals	.473	4.08*	--
Supervisors	.675	1.02	1.69

*$p<.05$

Item 25 - School principals participate in staff development activities with their staffs.

The group mean scores for Item 25, Difference, were .550 for supervisors, .247 for principals, and .575 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 136.

Table 136

Analysis of Variance for Item 25, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	7.49611	3.74806	5.86733*
Error	389	248.49368	.63880	

*p<.05

As shown in Table 137, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 137

T Statistics Among Personnel Types for Item 25, Difference

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	.575	--	
Principals	.247	4.80*	--
Supervisors	.550	0.26	2.84

*p<.05

Item 26 - Leaders of staff development activities are selected according to their expertise rather than their position.

The group mean scores for Item 26, Difference, were .325 for supervisors, .312 for principals, and .753 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 138.

Table 138

Analysis of Variance for Item 26, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	16.79442	8.39721	13.12289*
Error	389	360.45509	.92662	

*p<.05

As shown in Table 139, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals.

Table 139

T Statistics Among Personnel Types for Item 26, Difference

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	.753	--	
Principals	.312	6.45*	--
Supervisors	.325	4.45*	1.22

*p<.05

Item 28 - As participants in staff development activities become increasingly confident in their abilities, the leader transfers increasing responsibility to the participants.

The group mean scores for Item 28, Difference, were .500 for supervisors, .538 for principals, and .811 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 140.

Table 140

Analysis of Variance for Item 28, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	7.15199	3.57600	4.71790*
Error	389	294.84801	.75796	

*p<.05

As shown in Table 141, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 141

T Statistics Among Personnel Types for Item 28, Difference

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	.811	--	
Principals	.538	3.67*	--
Supervisors	.500	2.84	0.33

*p<.05

Item 29 - After participating in inservice activities participants have access to support services to help implement new behaviors as part of their regular work.

The group mean scores for Item 29, Difference, were 1.000 for supervisors, .957 for principals, and 1.328 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 142.

Table 142

Analysis of Variance for Item 29, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	11.33055	5.66528	6.13986*
Error	389	358.93220	.92270	

*$p<.05$

As shown in Table 143, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 143

T Statistics Among Personnel Types for Item 29, Difference

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	1.328	--	
Principals	.957	4.52*	--
Supervisors	1.000	2.84	0.33

*p<.05

Item 30 - School staff members who attempt to implement new learnings are recognized and rewarded for their efforts.

The group mean scores for Item 30, Difference, were 1.125 for supervisors, 1.075 for principals, and 1.471 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 144.

Table 144

Analysis of Variance for Item 30, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	12.81294	6.40647	6.14759*
Error	389	405.38094	1.04211	

*p<.05

As shown in Table 145, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 145

T Statistics Among Personnel Types for Item 30, Difference

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	1.471	--	
Principals	1.075	4.54*	--
Supervisors	1.125	2.82	0.37

*p<.05

Item 31 - The leaders of staff development activities visit the job setting, when needed, to help the inservice participants refine or review previous learning.

The group mean scores for Item 31, Difference, were 1.175 for supervisors, 1.129 for principals, and 1.448 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 146.

Table 146

Analysis of Variance for Item 31, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	8.23471	4.11735	3.65446*
Error	389	438.27294	1.12667	

*p<.05

As shown in Table 147, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 147

T Statistics Among Personnel Types for Item 31, Difference

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	1.448	--	
Principals	1.129	3.52*	--
Supervisors	1.175	2.14	0.32

*p<.05

Item 33 - Resources (time, money, and materials) are allocated to support the implementation of new practices following staff development activities (funds to purchase new instructional materials, time for planning, etc.).

The group mean scores for Item 33, Difference, were 1.125 for supervisors, 1.065 for principals, and 1.533 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 148.

Table 148

Analysis of Variance for Item 33, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	17.90585	8.95293	8.69674*
Error	389	400.45895	1.02945	

*p<.05

As shown in Table 149, results of the Tukey tests revealed that teachers' scores differed significantly from those of both principals and supervisors.

Table 149

T Statistics Among Personnel Types for Item 33, Difference

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	1.533	--	
Principals	1.065	5.40*	--
Supervisors	1.125	3.35*	0.44

*p<.05

Item 34 - The school principal actively supports efforts to implement changes in professional behavior.

The group mean scores for Item 34, Difference, were .850 for supervisors, .215 for principals, and .498 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 150.

Table 150

Analysis of Variance for Item 34, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	12.02092	6.01046	10.27506*
Error	389	227.54796	.58496	

*p<.05

As shown in Table 151, results of the Tukey tests revealed that teachers' scores differed significantly from those of both supervisors and principals. In addition, scores of supervisors differed significantly from those of principals.

Table 151

T Statistics Among Personnel Types for Item 34, Difference

Personnel Type	Mean	T-Scores	
		Teachers	Principals
Teachers	.498	--	
Principals	.215	4.33*	--
Supervisors	.850	3.83*	6.21*

*p<.05

Item 38 - Responsibility for the maintenance of new school practices is shared by both teachers and administrators.

The group mean scores for Item 38, Difference, were .825 for supervisors, .667 for principals, and 1.015 for teachers. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 152.

Table 152

Analysis of Variance for Item 38, Difference by Personnel Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three Personnel Types	2	8.18613	4.09307	4.73819*
Error	389	336.03580	.86385	

*p<.05

As shown in Table 153, results of the Tukey tests revealed that teachers' scores differed significantly from those of principals.

Table 153

T Statistics Among Personnel Types for Item 38, Difference

	Mean	T-Scores	
Personnel Type		Teachers	Principals
Teachers	1.015	--	
Principals	.677	4.25*	--
Supervisors	.825	1.70	1.19

*p<.05

Difference by district. Mean Difference scores for the three district types indicate that the 38 Practices Should Be utilized more than they currently Exist as shown in Table 154. The grand means for each Practice range from a low of .091 to a high of 1.700 in Difference between Should Be and Exists. (It should be noted that the grand mean for each item is an average of the three district type means.) The means for districts' Difference may be found in Table 154.

Table 154

Means and Standard Deviations of Difference for District Types

	Mean	Small Rural Districts		Other Districts		Large Urban Districts			
Item	M	M	SD	M	SD	M	SD	F	p
1	1.010	1.131	.970	.959	.878	.940	.818	1.60713	.202
2	.940	1.098	.999	.882	.934	.840	.934	2.35856	.096
3	.436	.598	.888	.391	.801	.320	.621	3.28024*	.039
4	.717	.656	.916	.655	.880	.840	.842	.94932	.388
5	.934	1.082	.887	.959	.933	.760	.822	2.29253	.102
6	.917	.959	1.079	.868	.905	.920	.804	.36724	.693
7	.748	.885	.902	.700	.887	.660	.772	2.06558	.128
8	.174	.172	1.018	.091	1.155	.260	.944	.57954	.561
9	1.048	1.090	.803	1.073	.914	.980	.979	.28493	.752
10	.851	.918	1.025	.855	1.041	.780	.975	.34462	.709
11	1.254	1.197	.915	1.245	.995	1.320	1.058	.28950	.749
12	.945	1.041	.931	.955	.900	.840	.976	.89155	.411
13	.815	.811	1.093	.714	.986	.920	1.209	.92139	.399
14	.963	1.025	.931	.964	.911	.900	.995	.35378	.702
15	1.050	1.205	1.090	1.045	1.080	.900	.763	1.71881	.181
16	.988	1.123	1.132	1.000	1.119	.840	.976	1.22586	.295
17	.568	.648	.871	.555	.812	.500	.839	.72886	.483
18	.715	.836	.965	.650	.833	.660	.772	1.88924	.153
19	.850	.910	.872	.959	.933	.680	.935	1.89640	.151
20	.831	.795	.890	.818	.923	.880	.895	.15468	.857
21	.704	.754	.903	.577	.992	.780	.996	1.77117	.172
22	.850	.967	.927	.623	.974	.960	1.049	6.02334*	.003
23	.683	.762	.872	.686	.900	.600	.969	.62515	.536
24	.574	.730	.891	.473	.835	.520	.814	3.63603*	.027
25	.503	.402	.799	.527	.813	.580	.810	1.26469	.283
26	.577	.598	.840	.632	.831	.500	.763	.52463	.592
27	.650	.795	.953	.614	.887	.540	.994	2.01227	.135
28	.749	.803	.887	.645	.877	.800	.857	1.54228	.215
29	1.209	1.336	.976	1.150	.961	1.140	1.010	1.57354	.209
30	1.310	1.410	1.002	1.341	1.032	1.180	1.119	.87545	.417
31	1.366	1.393	1.065	1.305	1.061	1.400	1.125	.34799	.706
32	1.105	1.131	.944	1.064	1.000	1.120	1.118	.20194	.817
33	1.445	1.262	1.066	1.373	1.019	1.700	.974	3.22410*	.041
34	.467	.443	.681	.477	.846	.480	.735	.08460	.919
35	1.103	1.139	1.007	1.109	1.005	1.060	.956	.11418	.892
36	1.058	1.164	1.015	.950	.994	1.060	.935	1.84442	.159
37	1.231	1.172	.942	1.082	.976	1.440	1.053	2.77127	.064
38	.948	.984	.927	.859	.938	1.000	.969	.92136	.399

Hypothesis 4.2 considers the issue of district differences.

