AN ASSESSMENT OF PERCEIVED IN-SERVICE EDUCATION NEEDS OF PROPRIETARY TRADE AND TECHNICAL SCHOOL TEACHERS

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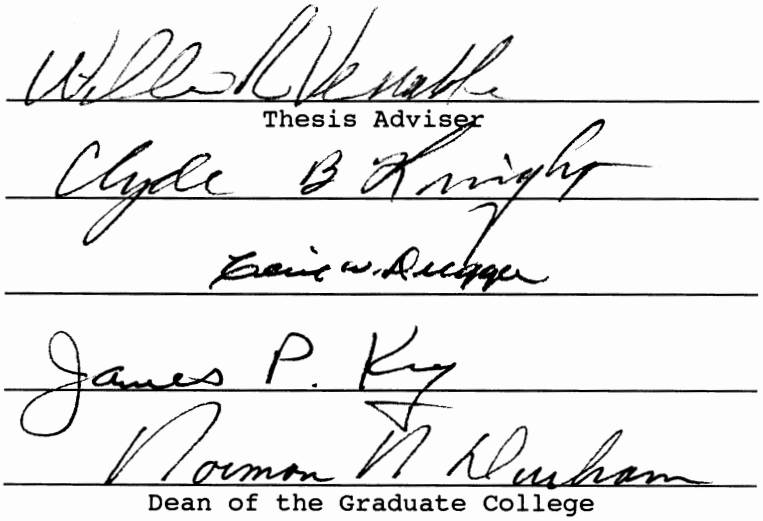

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INTRODUCTION

Proprietary schools are among the earliest known institutions for career-oriented education. They have existed in one form or another since the early 18th century. A large body of the literature about their operations has focused upon their profit-making orientation rather than upon their contributions to postsecondary education. Prior to 1972 these schools existed outside of the educational mainstream, and their relative obscurity is well documented.

Belitsky (1967), who conducted one of the most comprehensive studies of these schools, best depicted their status when he noted that historically, the profit-making nature of the schools has cast doubt on the credibility of their objectives and has resulted in widespread neglect of their contributions to the educational field.

Fulton (1969) noted that, largely because of the profit motive, proprietary education has often been viewed as a durable weed in the garden of academics. Wolman (1972) referred to proprietary education as the stepchild of vocational education. Trivett (1974) stated that, as part of the "educational periphery," proprietary schools are considered outcasts. Tolbert (1979) categorized the proprietary school sector as the least understood and least researched area of postsecondary education.

Despite neglect and scorn by the traditional education establishment, proprietary schools have expanded in number and have continued to succeed. With the enactment of the National Education Amendments of 1972, these schools were formally recognized as having an important role in postsecondary education. For the first time, these institutions were specifically included among all institutions which have assumed responsibility in each state for planning and coordinating higher education.

With the increased national awareness of proprietary schools, renewed emphasis at all educational levels on quality and accountability, and the drive to lure more students and federal student aid funds to the proprietary school sector, many of these schools have instituted measures to gain even greater acceptability in the academic world. In addition to implementing transfer of credit options and degree granting status, accreditation has become an established means of demonstrating accountability and conformity to the highest educational standards. Among proprietary trade and technical schools, the National Association of Trade and Technical Schools (NATTS) is the only accrediting organization recognized by the United States Office of Education.

Proprietary trade and technical school teachers in NATTS accredited institutions are typically recruited from business and industry. Selection criteria have focused on work experience and skill in the occupation rather than on teaching method and degrees. Although outstanding in knowledge of their craft, many teachers have little or no teaching background and experience, and lack key

competencies needed to successfully plan, organize, present and evaluate instruction for students of diversified ages, backgrounds and abilities.

This lack of teaching preparation could be addressed through a sound program of in-service education, but questions remain about which competencies are required of teachers specializing in diverse occupational programs within each school. NATTS has a prominent role in promoting in-service education for teachers in its member schools, but a comprehensive survey of teachers and administrators to collect information that could provide answers to these questions has not been undertaken. A study targeted at assessing teacher in-service education needs could provide valuable information from which administrators could initiate, expand, or improve in-service education programs.

Statement of the Problem

The problem was that insufficient information exists concerning specific in-service needs of NATTS teachers. In order to provide more effective help to proprietary trade and technical school teachers associated with the organization, it was felt that those responsible for their on-going professional development needed to know their in-service education needs. Therefore, it was important to conduct a study to determine teacher and administrator perceptions of the need for additional development of those teacher competencies that they considered essential for each trade and technical school teacher to be effective in the field. Findings in this area could

assist those responsible for providing in-service education programs in making critical decisions about the initiation, expansion, or improvement of in-service education programs.

Purpose of the Study

The purpose of this study was to identify the in-service education needs of full-time trade and technical school teachers in NATTS accredited schools as perceived by experienced teachers and school administrators.

Need for the Study

There have been few studies done on a comprehensive scale to determine the in-service education needs of proprietary trade and technical school teachers. Tolbert (1979) provided one major reason when he stated, "'Proprietorship' implies a certain degree of mistrust, mistrust of competitors, mistrust of the unknown, and in particular mistrust of government regulation" (p. 1). Indeed, many of these schools have been under close scrutiny by government regulatory agencies over the years due to allegations of unethical practices. As a consequence, the undertaking of such a study tends to raise the sensitivities and the reluctance of proprietary school owners and administrators to discuss or allow review of their internal operations in great detail.

NATTS instituted a movement to bring about accreditation and subsequent upgrade of teacher qualifications by member schools in 1965 (Johnson, 1967). Accreditation has greatly benefited the

proprietary school sector. It has been a key requirement of the federal government for eligibility in government funded training programs, and has suggested a level of credibility acceptable by higher educational standards.

An integral part of the accreditation process is an assessment of teacher qualifications to support institutional objectives. Teachers in schools accredited by NATTS typically begin their teaching careers after having met the prime requisites of occupational competence and certain prescribed minimum experience criteria. The individual has normally spent years in business or industry building up these qualifications. Consequently, there has been little time for formal development of teaching methods and supporting skills integral to success in the teaching profession.

Because credibility and accountability are of extreme importance in education, owners and administrators have a vested interest in seeking out the needs and concerns of their respective teachers as a commitment to improving teacher qualifications through in-service education. Because of these interests, they have felt a need to investigate the in-service education needs of full-time proprietary trade and technical teachers in schools accredited by NATTS.