Hypothesis 4.2 There are no significant differences in perception among personnel for small rural school districts, large urban school districts, and all other types of school districts as to discrepancies between desirable and currently employed practices for each practice.

There were no significant differences among the three types of districts in their perception of disparity between what Should Be and what Exists for 34 of the 38 Practices. Items 3, 22, 24, and 33 were significantly different at the .05 level of significance, and Item 22 was significantly different at the .01 level. However, Tukey tests revealed no statistical pair-wise differences for Items 3 and 24.

For Item 22, a pair-wise statistical difference was observed between other districts and both large urban districts and small rural districts. This item addressed teacher selection of objectives for their own staff development. No difference was observed between large urban districts and small rural districts.

For Item 33, pair-wise statistical differences were observed between large urban districts and small rural districts as well as large urban districts and other districts. No difference was observed between small rural

districts and other districts. This item addressed the allocation of resources for staff development.

Generally, respondents by district type agreed on the disparities between what Should Be and what Exists. Hypothesis 4.2 is accepted for 34 items. It is rejected for 4 items of which pair-wise differences were observed for only 2. Analysis of variance for Difference between Should Be and Exists for the 38 Practices by districts may be found in Table H of Appendix D. The analysis of variance for items with significant differences follows.

Item 3 - The school has a written list of goals for the improvement of school programs during the next three to five years.

The group mean scores for Item 3, Difference, were .598 for small rural districts, .320 for large urban districts, and .391 for other districts. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 155.

Table 155

Analysis of Variance for Item 3, Difference by District Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three District Types	2	4.29351	2.14675	3.28024*
Error	389	254.58149	.65445	

*p<.05

As shown in Table 156, no statistical significance could be differentiated among the district scores using the Tukey test.

Table 156

T Statistics Among District Types for Item 3, Difference

District Type	Mean	T-Scores	
		Small Rural	Other
Small Rural	1.131	--	
Other	.959	2.31	--
Large Urban	.940	2.89	1.10

*p<.05

Item 22 - Individual school staff members choose objectives for their own professional learning.

The group mean scores for Item 22, Difference, were .967 for small rural districts, .960 for large urban districts, and .623 for other districts. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 157.

Table 157

Analysis of Variance for Item 22, Difference by District Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three District Types	2	11.31815	5.65908	6.02334*
Error	389	365.47522	.93952	

*p<.05

As shown in Table 158, results of the Tukey tests revealed that other districts' scores differed significantly from those of both large rural districts and small rural districts.

Table 158

T Statistics Among District Types for Item 22, Difference

District Type	Mean	Small Rural	Other
Small Rural	.967	--	
Other	.623	3.20*	--
Large Urban	.960	0.07	4.36*

*p<.05

Item 24 - Peers help to teach one another by serving as inservice leaders.

The group mean scores for Item 24, Difference, were .730 for small rural districts, .520 for large urban districts, and .473 for other districts. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 159.

Table 159

Analysis of Variance for Item 24, Difference by District Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three District Types	2	5.26038	2.63019	3.63603*
Error	389	281.39013	.72337	

*p<.05

As shown in Table 160, no statistical significance could be differentiated among the district scores using the Tukey test.

Table 160

T Statistics Among District Types for Item 24, Difference

District Type	Mean	T-Scores	
		Small Rural	Other
Small Rural	.730	--	
Other	.473	2.73	--
Large Urban	.520	2.08	0.69

*p<.05

Item 33 - Resources (time, money, and materials) are allocated to support the implementation of new practices following staff development activities (funds to purchase new instructional materials, time for planning, etc.).

The group mean scores for Item 33, Difference, were 1.262 for small rural districts, 1.700 for large urban districts, and 1.373 for other districts. Analysis of variance revealed significant differences among the scores of the groups as shown in Table 161.

Table 161

Analysis of Variance for Item 33, Difference by District Type

Source of Variation	df	Sum of Squares	Mean Squares	F-ratio
Among Three District Types	2	6.82187	3.41094	3.22410*
Error	389	411.54292	1.05795	

*p<.05

As shown in Table 162, results of the Tukey tests revealed that large urban districts' scores differed significantly from those of both small rural districts and other districts.

Table 162

T Statistics Among District Types for Item 33, Difference

District Type	Mean	T-Scores	
		Small Rural	Other
Small Rural	1.262	--	
Other	1.373	0.97	--
Large Urban	1.700	3.59*	3.98*

*p<.05

Summary

The findings of this study support Hypothesis 1.1, regarding personnel, for 9 of 10 Beliefs. There appears to be general agreement on the Beliefs.

The findings of this study support Hypothesis 1.2, regarding school districts for all 10 beliefs. There appears to be universal agreement on the Beliefs.

Hypothesis 2.1, regarding personnel, is supported by the findings of this study for 26 of the 38 Practices. There is some disagreement among the three types of personnel regarding the degree to which 12 of the Practices should be used.

Hypothesis 2.2, regarding school districts, is also supported by the findings of the study for 36 of the 38 Practices. There appears to be general agreement among the three types of districts regarding the degree to which the 38 Practices should be used.

The findings of this study support Hypothesis 3.1, regarding personnel, for 6 of the 38 Practices. There is general disagreement among the three types of personnel regarding the degree to which the 38 Practices are actually used.

Hypothesis 3.2, regarding school districts, is supported by the findings of this study for 32 of the 38 Practices. There appears to be general agreement among the three types of districts regarding the degree to which the 38 Practices are actually used.

The findings of this study support Hypothesis 4.1, regarding personnel, for 19 of the 38 Practices. There appears to be both agreement and disagreement of substance among the three types of personnel regarding the discrepancy between what Should Be and what Exists for the 38 Practices.

The final hypothesis, Hypothesis 4.2, regarding school districts, is supported by the findings of the study for 34 of the 38 Practices. There appears to be general agreement among the three types of districts regarding the discrepancy between what Should Be and what Exists for the 38 Practices.

The three types of personnel appear to be in general agreement regarding acceptance of the 10 Beliefs. However, there is some disagreement regarding the desirability of the 38 Practices, substantial disagreement regarding the

actual employment of the 38 Practices, and wide disagreement as to the disparity between desirability and employment of the Practices.

There is general agreement among the three types of school districts regarding the importance of the 10 Beliefs and 38 Practices. In addition, the district types generally appear to agree on the degree of existence of the Practices.

Chapter 5

Conclusions, Discussion, Implications, and Suggestions for Further Research

Introduction

The intent of this study was to determine the status of staff development in Virginia as perceived by public school educators. Specifically, the researcher wished to know to what extent the tenets of staff development were accepted by district based personnel. Additionally, knowledge was sought regarding agreement among local personnel and among different types of school districts. It was anticipated that answers to these questions might enhance staff development by indicating the Practices perceived as desired and those requiring greater implementation. Finally, it was expected that the study might indicate whether more education about the process of staff development was needed.

Staff development is valued as an important component of learning for teachers and administrators because it serves to build upon the foundation of knowledge established during the undergraduate years. It also serves to maintain and refresh prior learning, continue new learning, introduce concepts, develop skills, and provide for professional growth.

Design of the Study

The population for the study was defined as public school educators within the state of Virginia. A random sample of district supervisors, principals, and teachers was identified using the directory of school districts in the 1993-94 Virginia Educational Directory. Questionnaires were mailed to the central office, a high school, a middle school (where one existed), and an elementary school of each of the 60 selected districts. A total of 744 questionnaires were mailed and 389 or 53% useable responses were returned. The questionnaire contained 48 items, 10 about staff development Beliefs and 38 about staff development Practices. Data were analyzed for each of the 48 items using analysis of variance. Where a significant difference was observed among personnel or among school districts, t tests were conducted to determine significance between groups for each item. All hypotheses were stated in null form. The .05 level of significance was used.

The survey instrument was developed and used in a study by Thompson (1982). Thompson surveyed four personnel types including intermediate unit staff development coordinators, which were identified as the coordinator of continuing professional education for state regional education bodies in Pennsylvania. Thompson's population was Pennsylvania educators in 1982.

The current study used Thompson's questionnaire intact but included district types in the subgroups surveyed and did not survey state department personnel. Within those limits the current survey was a replication of Thompson's study.

Research Question I asked to what degree each research-based staff development Belief was perceived as important. Hypothesis 1.1 addressed the question of agreement and compared responses of three personnel types.

Hypothesis 1.1 There are no significant differences in perception among teachers, principals, and supervisors as to what degree each research-based staff development belief is considered important.