Research Questions

The following research questions were developed for this study.

1. What is the nature of the teacher sample, based on factors of sex, age, occupation taught, years of work experience, years of teaching experience, method of recruitment for teaching, highest

educational level completed, and occupational training background?

2. What are the teacher competencies identified by teachers in which either more development is needed or more development is essential?

3. What order of importance do teachers place on the required competencies needed to teach students in the proprietary trade and technical schools?

4. What are the competencies, other than the requirements, which teachers identify as important to develop in-service education programs?

5. What are the teacher competencies identified by administrators in which either more development is needed or more development is essential?

6. What order of importance do administrators place on the required competencies needed by their teachers in order to teach students in the proprietary trade and technical schools?

7. What are the competencies, other than the requirements, which administrators identify as important for their teachers to develop in in-service education programs?

8. What are the differences in teacher and administrator responses to the degree of importance placed on the 38 competencies needed to teach students in the proprietary trade and technical schools?

Assumptions

This study was based upon the following assumptions.

1. Experienced teachers and administrators were best qualified to offer recommendations about in-service education programs as a result of day-to-day administrator observation of and teacher involvement in the educational process.

2. Teacher and administrator responses were free from bias and reflected true perceptions of each group's assessment of required needs.

3. Teachers and administrators responded to the rating scale by assessing each category in accordance with its high to low numerical value rather than from strict interpretation of the descriptors.

4. Proprietary trade and technical school teacher in-service education needs and teacher characteristics were similar to the in-service education needs and teacher characteristics of public vocational-technical education teachers.

5. The data gathering instrument provided the necessary information to identify in-service education needs of proprietary trade and technical school teachers.

Delimitations of the Study

The following delimitations apply to this study.

1. The study was limited to full-time teachers and administrators of postsecondary proprietary trade and technical schools accredited by NATTS.

2. The information for the study was collected by using a mail questionnaire.

3. The descriptors for each value within the range "more development essential", "more development needed", "little development needed, and "have adequate skills" of the rating scale may not have been interpreted as mutually exclusive.

4. Survey participant selection was based on a proportional stratified random sample of proprietary trade and technical schools teachers and administrators.

5. Trade and technical school programs varied in length from six weeks to 152 weeks.

6. Only those required teacher competencies which were common to all trade and technical career fields were utilized in the questionnaire.

7. Findings of this study were only generalizable to those full-time teachers who were employed by schools accredited by NATTS.

Definitions of Terms

The following terms used within this study are defined for clarification.

Administrator - The educational director, manager, owner, supervisor or other designated individual within each school who is responsible for management of the school's in-service teacher education program.

Competency - The ability to perform a given task through the prerequisite knowledge, skill and/or attitude.

In-service Education - Learning activity engaged in by teachers during their service and designed to contribute to their professional improvement.

National Association of Trade and Technical Schools - An organization which is the professional society for the proprietary trade and technical schools across the country. It supports an independent accrediting agency that is recognized by the United States Office of Education as the specialized accrediting agency in the trade and technical school area.

Needs Assessment - A systematic procedure by which educational needs are identified and ranked in order of priority. It is designed to improve school in-service education program planning.

Occupational Specialty Program - A complete postsecondary trade and technical training program which may last from six weeks to more than two years.

Postsecondary Education - An instructional program designated for individuals who have graduated from secondary schools or who are 18 years or older. It includes all institutions, agencies, and programs which are approved by accrediting bodies.

Proprietary Education - Any private trade or technical learning facility at the postsecondary level which offers course work through classroom instruction for profit and for the purpose of training a person for an occupational field of endeavor.

CHAPTER II

REVIEW OF LITERATURE

Prior to development of the questionnaire, a review of the literature was conducted consisting of the following three parts: (1) Proprietary Schools, (2) Teacher Competencies for Trade and Technical Education, and (3) In-service Education.

Proprietary Schools

Proprietary schools are the least understood and the least researched area of postsecondary education (Tolbert, 1979). Although similar to public vocational schools in many respects, there are some basic differences which make them unique among educational institutions. They are generally credited with having provided skills training to the American workforce long before public institutions, but their contributions have been overshadowed by the issue of unethical business practices. Because of this dilemma, a review of their background and operations was warranted.

Origin and Development of Proprietary Schools

The history of proprietary trade and technical school development in the United States is intertwined with the general development of vocational-technical education and other private vocational institutions. Katz (1973) noted that proprietary schools

in America were at least 234 years old in a country which was less than 200 years old.

The earliest reference to private vocational schools was during the existence of the Plymouth Colony. Within this settlement, proprietor-masters offered instruction in the casting of accounts (Fulton, 1969). According to Katz (1973), the first documented establishment of a proprietary school in the United States was by Caleb Phillips. Mr. Phillips announced commencement of classes in penmanship through publication in The Boston Gazette on March 20, 1728.

Throughout the eighteenth century, private-venture establishments were extremely popular. They were typically small and centered on the eastern seaboard. They had limited curricula, with instructional courses primarily in practical math, navigation, surveying, business and mercantile accounts and penmanship. For a nominal fee of $40.00 or less, students could pursue a course which would prepare them for a lifetime career (Bond, 1974).

Barlow (1967) attributed much of proprietary school development to the apprenticeship system which was practiced throughout colonial America. He pointed out that apprenticeships provided general knowledge, understanding, and experience in the trade skills, along with some techniques of a rudimentary scientific basis.

Despite its usefulness during the early stages of technology, the apprenticeship system rapidly declined with the rise of the Industrial Revolution and the growth of commerce (Katz, 1973). These economic influences increased the need for and focused on the

advantages of a structured vocational training program. Owing largely to the influx of people to the cities and the factories, the necessity for specific job skills and practical knowledge in specific occupational areas became increasingly important.

While the educational establishment during this period was generally in agreement about the critical need for semi-skilled workers, considerable debate arose over who should assume the responsibility for the education of the working class (Bond, 1974). Bond noted that early American colleges either shied away from this responsibility or questioned the utility of teaching practical arts.

As a result of intellectual snobbery by colleges, the labor force developed an educational consciousness about 1820 (Barlow, 1967). During this period, private charity schools and societies of mechanics began to provide educational supplements to apprenticeships for factory workers.