Means of the three personnel types revealed support for all ten Beliefs and agreement on nine of the Beliefs. There was a significant difference between scores of teachers and principals for the Belief identifying the principal as the gatekeeper of change. Hypothesis 1.1 was rejected for one Belief and not rejected for nine.

Hypothesis 1.2 addressed the question of agreement and compared responses of three school district types.

Hypothesis 1.2 There are no significant differences in personnel perceptions among small rural school districts, large urban school districts,

and all other types of school districts as to what degree each research-based staff development belief is considered important.

Means of the three district types revealed support for the 10 Beliefs and also agreement on all of them. Therefore, Hypothesis 1.2 was not rejected.

Research Question II asked to what degree each research-based staff development Practice was perceived as desirable. Hypothesis 2.1 addressed the question of agreement and compared responses of three personnel types.

Hypothesis 2.1 There are no significant differences in perception among teachers, principals, and supervisors as to what degree each research-based staff development practice is perceived as desirable.

Hypothesis 2.1 sought to determine the importance of the staff development Practices and whether teachers, principals, and supervisors agreed on the degree of importance of each Practice. The means of the three personnel types revealed support for all of the Practices and agreement on 26 of them. However, teachers perceived 12 Practices as significantly less important than did supervisors and 7 as less important than did principals. Principals perceived 2 items as less important than did

supervisors. Hypothesis 2.1 was rejected for 12 Practices and was not rejected for 26.

Hypothesis 2.2 addressed the question of agreement and compared responses of three school district types.

Hypothesis 2.2 There are no significant differences among personnel perceptions in small rural school districts, large urban school districts and all other types of school districts as to what degree each research-based staff development practice is perceived as desirable.

Hypothesis 2.2 compared the perceptions of personnel from small rural, large urban, and other types of school districts to determine whether district type was a factor in the importance given to the Practices. Mean scores of the three types of districts revealed agreement for 36 of the Practices. Large urban districts perceived two Practices as significantly more important than did other districts and one Practice as more important than did small rural districts. Hypothesis 2.2 was rejected for two Practices and was not rejected for 36.

Research Question III asked to what degree each research-based staff development Practice was perceived as desirable. Hypothesis 3.1 addressed the question of agreement and compared responses of three personnel types.

Hypothesis 3.1 There are no significant differences in perception among teachers, principals, and supervisors as to what degree each research-based staff development practice is perceived as currently employed.

Hypothesis 3.1 concerned the frequency of use of the Practices and whether teachers, principals, and supervisors agreed on the degree to which each Practice was implemented. Results showed that the three personnel types agreed on only 6 Practices. Teachers perceived 30 Practices as significantly less utilized than did principals and 24 as less utilized than did supervisors. Supervisors perceived the practice regarding how well principals support change and new programs as less utilized than did principals. Hypothesis 3.1 was rejected for 32 Practices and was not rejected for 6.

As noted earlier, Teachers perceived 12 Practices as significantly less desirable than did administrators. Teachers also perceived the same 12 Practices as less well implemented than did administrators.

Hypothesis 3.2 addressed the question of agreement and compared responses of three school district types.

Hypothesis 3.2 There are no significant differences in personnel perceptions among small rural school districts, large urban school districts, and all other types of school districts as to

what degree each research-based staff development practice is perceived as currently employed.

Hypothesis 3.2 sought to determine the perceptions of personnel according to district affiliation regarding implementation of the Practices. Agreement was found for 32 of the Practices. Large urban district personnel perceived four Practices as significantly better implemented than small rural districts and three Practices as significantly better implemented than did other districts. Small rural districts perceived one Practice as less well implemented than did other districts.

Hypothesis 3.2 was rejected for six Practices and was not rejected for 32.

Research Question IV asked to what degree respondents agreed on perceived differences between what Should Be and what Exists for the 38 Practices. Hypothesis 4.1 addressed the question of agreement and compared responses of three personnel types.

Hypothesis 4.1 There are no significant differences in perception among teachers, principals, and supervisors as to discrepancies between desirable and currently employed practices for each practice.

Hypothesis 4.1 addressed the Difference between the desirability and implementation of each Practice according to the perceptions of the different personnel types. Agreement among personnel was found for 19 of the Practices. Additionally, for 19 Practices teachers perceived a greater Difference than did principals. Teachers also perceived a greater Difference than supervisors for five Practices. Supervisors perceived a greater Difference than either principals or teachers for Practice 34 which addressed the principal's support for change and new programs. This was the only instance where a pair-wise difference occurred between every set of pairs in the current study. (Teachers perceived this Difference as significantly greater than did principals.) Finally, supervisors also perceived a greater discrepancy than did principals for Item 4. Hypothesis 4.1 was rejected for 19 Practices and not rejected for 19.

As noted earlier there were 12 Practices which teachers perceived as less desirable and less sell implemented than did administrators. Of those 12, teachers perceived 5 as having a greater Difference between desirability and implementation than did administrators.

Hypothesis 4.2 addressed the question of agreement and compared responses of three school district types.

Hypothesis 4.2 There are no significant differences in perception among personnel for small rural school districts, large urban school districts, and all other types of school districts as to discrepancies between desirable and currently employed practices for each practice.

Hypothesis 4.2 was concerned with the Difference for each Practice between desirability and implementation according to the perceptions of personnel from large urban, small rural, and other types of districts. Agreement among the district types was observed for 34 of the Practices. Large urban district personnel perceived a greater Difference than other district personnel for 2 Practices and a greater Difference than rural district personnel for 1 Practice. Small rural district personnel perceived a greater Difference than did personnel of other districts for 1 Practice. Hypothesis 4.2 was rejected for 4 Practices and was not rejected for 34.

Conclusions

The findings of this study support the following conclusions:

1. Educators in Virginia agreed with the staff development Beliefs and felt the Practices should be utilized often in staff development. These educators perceived that the Practices were utilized less often than desired.

2. Teachers disagreed frequently with principals and/or supervisors regarding the desirability, utility, and Difference between desirability and utility of the 38 Practices. Teachers perceived 12 Practices as less desirable, 32 as less often utilized and 19 as having a greater difference between Should Be and Exists than the two types of administrators. Supervisors perceived one Practice as having greater Difference between desirability and utility than did teachers. This Practice addressed the school principal's support for change and new programs. All agreed that the 38 Practices should be utilized <u>often</u> and were insufficiently implemented.

3. Principals and supervisors were in agreement regarding the desirability, utility, and Difference between desirability and utility for all Practices with four exceptions. Of these, three occurred once each. For the fourth Practice supervisors perceived that principals were less supportive of change and new programs than did principals themselves. Additionally, supervisors saw the Difference between desirability and utility for this Practice as significantly greater than did principals.

4. Teachers disagreed significantly with administrators regarding desirability, implementation, and Difference between desirability and implementation for Practices 28,

29, 31, 34, and 38. Teachers perceived that shared responsibility and support for innovation were considerably less utilized than did administrators.

5. There was little disagreement among the personnel of small rural districts, large urban districts, and other types of districts regarding the desirability, the utility, and the Difference between desirability and utility for the 38 Practices. Statistically significant differences ($p<.05$) among district types numbered two for desirability, six for utility, and four for Difference. These differences had little if any practical application since they were scattered among the Practices. Additionally, at the .05 level of significance, a Type I error was likely to occur twice in a group of 38 analyses of variance.

Discussion

The findings presented in this study substantiated earlier research conducted by Wood, et al. (1981) and Thompson (1982). Wood, et al. outlined a model of staff development based on several premises. Thompson used these Beliefs as the foundation for a list of Practices which were verified as desirable by a panel of specialists and supported in a study of Pennsylvania educators. Perceptions of Virginia educators in the current study also supported the Beliefs and Practices. Mean scores for all Beliefs were above 3.000 (agreed)

except for one identifying the school as the unit of change rather than the district or the individual. The lowest subgroup score for this Belief was 2.892, still much closer to agreed than to disagreed (2.000). This result was consistent with Thompson's findings which were also less supportive of the same Belief.

Teachers and principals did not concur on one Belief. Teachers were less supportive than principals on the Belief that the principal was the gatekeeper of change. This may have been perceived as too much authority for an individual by teachers. Supervisors did not disagree with principals on this issue.

Mean scores in the current study for the Practices were also high. Only eight subgroup scores fell below 3.000 (often). The lowest of these was 2.757, much closer to often than sometimes (2.000). Mean scores for 24 of the Practices in the current study were consistent with those in Thompson's study. Results for eight Practices were less consistent with the earlier study and the scores of six Practices were not consistent. The educators of both states generally supported the Beliefs and supported the Practices albeit 12 years apart.

Although Virginia educators believed the Practices were desirable, all three personnel types perceived them as less well implemented. Mean subgroup scores for 11 subgroups , 10 of them teacher subgroup responses, fell

between 1.000 (almost never) and 2.000 (sometimes). Mean scores for 22 subgroups were above 3.000 (often) and the remainder fell between 2.000 and 3.000. Additionally, *t* tests revealed that the Difference was significant for all of the Practices but one, Practice 8.