Not only did the proprietary school flourish at this time in response to the rapidly expanding consumer market of unemployed and unskilled workers, but this period also highlighted a significant advantage that these schools held over traditional educational establishments. That is, they continually demonstrated the ability to adapt to a rapidly changing environment, responding quickly and effectively to business and industrial needs which were not being adequately fulfilled by public educational institutions (Clark and Sloan, 1966).

The promotion of the general interest in vocational training was boosted in 1862 with the enactment of the Morrill Land Grant Act.

This legislation reflected government recognition of vocational education and provided funds to each state through the sale of land to establish colleges of agriculture and mechanical arts (Mitzel, 1982).

By 1900 proprietary schools had been in existence for nearly a quarter of a century and provided the principal source of job-oriented education and training in business, trade and technical occupations. Despite significant strides, Barlow (1967) expressed concern that vocational education as a whole suffered from the lack of a united program of action to boost its overall interest. Barlow stressed the need for strong financial backing as well as federal and state enacted legislation.

In response to these concerns, the Smith Hughes Act was passed in 1917. It provided federal funds, matched by state funds, to help promote vocational training in the public schools, despite the great need for expansion in all training facilities. Proprietary schools continued to grow, however, primarily because of curtailed immigration of skilled workers, increased demand for flexibility and the absence of the pedagogical disputes which were fairly common in public institutions (Clark and Sloan, 1966).

Perhaps the major period of growth in proprietary schools occurred after World War II. This expansion was spurred largely by the increased demand for the training of war veterans under the G. I. Bill and the growth and increased sophistication in electronics, engineering, medicine and other fields, a factor which spurred employment opportunities for semi-professional technicians (Nerden,

1971).

This period also gave rise to charges of widespread abuse within the proprietary school sector. As a consequence, the programs of these schools came under close scrutiny by regulatory agencies. Tempted mainly by the potential for a large pool of students eligible for federal government assistance in the form of direct grants to attend the schools of their choice, a number of new schools hastily assumed operations. The potentially lucrative investment drove some dishonest school owners and businessmen to commit a number of fraudulent acts which denied veterans from receiving the educational services for which they had paid.

Illicit acts of this nature brought considerable criticism and charges of scandal to the entire proprietary school sector. In addition, it served to reinforce the charge of traditional academicians that profit-oriented schools did not have the true interests of the student at heart. Besides tainting the credibility of the majority of the legitimate and ethical schools, these post-war scandals biased the minds of many Americans away from proprietaries as an acceptable option for education at the postsecondary level (Bond, 1974).

While skepticism of proprietary school education prevailed, the Vocational Education Act of 1963 served to strengthen postsecondary education in the public schools. Mitzel (1982) summarized as follows:

> . . . the act shifted the emphasis from occupational categories to groups of people to be served. The new purpose of this act was to maintain, extend and improve

> vocational education so that people of all ages in all communities would have equal opportunity for high-quality training and re-training that would be realistic with labor market opportunities and student needs, interests and abilities (p. 2003).

Although these amendments increased public support of postsecondary education, it was not until 1972 that proprietary schools became recognized components of postsecondary education. The Educational Amendments of 1972 highlighted the large segment of vocational postsecondary education which these schools accounted for and their significant contributions as alternative educational institutions. Trivett (1974) provided at least six reasons for increased nationwide awareness of their existence:

1. Institutions of higher education are experiencing declining enrollments due to changing birthrates and growing disenchantment with the marketability of a college degree.

2. State legislatures are requesting examination of all educational resources.

3. A White House special advisory committee recommended 'beginning work earlier' as an alternative to higher education. This focused major attention on proprietary schools which had previously been nonexistent.

4. The Educational Amendments of 1972 provided that educational grants might be given to students regardless of scholarship or institutional choice.

5. Special programs for students from disadvantaged backgrounds allowed proprietary institutions to become eligible as contractors.

6. The 1202 Commissions required states to increase access to students and embrace public and private non-profit students and embrace public and private non-profit and proprietary institutions of postsecondary education (p. 1).

This legislation was considered a landmark among proprietary

school establishments, and has now moved them into the mainstream of postsecondary education.

Origin of NATTS

Belitsky (1969) stated that a school can best serve its long range of interests by encouraging comment and even criticism from a maximum number of sources (p. 55). Seeking to improve the reputation and opportunities of its schools, a few owners formed an association among the trade and technical group. Belitsky pointed out that until 1967 these schools had no formally established means of evaluation, owing largely to the lack both of state licensing and of careful scrutiny of their instructional programs.

However, in 1967 the United States Office of Education gave formal recognition to NATTS as an agency of accreditation for trade and technical schools. From the beginning, more than 100 schools sought membership. Today, more than 900 schools offering occupational education at the postsecondary level have been accredited by the organization.

NATTS is the professional society for these schools and provides the traditional membership services, including workshops, newsletters and other information exchange activities. It also serves as the lobbying body in Washington for its members' views (Handbook of Accredited Private Trade and Technical Schools, 1984-1985).

The Accreditation Issue in Proprietary Schools

Accreditation is a method of protecting the public interest by identifying quality institutions and helping to maintain and raise institutional standards. Vocational, technical, and occupational institutions especially regard accreditation, both institutional and specialized, as having extreme importance and as a fundamental element in accountability, professionalism and credibility (Arcenaux, 1976).

Oftentimes confused with licensure, accreditation does serve as a useful complement. However, the major difference lies in the fact that licensure is mandatory and is normally granted by the state in which the organization is located. Accreditation, on the other hand, is strictly voluntary and has traditionally been conducted by private groups and professional associations without government restraint or administration (Stoodley, 1983).

Many of those familiar with the process of accreditation view it as a weakness in proprietary education. Arcenaux (1976) explained that this perception is not because of any question of its merit but because of the small number of profit-making schools that seek accreditation. Compared to the approximately 90 percent accreditation rate for non-profit postsecondary institutions (public and private), approximately 90 percent of proprietaries are not accredited. Thus, many conclude that accreditation in proprietary schools fails to establish minimum standards of quality and professionalism consistently throughout the industry.

Despite the small percentage of accredited proprietary institutions, accreditation remains the primary standard for participation in many federal education programs. Accreditation has been linked to eligibility for federal funds since 1952, when Congress made it a requirement to participate in the Veterans Readjustment Act. It has subsequently been written into every major piece of federal legislation.

For proprietary schools, the issue of accreditation is directly related to the question of contracts. Accreditation is often seen as a label of acceptability and legitimacy, and those who lack it are likely to be regarded as institutions of questionable character. Because the federal government is forbidden from involving itself in judgments about the quality of education, it has been heavily dependent upon the accrediting commissions of the major proprietary school associations in making eligibility judgments (House Committee on Government Operations, 1974).

NATTS, as the primary accrediting organization for the private trade and technical school sector, has been criticized for assuming a passive role in ensuring the quality of the schools they administer. Nevertheless, their concerns extend well beyond the area of educational quality, responding to complaints from government agencies regarding other alleged abuses, including inappropriate advertising, questionable business practices, and inequitable refund policies (House Committee on Government Operations, 1974).

Speaking before a subcommittee of the House Committee on Government Operations in 1974, William Goddard, then Executive

Director of NATTS, stated the following in defense of the organization and its aims:

> The accrediting commission of NATTS is the accrediting agency listed by the United States Office of Education as the nationally recognized accrediting agency in the trade and technical school field and is the only accrediting agency so listed by the United States Office of Education. The broad purpose of NATTS is to establish and maintain sound educational standards and ethical business practices for its member schools, which schools complement rather than compete with tax supported schools (p. 243).

According to Belitsky (1969), accreditation in NATTS entails certain benefits for its members. The following benefits were cited:

1. Favoritism under certain programs
2. Expertise from persons familiar with current changes in
3. Prestige
4. Selected student aid programs
5. A lobbying body (p. 56).

As noted previously, accreditation is seen as a weakness within the proprietary school sector in general, based on the low percentage of schools accredited. Likewise, the more traditional reasons for maintaining status as accredited institutions have been overshadowed by the issue of contracts and the profit motive. Those institutions genuinely concerned with improving their effectiveness and image through accreditation find the doubt about their true aims on the part of traditional educators especially distracting (Bond, 1974).

In order to promote the merits of accreditation and dispel negative perceptions about the aims of the organization, the association constitution of NATTS is quite clear in defining the purpose and objectives of accreditation. It states the primary purpose as being to "establish and maintain high educational

standards and ethical business practices" and its objectives as to

1. Assist good private trade and technical schools to become better schools

2. Assure the public of high quality trade and technical education offered by private schools

3. Set standards to which all private trade and technical schools can aspire (Arcenaux, 1976, p. 23).

To be eligible for accreditation in NATTS, a school must be a private commuter vocational school with definite trade, occupational, or technical education objectives. The school must have operated successfully for two years with at least one graduating class in the longest course. The NATTS accreditation criteria are outlined in the Handbook of Accredited Private Trade and Technical Schools, 1985-1986). Each school must

1. Clearly state its objectives and demonstrate overall ability to meet them,

2. Have a qualified administrative staff and faculty,

3. Have fair and proper admissions and enrollment practices in terms of educational benefits to the students,

4. Provide educationally sound and up-to-date courses and methods of instruction,

5. Demonstrate satisfactory student progress and success to include acceptance of graduates by employers,

6. Be fair and truthful in all advertising, promotional, and other representations,

7. Reflect financial business soundness of operation,

8. Provide and maintain adequate physical facilities, classrooms, and laboratories, and

9. Provide student and administrative accounting (p. 42).

Establishment of these criteria or standards represents the first step in the accreditation process. The second step involves the institution performing a self-study, or evaluating and comparing their results against established standards. The self-study is considered by experienced professionals to be the most beneficial part of the process (Stoodley, 1983). Stoodley believes that the self-study causes the individuals in the institution to inevitably see areas and methods for improvement. Conversely, he cautioned that the self-study could lose its effectiveness and original intent if the entire institution is not involved. This is very likely to be the case in many proprietary schools due to their small size and single ownership status.

The self-study process generates a self-evaluation report which is made available to the visiting team as well as the accrediting commission. This document serves as both an introduction to the school and a summary of the problems, strengths, recent actions, activities and possible steps to pursue as a result of the self-study (Robb, 1971). The third step occurs after the report is received by the agency. A site visit is conducted in which the visiting team thoroughly reviews the school operation to insure that standards are being met. Stoodley (1983) believes the formal on-site visit by a peer evaluation team complements the self-study by providing the opportunity to observe the unique characteristics of an institution that might not be covered in the self-study.

The fourth step is a thorough review process in which a final recommendation is made to the accrediting commission. Based on the

evidence, the commission accredits with stipulations, defers action, or denies accreditation. Finally, periodic reevaluation of its schools is conducted every six years by NATTS to insure consistency of standards. Failure to maintain standards results in termination of accredited status (Handbook of Accredited Private Trade and Technical Schools, 1985-1986).

Philosophy

The philosophy of the proprietary trade and technical school toward students makes it unique from public schools and has been one of its marketable strengths since early in its establishment. Katz (1973) noted that early private school masters learned to give maximum consideration to intelligence potential over educational prerequisites. Belitsky (1969) gave an example of this principle when he quoted the president of a proprietary school who said,

> We attempt to adjust a program to the student and not vice versa. We recognize their differing capabilities and therefore don't aim every student's rights to the same heights, because they could be broken for life. If a student can't become a machinist he may be a machine operator; if not a draftsman, perhaps a tracer (p. 13).

Based on this philosophy, the early schools motivated students to enter the world of work through a more practical process, relatively short term, concentrated job-oriented training (Schure, 1950). Katz (1973) commented that American industry was ripe for this approach to training. With industry's rapid expansion, it soon grew impatient with prolonged on-the-job training and saw significant productivity benefits in individuals with job entry

qualifications.

Hebert and Coyne (1980) indicated that the proprietary trade and technical schools continued to prosper because they understood students. They referred to William Goddard, then NATTS Executive Director, who said, "If this is truly a free society, a man or woman should have the opportunity to choose the level of which he or she wants to enter an occupation and to operate for that level (p. 45).

Bond (1974) emphasized that the high regard given the individual student in proprietary education is a quest for economic existence as much as it is for educational and production quality. This view was supported from an historical perspective by other researchers who noted that the history of the private schools showed that their very existence as profit-seeking institutions depended on customer satisfaction in the area of job entry training (Clark and Sloan, 1966; Belitsky, 1969 and Katz, 1973).