Respondents in the Pennsylvania study (Thompson, 1982) also perceived less implementation of the Practices than desired. However, agreement between the two studies for implementation was less consistent than for desirability. Results were consistent for implementation of 13 of the Practices while for another 13 they were less consistent. The results of 12 Practices were not consistent between the two studies. Where inconsistency was observed, no pattern emerged to show that personnel of either study perceived greater implementation. These comparisons suggest several possibilities. Little change may have taken place regarding implementation of staff development Practices. Educators' expectations of staff development programs may have increased as programs improved. Virginia programs may have developed to a point reached by Pennsylvania 12 years earlier. The focus of staff development may have changed, concentrating in areas not strongly addressed by these Practices. Clearly, however, the respondents perceived a need to improve the quality of staff development programs

by increasing the application of the several Practices included in the survey.

Supervisors and principals agreed with each other for all comparisons of the Practices except five. Three occurred singly for Practices 4, 29, and 31. Two of them addressed Practice 34, the level of support by principals for change and new programs. Supervisors perceived this Practice as significantly less well implemented than did principals. They also perceived a significantly greater Difference between desirability and implementation for this Practice. It is worthy of note that teachers perceived the same differences for Practice 34 as did supervisors. These results suggest that principals do not support innovation and change as openly and enthusiastically as they should. The results also support earlier research by Hart and Willower (1994).

In contrast to the perceptual agreement by administrators, teachers generally perceived the Practices as less desirable, less well implemented and as having more disparity between desirability and implementation than did administrative personnel. While not all of these perceptual differences were statistically significant, analysis of variance and subsequent t tests revealed that there was substantial disagreement. Teachers perceived 12 of the Practices as significantly less desirable than did administrators,

although all educators were very supportive of the Practices. The study was not designed to determine possible causes. These differences may be the result of different training, different perspectives, or a combination of the two.

Significant differences between the perceptions of teachers and administrators regarding implementation were found for nearly all of the Practices. While all educators perceived the Practices as insufficiently implemented, teachers' scores were significantly lower than those of principals and/or supervisors in 32 instances. This is a considerably greater difference than was found in Thompson's 1982 study. In the earlier study, teachers differed with administrators for 17 Practices. Teachers perceived a greater discrepancy than administrators between the desired level of use and the level of implementation for 19 of the Practices. Since teachers perceived the majority of the Practices at the same level of desirability as did administrators but a significantly lower level of implementation for most of the Practices than did administrators, this was to be expected.

Although teachers generally perceived less desirability, less implementation, and greater Difference between desirability and implementation where significant differences were observed, results for five of the

Practices merit special consideration. The results for Practices 28, 29, 31, 34, and 38 revealed significant differences between scores of teachers and administrators across all three areas where hypotheses addressed personnel differences.

It is noted and accepted that teachers perceived the Practices to be less desirable than did administrators. In fact, this was the case for the 12 Practices where significant differences were observed. Further, it is accepted that teachers perceived the practices as less well implemented than did administrators. In fact, teachers perceived the Practices as less well implemented than did administrators for all 32 Practices where significant differences were observed. Among these 32 were the 12 Practices which teachers perceived as being less desirable than did administrators. It is worthy to note that generally, teachers systematically placed the Practices lower on the scale than did administrators.

It follows then that if a Practices were perceived by teachers as both less desirable and less well implemented by teachers than administrators that the Difference would be the same for both teachers and administrators. It would be anticipated that the Difference in value teachers placed between the desirability and the implementation of the Practices would approximate the Difference in value administrators

placed between desirability and implementation of the Practices. Teachers' scores would be systematically lower than those of administrators. This was the case for 7 of the 12 Practices being considered.

However, for the five practices mentioned earlier, teachers perceived a significantly greater Difference than did administrators. All five of these Practices were concerned with shared responsibility or support for innovation and new programs. Practice 28 addressed the transfer of responsibility from the leader to staff development participants as their confidence with a new skill increased. Practice 29 addressed support services for implementation of new behaviors. Practice 31 addressed visitation of the job setting by staff development leaders to help refine or review new skills. Practice 34 addressed principals' support for change and new programs. Practice 38 addressed the sharing of responsibility for innovations by teachers and administrators. The content of these five then, address assignment of responsibility for staff development implementation and support for maintenance of innovation and new programs. It is clear then that teachers are particularly dissatisfied with the level of use of these five Practices and that staff development supervisors need to address the concerns.

The current study lends support to earlier research. Little (1982) determined that teachers supported staff development concepts but wanted quality programs. Hoover (1989), in a survey of several western states, observed that teachers supported staff development goals but felt the design and quality of most programs were inadequate. Amos and Benton (1988) also found dissatisfaction with inservice programs among teachers who felt their needs weren't met. The negative attitudes of teachers toward inservice have been documented by other research as well (Berman & McLaughlin, 1978; Boyer, 1983; McBride, Reed, & Dollar, 1994). The current study supports the results of these earlier studies in suggesting that staff development programs lack the quality desired by educators. The current study also suggests that teacher dissatisfaction with inservice stems from participation in inservice which makes inadequate use of staff development Practices.

The review of the literature on rural schools in Chapter 2 lent support to the concept that small rural districts suffered from a number of ills which placed them at an educational disadvantage when compared with larger, more urban localities. Questions were raised as to whether respondents from the different types of districts perceived the Beliefs and Practices differently. A comparison of group mean scores using

analysis of variance revealed no significant difference in perceptions of the 10 Beliefs. Respondents of the three types of districts agreed among themselves regarding the frequency with which Practices were desirable for 36 of the 38 Practices. Only one of these two issues differentiated rural and urban schools. Respondents by district agreed regarding the frequency with which Practices were utilized for 32 of the 38 Practices. Four Practices by utility differentiated between rural and urban schools. Respondents agreed among themselves regarding perceived Difference between desirability and implementation for 34 of the 38 Practices. Only one of these differentiated rural and urban districts. As mentioned earlier, the possibility of a Type I error occurring is two for each set of 38 Practices at the .05 level of significance.

There were six instances of disparity in scores between large urban and small rural districts out of a possible 114 items. These results suggest that there is little difference between the two types of districts regarding Beliefs about staff development, desirability of the Practices or utility of the Practices as perceived by Virginia educators. In fact, there is a larger number of differences between large urban and other districts. The results of the current study do not support the implications of the literature review that small rural

schools suffer from a lack of training, resources, or knowledge in the area of staff development relative to large urban districts, much less other districts. While there is a perceived need to increase utility of the Practices, it is a universal need and not limited to one type of school district.

There are several possible explanations for this finding. First, isolation may not be as severe a problem as thought. Communications may have improved. Only a very few districts may be truly isolated. The conditions of isolation relative to other states, particularly some western states, may be considerably less severe.

Second, in reviewing the findings, consideration must be given to the low response rate to the current study for large urban districts. Only 10 large urban districts were identified and all were included in the study. Three of these urban districts, provided no responses due to local board policy. Two of the 3 were the largest districts in the state. Data from these 3 districts may have altered results given the small population.

Third, there may be a general misconception of what constitutes a high level of implementation for the Practices. A related consideration may be that respondents misunderstood the language of the statements and responded cautiously.

All of these possibilities may have played a role in these results to one degree or another. However, the most likely cause would seem to be that isolation and other restrictions to good educational practice are not as severe as may have been thought, at least in Virginia.

Implications

Several implications may be drawn from the findings of this study. These are stated with caution because of the low return rate of the questionnaires. Educators in Virginia agreed with the staff development Beliefs and perceived that most of the Practices should be utilized at least often. This implies that a foundation exists for support of quality staff development.

Staff development Practices were perceived by all educators as less well implemented than they should have been. Therefore, a need for evaluation and improvement of current staff development programs should be conducted within districts across the state. Whether such steps will be taken depends upon the importance placed upon staff development within each district.

There is a significant gap between perceptions of teachers and administrators regarding implementation of staff development Practices. This finding points out the need for staff development coordinators to take these differences into consideration when planning for and conducting staff development to implement change and new

programs. There is also a need to determine the causes for these differences with an intent to resolve them. Related to this implication is one concerning principals. Principals need to consider whether their support of staff development activities is adequate and whether it is perceived as adequate by other educators.

Differences between teachers and administrators for Practices 28, 29, 31, 34, and 38 are particularly significant. Educators responsible for staff development programs need to evaluate the provisions for support of and responsibility for new programs and innovation during and following staff development.

Little difference existed among responses of the different types of school districts. This implies that smallness and ruralness is not a detriment to current staff development programs relative to other district types in Virginia.

Suggestions for Further Research

The findings and implications of this study suggest several possibilities for further research.