Management

Little has been written about management teams involved in proprietary trade and technical schools. Erickson (1972) listed the management team of proprietary schools that he visited as consisting of a president, a dean or director, and several admissions counselors. They were primarily involved in student enrollment and meeting cost and quality standards for program offerings and placement.

Katz (1973), who wrote extensively about the private school

industry in Illinois, explained that the makeup of management teams evolved from corporate necessity. Operating as both a business and an educational institution, educationally-oriented proprietors envisioned the need for expertise in both areas as essential to insure survival and success. Ultimately, as the larger schools incorporated or became subsidiaries of corporations, the title of president was dropped and replaced by the title "director" or "manager."

Katz (1973) identified four positions and titles of the management personnel in the larger proprietary schools.

1. A Director of Training or a Director of Education is responsible to the school director and his functions are related to faculty, curricula, and related areas.

2. A Director of Marketing or Sales is responsible to the school director. His primary functions include advertising, sales development, control of sales representatives, statistical analysis of advertising leads and closures (enrollments) and related matters.

3. A Director of Student Services sometimes reports to the director of education, but more often to the school director. His functions include student counselling, housing, undergraduate and graduate job placement, compilation and storage of student records, and matters related to government and veteran agencies.

4. A Chief Accountant or Controller reports to the director of the school. His functions are to prepare profit and loss statements, tax preparation, budgeting, payroll, and to generally control and supervise the financial affairs of the institution. Usually, a department directly under the supervision of the chief financial officer is directly in charge of student financial records and collection procedures (pp. 112-113).

Pederson (1979) described the management decision for the proprietary schools owner as "complex" (p. 23). Forces that have an impact on major management decisions include incorporating

technological changes into course work, competition with vocational training offered by public institutions, changes in the labor market condition, and expansion in size and operating hours.

With implications for the makeup of management teams in proprietary schools, Tolbert (1979) listed four activities of allied health schools that he considered essential to survival and success. These were: (1) student recruitment, (2) education process, for example, limited class size, frequent class starts, non-tenured faculty and sophisticated evaluation systems, (3) job placement, and (4) management (p. 21). Another school owner, when asked how his school survived, replied, "It's simple. I have three priorities, marketing, marketing, and more marketing" (Wilms, 1987, p. 14).

Operations

The proprietary school is most often characterized as a private for profit institution. Because of confusion often generated over the term "private," and the classification of these schools under various forms of control, some researchers attempted to resolve semantic differences by providing distinct classifications to these institutions (Simmons, 1975). Clark and Sloan (1966), who conducted the first comprehensive study of private schools in their work Classrooms on Main Street, chose to call them "specialty schools," viewing them as a third category of American education. Katz (1973) felt the designation "independent private school industry" best exemplified their nature and function. As a means of distinction from nonprofit institutions, he cited these common

denominators of the private school industry.

1. They are almost totally profit seeking.

2. They are all private in that they are not tax supported and subject to the government system related to public systems.

3. While they are private, they are subject to the payment of taxes on generated profits and are not privileged to other financial and procurement benefits enjoyed by totally tax-supported public or conventional private schools.

4. The majority are occupationally oriented with courses designated to prepare a student for job entry in some special phase of the world of work. Although the term vocational is often applied to these schools, the highly demanding skills, knowledge and disciplines of many trades, technical art and semi-professional careers taught by the independent private school leave little or no room for overall vocational designation.

5. The schools differ considerably in philosophical, functional, and operational aspects from the conventional school system. It is simply a profit-seeking business which, under the constitutional principles of a government based on the free enterprise system finds justification for being; and will decline or prosper in response to the demands of the marketplace (pp. vi-vii).

Since their beginning, proprietary school ownership status has changed considerably. The single ownership status which was fairly common among these schools has now evolved to where currently over 85 percent of all private profit-seeking schools are corporations. Hebert and Coyne (1976) named some of the largest and most well known corporations as participants in the business. Among them are Ryder Systems, Bell and Howell, Lockheed Aircraft, LTV Aerospace, Philco Ford, Lear Siegler, Honeywell, IBM, Litton Industries, American Express, ITT, MacMillan Publishing, CBS, RCA, Montgomery

Ward, and Control Data Corporation.

Bad management, especially in the form of misleading and dishonest practices, has also had a major influence on proprietary school operations. The Federal Trade Commission in particular is concerned about consumer abuse and has prompted oversight through both voluntary and non-voluntary sources. Regulations by government agencies prescribe certain guidelines which are oftentimes used to monitor operations of these schools. Although by no means uniform from state-to state, the following controls are imposed:

1. A license is required.
2. Proof of financial responsibility must be shown.
3. A bond must be posted.
4. The course of study must be outlined.
5. Adequate housing and equipment must be assured.
6. Administrative procedures and qualifications of teachers are prescribed.
7. Controls over advertising are imposed.
8. Regulations pertaining to contracts with students are specified.
9. Licenses may be suspended or involved if violations occur (Trivett, 1974, p. 7).

The proprietary vocational school is small in comparison to other postsecondary institutions. Alluding to the small size of the typical proprietary school, one owner said, "Take your average university president's boardroom, divide by two, and you get the size of the average proprietary school" (Hebert and Coyne, 1976, p. 51). Belitsky (1969) placed the average enrollment in small trade and technical schools at 268. Hebert and Coyne's (1976) investigation yielded comparable figures, placing the typical size at 250-300 students and fewer than a dozen teachers and administrators. They felt that the small size and private ownership generated successful

schools.

Goddard (1974) cited Belitsky (1969) in attributing the smaller size to costs involved in operating large classrooms, shops and labs, the wide geographical distribution of the schools, and training focused on single or related occupations (House Committee on Government Operations, p. 144).

Wilms (1973) identified large size as one of the complaints about public community colleges. He compared 21 community colleges to 29 proprietary schools and found the following

> Our average proprietary school offered two occupational programs, compared with an average of eleven programs for the public schools. First-time visitors at public schools often need a map to avoid getting lost in new and sprawling complexes. Proprietary schools sometimes set up shop in equally fancy headquarters over the local dime store, in refurbished factories, or in this sample had full-time enrollment ranging from fourteen to 2,300 students, but the average proprietary school enrolled 291 students. Public school enrollments ranged from 120 to a whopping 14,000-plus, with a large average school enrollment of 7,867--some 27 times larger than the average proprietary school (Hebert and Coyne, 1976, p. 52).

Students and Enrollment

Among those proprietary schools that are resident in nature, the proprietary trade and technical schools accounted for the largest student population. Belitsky (1966) estimated them close to 850,000 when he conducted his study. Simmons (1975) focused on the overall increase in students in proprietary schools. She noted that these schools, which were estimated at over one and one-half million students enrolled in 1966, had increased to approximately 3.2 million by 1974. Bond (9174) explained that the dramatic increase in

students occurred as a result of increased utilization of these schools by the federal government to train students with unique educational objectives and the efforts of accrediting associations to maximize the quality of this segment of school.

The students who attended the proprietary school were found in a number of studies to have much in common. First, they tended to be a first generation postsecondary school attender from among a family which represents the middle or upper-lower socio-economic class. Second, their employment strengths lay in the skills occupations. Third, men predominated, with the heaviest concentration in the trade and technical career field. Fourth, students attending resident schools had a median age of 20 years for day students, with evening students being considerably older. Finally, the most often cited reason for attending was to get either an entry level job, a higher paying job or find a new career field (House Committee on Government operations, 1974).

Podesta and Kincaid (1967) found that the student choosing to attend a proprietary school did so because: (1) it offered the kinds of education and training directly related to employment skills, (2) the time required for completion of the course was relatively short in comparison to community colleges, (3) new courses began at regular and frequent intervals, and (4) the proprietary school had a good reputation for placing their graduates in the kinds of jobs for which they were trained.

Podesta and Kincaid's conclusions compared favorably with those of Trivett (1974) who summarized the features which he

considered typical of the proprietary school student. Trivett indicated that these features were: (1) probably younger than 25, (2) probably selected the proprietary school because it offered a short course to a job, (3) probably well enough educated to attend other types of schools if desired, (4) probably borrowing money directly or through deferred payment in order to attend, and (5) probably would find a training-related job (pp. 30-31).

Belitsky (1969), who limited his study to students in schools associated with the NATTS, also found students with similar backgrounds, although in some cases inconsistent with the Podesta (1967) and Trivett (1974) findings.

1. High school dropouts with no occupational training,
2. High school graduates of a general education program who lack any specific preparation for employment,
3. High school graduates who fail to pass the private schools' aptitude test in algebra or even arithmetic,
4. Persons preparing for a licensable occupation,
5. College dropouts, or even college students and graduates, desiring an otherwise unavailable course, such as computer programming, and
6. Persons for whom the formal education requirement is eased because they have had several years of employment experience but are currently unemployed or finding it difficult, for physical reasons, to remain in their present occupations (p. 14).

Since much of the success of proprietary schools relied on the occupational success of their graduates, Wilms (1974) focused on this area in his comparative analysis of the effectiveness of public and proprietary schools. In detailing differences between the students of each, Wilms reported that proprietary students had fewer

educational resources and were more apt to be high school dropouts or graduates of inferior vocational programs. Graduates were more likely to be from an ethnic minority group and their verbal skills lagged behind those of their public counterpart at graduation.

A comparison of the employment of the two groups found the success rate for public and proprietary school graduates to be roughly the same after controlling for differences in their backgrounds.

The Federal Trade Commission, in its consumer abuse investigations of unethical schools, listed four categories of students which it believed represented the typical client of proprietary vocational schools. These categories were: (1) servicemen and veterans, (2) recent high school graduates and dropouts, (3) ghetto residents, and (4) the unemployed (House Committee on Government Operations, 1974).

Teachers

A common perception among traditional educators is that the average proprietary school teacher must not have been able to succeed in the public school system. Yet Belitsky (1969) found that the proprietary school teacher tended to be more like the public school teacher than different, but the ways in which he is different separated the proprietary school system from the public school system of teaching. Katz (1973) defined the most fundamental differences as these:

1. The private school instructor is seldom protected by

tenure.

2. He is rewarded directly on performance rather than on scheduled review of service based on time. Student failure means teacher failure in the proprietary school.

3. He is taught to consider his students as "clients" or perhaps "customers of training," rather than "charges" imposed upon him by a public system.

4. He is hired more on the basis of practical experience or achievement rather than on completion of academic programs.

5. He is often evaluated on the basis of his ability to 'hold' students' interest through continued motivation, based on the theory that each student's individual potential and talent is subject to be 'tapped'.

6. Often he is handicapped by lack of knowledge and training in the art and science of teaching a skill separate from trade and technical skill.

7. Often he is handicapped by lack of understanding of student disadvantages caused by exterior influences (pp. 121-122).

The Georgia State Postsecondary Study Report (1975) found significant classroom benefits as a result of these teachers spending longer hours in teaching rather than in scholarly publication and receiving more constant evaluation by students. The study also indicated the need for teachers to make use of innovative and non-traditional teaching methods to keep pace with the demands of industry. Trivett (1974) referred to a distinct instructional orientation and to unique practices regarding faculty, owing largely to the profit motive and the job-oriented provision of training.

Podesta and Kincaid (1966) focused on teachers in schools in Santa Clara County, California, and found that the typical teacher was male, between the late 40s and early 50s, and teaching on a

part-time basis. Most instructors had attended some form of postsecondary school and two-thirds had completed a college degree. He also reported that they had between one and five years of experience in the same or a related field prior to assuming teaching duties.

Another profile of teachers was developed by Johnson (1967) in her descriptive survey of teachers in schools associated with the National Association of Trade and Technical Schools. Her study revealed that the private trade and technical school teacher was typically male, between 36 and 55 years of age and was recruited directly from the world of work. The teacher had an average minimum of eight years of work experience in a specific trade or technical field.

Wolman (1972) found teachers in proprietary schools to be younger than teachers in non-proprietary schools. She attributed the prevalence of younger teachers to the high turnover rate associated with generally lower salaries and lack of a tenure system in the proprietary schools. Male teachers were predominant, according to Wolman, by a two to one margin over females. In comparison to non-proprietary school teachers regarding educational attainment, Wolman found that proprietary school teachers had obtained a significantly lower level of traditional education. Wolman emphasized that the different mission and philosophy of each type of school accounted for the differences in the level of teachers education.

Wilms' (1973) comparative study of public and proprietary schools found an almost comparable age, 39 for public school

teachers, and 40 for proprietary school teachers. The proprietary school teachers on the average had completed an Associate of Arts degree, compared to a bachelor's degree for public school teachers. Both had about three years of teaching experience.