1. Investigation of perceptual differences between teachers and administrators regarding frequency with which the Practices occur would contribute to understanding success and failure when implementing new programs. Earlier research has noted the importance of training prior to initiating new programs (Joyce &

Showers, 1988). Difference of opinion may suggest that the staff development is inadequate to meet desired needs and goals.

2. Investigation of the relationship between personnel type, knowledge of staff development processes and contexts, and perceptions of staff development would add considerably to understanding the validity of responses by the different personnel types. Given the agreement regarding Beliefs and the importance of the Practices, differences of opinion regarding current use may be affected by one's understanding of a given Practice.

3. Further investigation of the Practices, a few at a time, should be considered. It is difficult to adequately determine results and implications of so large a number of items. Response rate may also have been affected by the length of the questionnaire.

4. This study was limited to schools in Virginia. The researcher identified no others besides Thompson's original study. Given the 12 year time lapse between the two and the lack of data from other regions of the country, it is recommended that the study be replicated in other regions of the United States.

5. Thompson recommended a study of the priority of professional development relative to other functions of school districts due to the difference between what Should Be and what Exists (Thompson, 1982). Similar

results in the current study lend support to Thompson's recommendation.

6. The current study attempted to define the conditions differentiating rural and urban staff development and to identify disparities unique to small rural districts. However, few differences were observed. Investigation should be considered relative to isolation of districts, especially considering time/distance factors and size. Such a study should also consider recent developments in technology and communication and their relation to isolation of small rural districts. As noted earlier (see Chapter Two), the definition of small and rural varies among states.

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Appendix A

Questionnaire

General Information

1. Is Your School District: Rural____ Suburban____ Urban____

2. Total Students In District: 2,499 or less____ 2,500-9,999____ 10,000 or more____

3. Total Number Of Years Teaching Experience (teachers only):_____

THE SCHOOL-BASED STAFF DEVELOPMENT
PRACTICES INVENTORY
1980, Steven Ray Thompson

PART I: PRACTICES

Listed below are a number of statements that could be used to describe various practices in school-based staff development programs. Next to each statement are two columns.

In the first column, please indicate the degree to which you believe each statement describes existing practices in the school or system where you now work by circling the number beneath the appropriate descriptor. In the second column, indicate the degree to which you believe each statement describes what should be practiced.

	WHAT EXISTS				WHAT SHOULD BE			
	Almost Never	Sometimes	Often	Almost Always	Almost Never	Sometimes	Often	Almost Always
1. A positive school climate is developed before other staff development efforts are attempted. (A positive climate is characterized by open communications, trust, and supportive relationships.)	1	2	3	4	1	2	3	4
2. Goals for school improvement are written collaboratively be teacher, parents, building administrators, and central office administrators.	1	2	3	4	1	2	3	4
3. The school has a written list of goals for the improvement of school programs during the next three to five years.	1	2	3	4	1	2	3	4
4. The school staff adopts and supports goals for the improvement of school programs.	1	2	3	4	1	2	3	4
5. Current school practices are examined to determine which ones are congruent with the school's goals for improvement before staff development activities are planned.	1	2	3	4	1	2	3	4
6. Current educational practices not yet found in the school are examined to determine which ones are congruent with the school's goals for improvement before staff development activities are planned.	1	2	3	4	1	2	3	4
7. The school staff identifies specific plans to achieve the school's goals for improvement.	1	2	3	4	1	2	3	4

SURVEY OF SCHOOL-BASED STAFF DEVELOPMENT PRACTICES

	WHAT EXISTS				WHAT SHOULD BE			
	Almost Never	Sometimes	Often	Almost Always	Almost Never	Sometimes	Often	Almost Always
8. Leadership and support during the initial stage of staff development activity is the responsibility of the principal and central office staff.	1	2	3	4	1	2	3	4
9. Differences between desired and actual practices in the school are examined to identify the inservice needs of the staff.	1	2	3	4	1	2	3	4
10. Planning of staff development activities relies, in part, upon information gathered directly from school staff members.	1	2	3	4	1	2	3	4
11. Inservice planners use information about the learning styles of participants when planning staff development activities.	1	2	3	4	1	2	3	4
12. Staff development programs include objectives for inservice activities covering as much as five years.	1	2	3	4	1	2	3	4
13. The resources (time, money, and materials) available for use in staff development are identified prior to planning inservice activities.	1	2	3	4	1	2	3	4
14. Staff development programs include plans for activities to be conducted during the following three to five years.	1	2	3	4	1	2	3	4
15. Specific objectives are written for staff development activities.	1	2	3	4	1	2	3	4
16. Staff development objectives include objectives for attitude development (new outlooks and feelings).	1	2	3	4	1	2	3	4
17. Staff development objectives include objectives for increased knowledge (new information and understanding).	1	2	3	4	1	2	3	4
18. Staff development objectives include objectives for skill development (new work behaviors).	1	2	3	4	1	2	3	4
19. Leadership during the planning of inservice programs is shared among teachers and administrators.	1	2	3	4	1	2	3	4
20. Staff development activities include the use of learning teams in which two to seven participants share and discuss learning experiences.	1	2	3	4	1	2	3	4

SURVEY OF SCHOOL-BASED STAFF DEVELOPMENT PRACTICES	WHAT EXISTS				WHAT SHOULD BE			
	Almost Never	Sometimes	Often	Almost Always	Almost Never	Sometimes	Often	Almost Always
21. Individual school staff members choose objectives for their own professional learning.	1	2	3	4	1	2	3	4
22. Individual school staff members choose the staff development activities in which they participate.	1	2	3	4	1	2	3	4
23. Staff development activities include experimental activities in which participants try out new behaviors and techniques.	1	2	3	4	1	2	3	4
24. Peers help to teach one another by serving as inservice leaders.	1	2	3	4	1	2	3	4
25. School principals participate in staff development activities with their staffs.	1	2	3	4	1	2	3	4
26. Leaders of staff development activities are selected according to their expertise rather than their position.	1	2	3	4	1	2	3	4
27. As participants in staff development activities become increasingly competent, leadership behavior becomes less directive or task-oriented.	1	2	3	4	1	2	3	4
28. As participants in staff development activities become increasingly confident in their abilities, the leader transfers increasing responsibility to the participants.	1	2	3	4	1	2	3	4
29. After participating in inservice activities participants have access to support services to help implement new behaviors as part of their regular work.	1	2	3	4	1	2	3	4
30. School staff members who attempt to implement new learnings are recognized and rewarded for their efforts.	1	2	3	4	1	2	3	4
31. The leaders of staff development activities visit the job setting, when needed, to help the inservice participants refine or review previous learning.	1	2	3	4	1	2	3	4
32. School staff members use peer supervision to assist one another in implementing new work behaviors.	1	2	3	4	1	2	3	4

SURVEY OF SCHOOL-BASED STAFF DEVELOPMENT PRACTICES	WHAT EXISTS				WHAT SHOULD BE			
	Almost Never	Sometimes	Often	Almost Always	Almost Never	Sometimes	Often	Almost Always
33. Resources (time money, and materials) are allocated to support the implementation of new practices following staff development activities (funds to purchase new instructional materials, time for planning, etc.).	1	2	3	4	1	2	3	4
34. The school principal actively supports efforts to implement changes in professional behavior.	1	2	3	4	1	2	3	4
35. A systematic program of instructional supervision is used to monitor new work behavior.	1	2	3	4	1	2	3	4
36. School staff members utilize systematic techniques of self-monitoring to maintain new work behaviors.	1	2	3	4	1	2	3	4
37. Student feedback is used to monitor new practices.	1	2	3	4	1	2	3	4
38. Responsibility for the maintenance of new school practices is shared by both teachers and administrators.	1	2	3	4	1	2	3	4

PART II; BELIEFS

Listed below are ten beliefs that could shape staff development practices. Next to each statement is a column of numbers. Please indicate the degree to which you agree with each statement by circling the number beneath the appropriate descriptor.

	Strongly Disagree	Disagree	Agree	Strongly Agree
39. All school personnel should be involved in professional development throughout their careers to stay current and effective.	1	2	3	4
40. Significant improvement in educational practice takes considerable time and is the result of systematic, long-range staff development.	1	2	3	4
41. Inservice education should focus on improving the quality of the school program.	1	2	3	4
42. Adult learners are motivated to risk learning new behaviors when they believe they have control over the learning situation and are free from threat.	1	2	3	4
43. Educators vary widely in their professional competencies, readiness for learning and approaches to learning.	1	2	3	4
44. Professional growth requires commitment to new performance norms.	1	2	3	4
45. Organizational health, including factors such as social climate, trust, open communication, and peer support for change in practices, influence the success of professional development.	1	2	3	4
46. The school is the most appropriate unit of change, not the district of the individual.	1	2	3	4
47. School districts have the primary responsibility for providing the resources and training necessary for a school staff to implement new programs and improve instruction.	1	2	3	4
48. The school principal is the "gate-keeper" or key element for adoption and continued use of new practices and programs in a school.	1	2	3	4

Appendix B

Sample Letters

February 20, 1994

Dear Educator:

You are part of a carefully selected sample of individuals to be consulted in a study of staff development practices in public schools. research during the last 20 years has identified a number of practices and beliefs which, it is believed, may be critical to successful inservice programs. It is the purpose of this survey to address this issue by doing the following:

1. Identify practices and beliefs considered important by Virginia educators.
2. Identify practices actually in use across the state.
3. Address the needs relative to staff development in Virginia in a statement to be used for future planning.
4. Add to the growing body of research in staff development nationwide.