Wilms (1973) found the largest disparities in the areas of salary and teaching load. The majority of proprietary school teachers worked 12 months a year. This compared to nine months a year for the public school teacher. Despite year-round teaching schedules, salaries for proprietary school teachers were found to be on the average only 65 percent of that of public school teachers. Although being paid less, the proprietary school teachers were required to work harder, with average weekly teaching loads being 27 hours, compared to 18 hours for public school teachers.

According to Johnson (1967), the statutes concerning teacher qualifications are not uniform from state to state. Many states were found in her study to have no regulations governing this issue. This situation has improved over the years to the extent that all of the states now regulating proprietary schools now have minimum teaching criteria similar to that of the State of Illinois, which specifies that teachers must have one of the following:

1. Four years of acceptable instructional experience in area of teaching specialty, or
2. Four years of acceptable work experience in area of teaching specialty, or
3. Any combination of a and b (Katz, 1973, p. 123).

Although the eligibility requirements above are fairly consistent from state to state, teacher certification may vary

widely. Rules and regulations dealing with the certification of proprietary school teachers for the State of Illinois are set forth by the Illinois Board of Education. Teachers in Illinois shall possess at least one of the following qualifications:

1. A valid teacher's certificate, in a relevant subject area, issued by the Office of the Superintendent of Public Instruction or the Chicago Board of Education; or

2. Graduation from an approved four-year college or university with sufficient course content in the subject the applicant intends to teach; or

3. Appropriate experience in the field of instruction as determined by the Superintendent of Public Instruction; or

4. No less than 4,000 clock hours (the equivalent of two years) of successful training and experience in the specific subject or skill area of the instructional program in which the applicant intends to teach (Pederson, 1979, p. 18).

Curricula

Podesta and Kincaid (1966) found a variety of program offerings in proprietary schools encompassing industry, skilled trade, semi-professional, personal service and recreational activity. Clark and Sloan (1966) described the nature of skilled trades in the United States and estimated that 10,000 of these jobs existed.

Belitsky (1969) aptly described these schools as having "limited objectives and unlimited opportunities." According to Belitsky, the wide variety of courses offered in proprietary schools point to one reason why many trade and technical schools are combined. He listed auto mechanics, data processing, drafting, electronics, allied

health, and radio-television as six major categories.

One indication of how the number of programs has grown is the 1985-1986 NATTS Handbook of Accredited Private Trade and Technical Schools, which reflected more than 98 careers consisting of more than 230 different courses.

The large variety of courses reflected the flexibility and adaptability of these schools in responding to training needs of many industries and professions (Wilms, 1973). The schools maintained close contact with the labor market and voluntarily modify course content to reflect changes in facilities, concepts and technology without excessive delay (Katz, 1973). Pederson (1979) listed financial needs, manpower surveys, high student interest, job availability and needs of industry as reasons why schools in Illinois added new programs. Programs were terminated due to lack of job availability, low student interest, high operating costs, and changes in ownership.

Instruction

The instruction tends to be highly specialized because of the labor market orientation. This orientation is reinforced on a day-to-day basis because proprietary school teachers favor academic terminology with an occupational association (Katz, 1973; Belitsky, 1969; Herbert and Coyne, 1976). As a result, "enrollees" are called "trainees" or "students" rather than pupils, "course" is oftentimes used in place of subject, texts are referred to as "manuals," and training is frequently substituted by "work."

Johnson's (1967) study indicated that teachers in schools associated with NATTS were active in curriculum and test development and used a variety of visual aids. The discussion and lecture were the most popular classroom methods, with demonstration or experiments and on-the-job laboratory methods used extensively for shop work.

Belitsky (1969) specified the crucial need for teachers within proprietary vocational schools to present the course well and train the students well because the graduate is presumed to refer a large percentage of new students to the school. Methods of instruction used to motivate students included extensive use of the short sequential unit, immediate feedback, flexibility in course offerings based on student needs, interests and abilities, and a high regard for the use of student time as reflected through intensive course offerings that meet four to six hours per day.

Trivett (1974) found that actual methods of instruction in proprietary schools were comparable to those of other educational institutions. Individualized instruction was a popular method of instruction within the schools. Other commonly used methods included supervised study periods, supervised work study, laboratory periods, audiovisual techniques, and simulation.

Teacher Competencies in Trade and Technical Education

Determination of the competencies required for vocational and technical teachers is one of the most critical problems of vocational teacher educators. In the field of proprietary trade and technical

education, little research has been conducted in this area. In contrast, the research in public vocational-technical education has been quite extensive. Although the previous section of this chapter focused on the uniqueness of proprietary schools, proprietary trade and technical teacher education and public vocational-technical teacher education share similar competency requirements.

Identifying the competencies that make a successful teacher and upgrading pre-service and in-service teacher programs to meet those standards in a rapidly changing society was an issue which Mager and Beach (1940) found filled with difficulty. Walsh (1961) stressed the need to identify and develop teacher competencies when he attributed the acquired skills, knowledge, attitudes and appreciations of students mainly to the influence of their teachers. Popovich (1975) described the identification and validation of teacher competencies as a fundamental step in development of relevant teacher education programs which will satisfy the need for accountability, teacher certification reform, and teacher preparation in field-oriented programs of teacher education.

Adamsky and Cottrell (1979) called for more research in the area of teacher competence. They described the competent teacher as having certain desirable characteristics and behaviors which influence desired student behavior. Accordingly, this description forms one basis for research in teaching. Adamsky and Cottrell pointed to the difficulty involved in the research area, primarily because what constitutes an effective teacher has not been defined.

They concluded that this void has hampered the design of a successful teacher education system.

The Competent Teacher

Miller (1967), in a discussion of the role of the technical teacher, stated, "It is generally agreed that there are certain personality characteristics, cognitive skills and behaviors that are essential to good teaching performance" (p. 5). A review of the literature revealed a number of models which attempt to describe the competent or effective teacher.

Miller (1967) classified these desired competencies into the areas of understanding of and commitment to technical education objectives, understanding students, effective teaching and understanding research. Effective teaching was further classified into three essential elements:

a) knowledge of subject matter and related fields,

b) appropriate industrial experience specifically related to the teaching specialty, and

c) mastery of teaching methods.