Your response is important because it will add to the database of information on staff development used by practitioners in planning inservice and staff development programs. In addition, it will provide a picture of staff development practices which Virginia's educators consider essential for successful training in the implementation of new ideas and change for better schools.

The questionnaire takes approximately 20 minutes to complete and should be returned to me in the enclosed stamped, self-addressed envelope by March 5, 1994. Participation is voluntary. You don't have to answer every question or any questions. The survey itself has no identifying marks and both you and your school district will remain anonymous in the reporting of data. The envelope has been coded to identify the size and location (rural, urban, etc.) of your district. Once that information has been recorded the envelope will be destroyed. A summary of the survey results will be provided upon request.

If you have questions regarding the survey you may contact me at (804)749-4021 (Home)/(804)556-5320 (Office) or my advisor, Dr. James H. Stronge, at (804)221-2339 (Office). Please accept my sincere expression of appreciation in advance for your assistance with this study.

Sincerely,

Herbert O. Cox
Doctoral Candidate

Enclosure

February 20, 1994

Dear Principal:

You and three of your teachers are being asked to be part of a carefully selected sample of educators in a study of staff development beliefs and practices in Virginia's public schools. As explained in the accompanying letter it is intended that this survey will provide direction for future planning of staff development by professionals across the state as well as add to the growing database of staff development nationwide.

I am requesting that you, as your school's instructional leader, do two things. First, please distribute three of the enclosed survey packets to three of your teachers as follows:

1. One to a beginning teacher, or the least experienced teacher on your faculty.
2. One to a teacher with five years experience or as close to five years as possible.
3. One to a teacher of 15 years experience or as close to 15 years as possible.

In the event more than one teacher fits one of these categories please assign the packet to the teacher whose last name begins with the letter "U" or is closest to that letter.

My second request is that you take 20 minutes of your time to complete the survey yourself, using the remaining packet. Each packet includes a letter of explanation, a copy of the survey and a stamped, self-addressed envelope to return the survey to me. Please be assured that under no circumstances will you, any member of your faculty, or your school district be identified in the data collected for this study. Please accept my expression of deep gratitude for your time and effort in assisting with this study. Should you have any questions please contact me at (804)749-4021 (Home)/(804)556-5320 (Office) or my advisor, Dr. James H. Stronge, at (804)221-2339 (Office).

Sincerely,

Herbert O. Cox
Doctoral Candidate

ENCLOSURES

March 21, 1994

Dear Educator:

You are part of a carefully selected sample of individuals to be consulted in a study of staff development practices in public schools. Research in the last 20 years identified a number of practices and beliefs which, it is believed, may be critical to successful inservice programs. The purpose of this survey is to address the issue by:

1. Identifying practices and beliefs considered important by Virginia educators.
2. Identifying practices actually in use across the state.
3. Addressing the needs relative to staff development in Virginia in a statement to be used for future planning.
4. Adding to the body of research in staff development.

Your response is essential because it will add to the database of information on staff development used by practitioners in planning inservice and staff development programs. In addition, it will describe staff development practices which Virginia educators consider essential to successful training for implementation of new ideas and change for better schools.

The questionnaire takes approximately 20 minutes to complete and should be returned in the enclosed stamped, self-addressed envelope by April 19, 1994. Participation is voluntary. You and your school district will remain anonymous in the reporting of data. The envelope has been coded to identify the size and location (rural, urban, etc.) of your district but will be destroyed once that information has been recorded. This research was approved by the Human Subjects Review Committee at William and Mary. A summary of the results will be provided upon request.

If you have questions regarding the survey you may contact me at (804)749-4021 (Home)/(804)556-5320 (Office) or my advisor, Dr. James H. Stronge, at William and Mary (804)221-2339 (Office). Please accept my sincere expression of appreciation in advance for your assistance with this study.

Sincerely,

Herbert O. Cox
Doctoral Candidate

Enclosure

March 21, 1994

Dear Principal:

You and three of your teachers are being asked to be part of a carefully selected sample of educators in a study of staff development beliefs and practices in Virginia's public schools. This research is being conducted as part of the degree requirements for a doctorate in education. It has been approved by the Human Subjects Review Committee in the school of education at William and Mary and meets the requirements for safeguarding survey respondents.

I am requesting that you, as your school's instructional leader, do two things. First, please distribute three of the enclosed survey packets to three of your teachers according to the way they are marked. Second, please take 20 minutes of your time to complete the survey yourself, using the remaining packet.

Each packet includes a letter of explanation, a copy of the survey and a stamped, self-addressed envelope to return the survey. Please be assured that under no circumstances will you, any member of your faculty, or your school district be identified in the data collected for this study.

Please accept my expression of deep gratitude for your time and effort in assisting with this study. Should you have any questions please contact me at (804)749-4021 (Home)/(804)556-5320 (Office) or my advisor, Dr. James H. Stronge, at (804)221-2339 (Office) at William and Mary.

Sincerely,

Herbert O. Cox
Doctoral Candidate

ENCLOSURES

March 21, 1994

Dear Principal:

Thank you so much for responding to the survey recently sent to you. Your input is a valuable contribution to this research and greatly appreciated.

With the recent weather related problems added to the normally busy routine of teaching children some of your teachers haven't had a chance to complete the questionnaire and return it. Please distribute the enclosed envelopes as you did before. The envelopes have been labeled for distribution for your convenience.

Questions may be directed to me (804)749-4021 (home)/(804)556-5320 (work) or to my advisor at William and Mary, Dr. Stronge (804)221-2339. Again I thank you and your staff for your consideration and help.

Sincerely,

Herbert O. Cox
Doctoral Candidate

Enclosures

March 21, 1994

Dear Principal:

Thank you so much for distributing the copies of the survey recently sent to you. Several of your teachers have been able to respond. Their input is a valuable contribution to this research and is greatly appreciated.

With the recent weather related problems added to the normally busy routine of teaching children I know you and some of your teachers haven't had a chance to complete the questionnaire and return it. Please distribute the enclosed envelopes as you did before and take a few moments to respond to the survey yourself. The envelopes have been labeled for distribution for your convenience.

Questions may be directed to me (804)749-4021 (home)/(804)556-5320 (work) or to my advisor at William and Mary, Dr. Stronge (804)221-2339. Again I thank you and your staff for your consideration and help.

Sincerely,

Herbert O. Cox
Doctoral Candidate

Enclosures

Appendix C

Permission to use Questionnaire

IDEA

INSTITUTE FOR DEVELOPMENT OF EDUCATIONAL ACTIVITIES, INC.

259 Regency Ridge, Dayton, Ohio 45459 ☐ 513/434-6969 Fax: 513/434-5203

December 17, 1992

Mr. Herbert Cox
2455 Hillstream Dr.
Rockville, VA 23146

Dear Herbert:

Enclosed are a copy of the "School-based Staff Development Practices Inventory" and excerpts from my dissertation that describe the development of the instrument.

The instrument is copyrighted, and you have my full permission to use or to adapt the instrument for use in your research. I ask only that you include the appropriate attributions on the instrument and in your writing.

I am pleased that my work may prove helpful to you. Please send me a copy of any conclusions or summary recommendations that you generate in your work. I am always interested in learning more about staff development and school improvement. Thank you.

Sincerely,

Steven R. Thompson

Appendix D

Analysis of Variance Tables

Table A

Analysis of Variance for Beliefs by Personnel Type

Belief	Sum of Squares	Error	Mean Squares	Error	F-ratio	Significance of F
1	.88534	135.60445	.44267	.34860	1.26986	.282
2	1.60319	198.14171	.80160	.50936	1.57373	.209
3	1.58041	182.29459	.79020	.46862	1.68622	.187
4	1.08106	247.89853	.54053	.63727	.84820	.429
5	.48256	203.42560	.24128	.52294	.46139	.631
6	.84065	262.87109	.42032	.67576	.62200	.537
7	.09889	227.18427	.04944	.58402	.08466	.919
8	.70860	462.67916	.35430	1.18941	.29788	.743
9	.80463	287.62139	.40232	.73939	.54412	.581
10	7.74835	258.80012	3.87418	.66530	5.82324*	.003

p<.05

Table B

Analysis of Variance for Beliefs by School District Type

Belief	Sum of Squares	Error	Mean Squares	Error	F-ratio	Significance of F
1	.50611	135.98368	.25306	.34957	.72391	.486
2	1.16833	198.57657	.58416	.51048	1.14434	.320
3	.64039	183.23461	.32020	.47104	.67977	.507
4	.18745	248.79215	.09372	.63957	.14654	.864
5	.78874	203.11942	.39437	.52216	.75527	.471
6	1.38610	262.32563	.69305	.67436	1.02772	.359
7	.25708	227.02608	.12854	.58361	.22025	.802
8	.84808	462.53967	.42404	1.18905	.35662	.700
9	1.30896	287.11706	.65448	.73809	.88672	.413
10	.14069	266.40778	.07034	.68485	.10272	.902

p<.05

Table C

Analysis of Variance for Practices as They Should Be by Personnel Type

Item	Sum of Squares	Error	Mean Squares	Error	F-ratio	Significance of F
1	.21195	98.05081	.10597	.25206	.42043	.657
2	.40228	151.88088	.20114	.39044	.51517	.598
3	1.28206	194.17713	.64103	.49917	1.28419	.278
4	.23349	172.24610	.11675	.44279	.26366	.768
5	2.12568	170.70850	1.06284	.43884	2.42194	.090
6	1.99203	285.84471	.99601	.73482	1.35546	.259
7	.93204	134.20826	.46602	.34501	1.35075	.260
8	.85803	318.27462	.42902	.81819	.52435	.592
9	1.05995	176.01913	.52998	.45249	1.17124	.311
10	1.69417	202.18083	.84709	.51975	1.62981	.197
11	1.66483	251.31221	.83241	.64605	1.28847	.277
12	15.36213	341.34960	7.68107	.87751	8.75330*	.000
13	14.84590	395.98829	7.42295	1.01796	7.29195*	.001
14	11.47936	363.06911	5.73968	.93334	6.14962*	.002
15	1.47617	327.03148	.73809	.84070	.87794	.416
16	.80177	328.60385	.40088	.84474	.47456	.623
17	1.58724	263.98164	.79362	.67862	1.16947	.312
18	2.15463	244.90660	1.07731	.62958	1.71116	.182
19	2.34023	171.61895	1.17012	.4418	2.65224	.072
20	.54285	252.43674	.27143	.64894	.41826	.658
21	.19089	219.26830	.09544	.56367	.16933	.844
22	1.01951	217.10294	.50976	.55811	.91337	.402
23	.33815	247.31236	.16907	.63576	.26594	.767
24	3.28369	222.46121	1.64184	.57188	2.87096	.058
25	.99681	156.08227	.49840	.40124	1.24216	.290
26	1.69457	236.26461	.84729	.60736	1.39502	.249
27	22.23130	511.17431	11.11565	1.31407	8.45893*	.000
28	15.35169	384.76821	7.67585	.98912	7.76027*	.000
29	6.85631	258.36562	3.42816	.66418	5.16150*	.006
30	3.29693	214.61123	1.64846	.55170	2.98797	.052
31	10.13191	335.27370	5.06596	.86189	5.87776*	.003
32	4.49904	283.33514	2.24952	.72837	3.08844*	.047
33	3.20540	252.77164	1.60270	.64980	2.46646	.086
34	2.93680	174.32595	1.46840	.44814	3.27667*	.039
35	26.93094	353.18896	13.46547	.90794	14.83078*	.000
36	10.06789	369.43977	5.03394	.94972	5.30047*	.005
37	4.35949	305.00531	2.17975	.78408	2.78002	.063
38	4.97388	225.02357	2.48694	.57847	4.29919*	.014

p<.05

Table D

Analysis of Variance for Practices as They Should Be by School District Type

Item	Sum of Squares	Error	Mean Squares	Error	F-ratio	Significance of F
1	.21115	98.05161	.10557	.25206	.41884	.658
2	1.44856	150.83461	.72428	.38775	1.86790	.156
3	.65714	194.80204	.32857	.50078	.65612	.519
4	.05384	172.42575	.02692	.44325	.06073	.941
5	1.31105	171.52313	.65553	.44093	1.48668	.227
6	1.90243	285.93431	.95121	.73505	1.29408	.275
7	1.34980	133.79051	.67490	.34393	1.96229	.142
8	1.09818	318.03447	.54909	.81757	.67161	.511
9	.05855	177.02054	.02927	.45507	.06433	.938
10	.21870	203.65630	.10935	.52354	.20886	.812
11	.50063	252.47641	.25032	.64904	.38567	.680
12	4.45029	352.26145	2.22514	.90556	2.45721	.087
13	.56053	410.27365	.28027	1.05469	.26573	.767
14	.07152	374.47694	.03576	.96267	.03715	.964
15	10.17169	318.33596	5.08585	.81834	6.21480*	.002
16	.51555	328.89006	.25778	.84548	.30489	.737
17	.63554	264.93334	.31777	.68106	.46658	.627
18	.75869	246.30253	.37935	.63317	.59912	.550
19	1.04699	172.91219	.52350	.44450	1.17771	.309
20	.25381	252.72578	.12690	.64968	.19533	.823
21	.45632	219.00286	.22816	.56299	.40527	.667
22	1.46719	216.65526	.73359	.55695	1.31715	.269
23	1.19033	246.46018	.59517	.63357	.93938	.392
24	.76581	224.97909	.38290	.57835	.66206	.516
25	.37330	156.70578	.18665	.40284	.46333	.630
26	1.96675	235.99243	.98338	.60666	1.62096	.199
27	1.33494	532.07067	.66747	1.36779	.48799	.614
28	7.98425	392.13565	3.99212	1.00806	3.96020*	.020
29	2.49176	262.73018	1.24588	.67540	1.84466	.159
30	.58548	217.32268	.29274	.55867	.52399	.593
31	.66184	344.74377	.33092	.88623	.37340	.689
32	.11761	287.71657	.05881	.73963	.07951	.924
33	.73795	255.23909	.36897	.65614	.56234	.570
34	.52997	176.73279	.26498	.45433	.58325	.559
35	2.00517	378.11472	1.00259	.97202	1.03145	.357
36	.54637	378.96128	.27319	.97419	.28042	.756
37	.37590	308.98890	.18795	.79432	.23662	.789
38	1.73237	228.26508	.86618	.58680	1.47611	.230

p<.05

Table E

Analysis of Variance for Practices as They Exist by Personnel Type

Item	Sum of Squares	Error	Mean Squares	Error	F-ratio	Significance of F
1	17.90191	284.66697	8.95096	.73179	12.23156*	.000
2	8.09095	346.78405	4.04548	.89148	4.53796*	.011
3	3.30721	387.95554	1.65361	.99732	1.65806	.192
4	8.24638	321.59035	4.12319	.82671	4.98747*	.007
5	9.94904	341.60198	4.97452	.87815	5.66475*	.004
6	5.72364	337.98044	2.86182	.86884	3.29383*	.038
7	7.76308	312.23692	3.88154	.80267	4.83581*	.008
8	8.38670	327.00106	4.19335	.84062	4.98840*	.007
9	23.28650	270.58850	11.64325	.69560	16.73842*	.000
10	26.87847	329.72357	13.43923	.84762	15.85529*	.000
11	14.87598	339.99902	7.43799	.87403	8.50996*	.000
12	15.69889	370.30111	7.84945	.95193	8.24581*	.000
13	37.87272	528.96146	18.93636	1.35980	13.92586*	.000
14	17.38815	367.32359	8.69407	.94428	9.20713*	.000
15	3.58340	424.96507	1.79170	1.09246	1.64007	.195
16	9.50836	379.37939	4.75418	.97527	4.87474*	.008
17	9.08447	353.19869	4.54224	.90797	5.00265*	.007
18	15.88663	349.61337	7.94331	.89875	8.83819*	.000
19	16.44995	355.46841	8.22498	.91380	9.00084*	.000
20	1.47538	352.39962	.73769	.90591	.81431	.444
21	3.28329	414.63508	1.64164	1.06590	1.54015	.216
22	11.53532	321.58458	5.76766	.82670	6.97676*	.001
23	7.97996	263.99708	3.98998	.67866	5.87924*	.003
24	4.52702	313.04186	2.26351	.80473	2.81274	.061
25	11.97309	365.90191	5.98655	.94062	6.36446*	.002
26	27.89764	333.93654	13.94882	.85845	16.24887*	.000
27	31.19705	385.04784	15.59853	.98984	15.75863*	.000
28	43.29012	359.11549	21.64506	.92318	23.44630*	.000
29	28.51785	344.32909	14.25892	.88516	16.10878*	.000
30	28.40733	351.79675	14.20366	.90436	15.70573*	.000
31	31.56793	318.62595	15.78396	.81909	19.27012*	.000
32	14.81128	341.98209	7.40564	.87913	8.42382*	.000
33	32.56604	325.05640	16.28302	.83562	19.48614*	.000
34	13.63607	299.82311	6.81804	.77075	8.84594*	.000
35	43.74037	346.68565	21.87018	.89122	24.53953*	.000
36	5.44508	337.96054	2.72254	.86879	3.13370*	.045
37	3.16369	338.33631	1.58184	.86976	1.81871	.164
38	21.24968	363.80134	10.62484	.93522	11.36077*	.000

p<.05

Table F

Analysis of Variance for Practices as They Exist by School District Type

Item	Sum of Squares	Error	Mean Squares	Error	F-ratio	Significance of F
1	1.34292	301.22596	.67146	.77436	.86711	.421
2	4.13285	350.74215	2.06643	.90165	2.29183	.102
3	5.35213	385.91063	2.67606	.99206	2.69749	.069
4	1.90243	327.93431	.95121	.84302	1.12834	.325
5	6.69342	344.85760	3.34671	.88652	3.77509*	.024
6	1.90591	341.79817	.95296	.87866	1.08456	.339
7	4.38425	315.61575	2.19212	.81135	2.70182	.068
8	2.81522	332.57253	1.40761	.85494	1.64644	.194
9	.83372	293.04128	.41686	.75332	.55336	.575
10	.40055	356.20149	.20028	.91569	.21872	.804
11	.00968	354.86532	.00484	.91225	.00531	.995
12	1.46240	384.53760	.73120	.98853	.73968	.478
13	.46269	566.37149	.23135	1.45597	.15890	.853
14	.40021	384.31152	.20011	.98795	.20255	.817
15	23.96243	404.58604	11.98122	1.04007	11.51966*	.000
16	5.19212	383.69563	2.59606	.98636	2.63195	.073
17	3.07948	359.20368	1.53974	.92340	1.66746	.190
18	3.61599	361.88401	1.80800	.93029	1.94347	.145
19	6.57147	365.34690	3.28573	.93920	3.49846*	.031
20	.99962	352.87538	.49981	.90793	.55098	.577
21	1.69934	416.21903	.84967	1.06997	.79410	.453
22	8.11836	325.00154	4.05918	.83548	4.85851*	.008
23	3.37789	268.59915	1.68895	.69049	2.44602	.088
24	7.08329	310.48559	3.54164	.79816	4.43724*	.012
25	3.41494	374.46006	1.70747	.96262	1.77377	.171
26	4.29250	357.54168	2.14625	.91913	2.33509	.098
27	4.29329	411.95161	2.14664	1.05900	2.02705	.133
28	2.52838	399.87723	1.26419	1.02796	1.22980	.293
29	4.43037	368.41657	2.21518	.94709	2.33895	.098
30	2.01128	278.19280	1.00564	.97222	1.03438	.356
31	.00711	350.18677	.00356	.90022	.00395	.996
32	.40168	356.39168	.20084	.91617	.21922	.803
33	3.67680	353.94565	1.83840	.90989	2.02047	.134
34	.38626	313.07292	.19313	.80481	.23997	.787
35	3.55660	386.86942	1.77830	.99452	1.78809	.169
36	6.92581	336.47981	3.46290	.86499	4.00342*	.019
37	2.89528	338.60472	1.44764	.87045	1.66309	.191
38	.25084	384.80018	.12542	.98920	.12679	.881

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Table G

Analysis of Variance Difference Between Should Be and Exist for Practices by Personnel Type

Item	Sum of Squares	Error	Mean Squares	Error	F-ratio	Significance of F
1	19.33393	289.62525	9.66697	.76767	12.59254*	.000
2	4.88817	353.87713	2.44409	.90971	2.68667	.069
3	.50267	258.37233	.25033	.66420	.37840	.685
4	11.16046	296.33954	5.58023	.76180	7.32508*	.001
5	4.85056	317.84077	2.42528	.81707	2.96826	.053
6	2.11077	350.20555	1.05539	.90027	1.17230	.311
7	5.63756	297.35989	2.81878	.76442	3.68747*	.026
8	3.96292	458.59830	1.98946	1.17892	1.68075	.188
9	17.18792	291.08759	8.59396	.74830	11.48469*	.000
10	28.48060	383.35359	14.24030	.98548	14.45004*	.000
11	8.85509	364.60409	4.42754	.93729	4.72379*	.009
12	.01302	330.55585	.00651	.84976	.00766	.992
13	6.32090	425.01584	3.16045	1.09259	2.89263	.057
14	.84903	334.89587	.42451	.86091	.49310	.611
15	.52796	431.17612	.26398	1.10842	.23816	.788
16	4.79565	474.07935	2.39783	1.21871	1.96751	.141
17	3.97732	267.72676	1.98866	.68824	2.88947	.057
18	8.61689	288.23005	4.30844	.74095	5.81474*	.003
19	6.72399	321.96989	3.36199	.82769	4.06192*	.018
20	1.58288	320.55743	.79144	.82406	.96042	.384
21	3.71122	362.48266	1.85561	.93183	1.99136	.138
22	16.33827	360.45509	8.16914	.92662	8.81606*	.000
23	6.62990	309.84969	3.31495	.79653	4.16175*	.016
24	.18968	286.46083	.09484	.73640	.12879	.879
25	7.49611	248.49368	3.74806	.63880	5.86733*	.003
26	16.79442	248.91732	8.39721	.63989	13.12289*	.000
27	1.53927	332.33573	.76963	.85433	.90086	.407
28	7.15199	294.84801	3.57600	.75796	4.71790*	.009
29	11.33055	358.93220	5.66528	.92270	6.13986*	.002
30	12.81294	405.38094	6.40647	1.04211	6.14759*	.002
31	8.23471	438.27294	4.11735	1.12667	3.65446*	.027
32	5.43076	383.26311	2.71538	.98525	2.75603	.065
33	17.90585	400.45895	8.95293	1.02946	8.69674*	.000
34	12.02092	227.54796	6.01046	.58496	10.27506*	.000
35	5.90638	383.15485	2.95319	.98497	2.99824	.051
36	1.03759	386.59506	.51879	.99382	.52202	.594
37	3.04221	372.46545	1.52110	.95749	1.58863	.206
38	8.18613	336.03580	4.09307	.86385	4.73819*	.009

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Table H

Analysis of Variance Difference Between Should Be and Exist for Practices by School District Type

Item	Sum of Squares	Error	Mean Squares	Error	F-ratio	Significance of F
1	2.60573	315.35346	1.30286	.81068	1.60713	.202
2	4.29836	354.46694	2.14918	.91123	2.35856	.096
3	4.29351	254.58149	2.14675	.65445	3.28024*	.039
4	1.49356	306.00644	.74678	.78665	.94932	.388
5	3.75918	318.93215	1.87959	.81988	2.29253	.102
6	.66397	351.65235	.33199	.90399	.36724	.693
7	3.18401	299.81344	1.59200	.77073	2.06558	.128
8	1.37416	461.18706	.68708	1.18557	.57954	.561
9	.45095	307.82456	.22547	.79132	.28493	.752
10	.72840	411.10578	.36420	1.05683	.34462	.709
11	.55504	372.90414	.27752	.95862	.28950	.749
12	1.50834	329.06054	.75417	.84591	.89155	.411
13	2.03371	429.30303	1.01685	1.10361	.92139	.399
14	.60958	335.13532	.30479	.86153	.35378	.702
15	3.78158	427.92250	1.89079	1.10006	1.71881	.181
16	2.99926	475.87574	1.49963	1.22333	1.22586	.295
17	1.01436	270.68972	.50718	.69586	.72886	.483
18	2.85563	293.99131	1.42781	.75576	1.88924	.153
19	3.17386	325.52001	1.58693	.83681	1.89640	.151
20	.25598	321.88432	.12799	.82747	.15468	.857
21	3.30456	362.88931	1.65228	.93288	1.77117	.172
22	11.31815	365.47522	5.65908	.93952	6.02334*	.003
23	1.01394	315.46565	.50697	.81097	.62515	.536
24	5.26038	281.39013	2.63019	.72337	3.63603*	.027
25	1.65376	254.33604	.82688	.65382	1.26469	.283
26	.71479	264.99694	.35739	.68123	.52463	.592
27	3.41886	330.45614	1.70943	.84950	2.01227	.135
28	2.37586	299.62414	1.18793	.77024	1.54228	.215
29	2.97144	367.29131	1.48572	.94419	1.57354	.209
30	1.87386	416.32001	.93693	1.07023	.87545	.417
31	.79744	445.71021	.39872	1.14578	.34799	.706
32	.40315	388.29073	.20157	.99818	.20194	.817
33	6.82187	411.54292	3.41094	1.05795	3.22410*	.041
34	.10415	239.46472	.05208	.61559	.08460	.919
35	.22826	388.83297	.11413	.99957	.11418	.892
36	3.64134	383.99131	1.82067	.98712	1.84442	.159
37	5.27513	370.23252	2.63757	.95175	2.77127	.064
38	1.62291	342.59903	.81145	.88072	.92136	.399

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