Penner (1972) cited Prosser's (1966) model in his study of the in-service needs of adult vocational-technical education programs. These characteristics were mastery of skill and knowledge, ability to teach, ability to plan, ability to handle people, ability to analyze a trade for instructional purposes, and interest in and sympathy to students or workers.

Borg (1967) identified curriculum content, professional

knowledge, and classroom skills as the components of competency. Bush (1971) developed a model for in-service education in which he classified competencies into the areas of expository exhortations, demonstration teaching, supervised trials, and analysis of performance.

Ward (1976) defined teacher competency as the measurable area of results. He divided competency into at least five definable areas.

1. Knowledge - Cognitive understanding by teachers of the technical knowledge of their teaching field and of the science of learning and the art of teaching.

2. Skill - The vehicle through which knowledge is applied to one's work.

3. Values - The measurable aspects of behavior.

4. Organizational climate - Those organizational constraints which effect the ability of role incumbents to fulfill their job expectations.

5. Experience - Participation in events. This component serves as a linchpin for all previous components (pp. 251-252).

Clark (1971) attempted to identify desirable characteristics of vocational-technical instructors for metropolitan areas. Although similar in many respects to the above characteristics, the findings also emphasized certain human relations qualities which teachers should possess. The following attributes were considered to be of most importance.

1. Technical competence in the vocational area instructed and knowledge of related career fields.
2. The ability to teach.
3. Good mental and physical health.
4. Positive attitudes, faith, compassion, sensitivity, and the capacity to love and be loved.
5. Knowledge of the larger society . . . and of the goals of their social institutions in the state.

6. Knowledge of and concern for deprived inner city environments, where it is not easy to teach pp. 29-30).

These qualities have implications for the philosophy toward students advocated by proprietary school personnel.

Evans and Guymon (1978) reviewed the literature to date and compiled a list of competencies most frequently mentioned as indicators of teacher effectiveness. These competencies were preparation, knowledge of subject matter field, appropriateness of workload, evaluation of grading, clarity of presentation, motivation, interest in student, enthusiasm, and interpersonal relationships.

Tracey (1981) focused on knowledge and skill as the fundamental components of competency. He defined teacher competency in terms of knowledge of the enterprise, job knowledge, job skills, professional knowledge, professional skills, and communication skills.

Kay (1975) described task analysis as one basic approach to defining the competent teacher. Task analysis identifies what teachers are doing and what they should be doing, and then derives competency statements.

Review of Related Literature and Research

Task analysis has evolved as the primary tool used by researchers to identify and validate teacher competencies (Adamsky and Cottrell, 1979). Walsh (1961) used task analysis to identify and evaluate the knowledge, skills, and abilities necessary for teachers of trade and industrial subjects. He identified 107 teaching competencies which successful teachers considered either most

important or very important. The three most important competencies were:

a) The ability to develop student attitudes toward safe practices and safety consciousness in job performance

b) The ability to stimulate and maintain interest throughout the instructional process, and

c) The ability to develop appreciation of good workmanship (p. 6).

The concept of the "common core" was explored in a study of secondary-level vocational teachers conducted by Courtney (1967). Factor analysis was made of responses to 40 competencies in order to determine common training requirements in the vocational areas of agriculture, home economics, trade and industry, distributive education, and business education. The study concluded that some commonalities within the five disciplines present the opportunity for a common core of training experiences across the vocational education spectrum.

To determine the in-service needs of trade and industrial and technical teachers at 26 institutions in North Carolina, Chambliss (1967) developed a questionnaire composed of 60 rudimentary needs. Teachers and administrators responded to the degree of improvement needed for each rudiment. One of the needs found to be most common between both groups was instruction in trade and technical education. One conclusion from this study which has implications for proprietary school teacher education was that group weaknesses tended to be pedagogic while group strengths tended to be technical.

Holmen (1970) surveyed trade and technical teachers and

supervisors of postsecondary schools in Iowa to determine their major professional problems. Topping the list of major problems were preparing tests, selecting texts, references, and related reading material; allocating time to each unit; and planning and presenting related material. Inadequate time and inadequate educational preparation were given as the main causes of problem areas.

Perhaps the most ambitious study to identify teacher competencies was conducted by Cottrell (1971) at the Ohio State University Center for Vocational Education. Cottrell cited shortages of adequately trained teacher educators, demands for highly qualified vocational and technical teachers, the paucity of in-service education programs for teachers and leadership personnel and program duplication as examples of some of the problems and concerns which stimulated this project.

The project, Model Curricula for Vocational and Technical Teacher Education, was designed to develop, implement and test curricula for the preparation and in-service education of vocational and technical teachers in all occupational areas. Utilizing the task analysis approach to analyze seven vocational disciplines, Cottrell identified 384 performance elements associated with mastery teaching in vocational education. These competencies were relevant to both secondary and postsecondary education. A major finding was that experienced teachers identified competencies which were common to all vocational education areas, while beginning teachers indicated skills which were unique to each area.

Cottrell's findings prompted other studies developing new

competency statements based on vocational service areas. Perkins (1975) conducted a study to determine the professional competencies needed by teachers in the field of trade and industrial education as perceived by successful trade and industrial teachers, administrators, supervisors and teacher educators. Of the 164 competencies identified, laboratory use and maintenance, development of teaching skills, development of positive attitudes toward students, curriculum development skills and development of certain administrative skills rated highest among important in-service needs.

The New York Bureau of Occupational Education Research (1978) provided a perspective on identified in-service teacher competencies based on the perceptions of teacher supervisors. The purpose of the study was to assess the impact of a 1972 change in New York vocational education teacher requirements which allowed individuals with minimal work experience to become certified to teach. An analysis was made of personal and professional characteristics of both traditionally and nontraditionally prepared teachers in agriculture, trade and industrial and technical education.

Based on supervisor responses to questions about nontraditionally prepared teachers, the study indicated need in the following areas:

1. Improvement in classroom management techniques.
2. Greater need to work with students in developing goals.
3. The need to help students improve work habits.
4. Necessity of planning for individual differences.
5. The need to provide for specialized requirements of disadvantaged students.
6. Increased job placement efforts (p. 12).

Spewock's (1984) study attempted to determine if secondary vocational teachers in the trade and industrial area required additional competencies to teach adult students enrolled in vocational education courses. Participating teachers assessed their abilities in the performance competency areas of "promote the adult vocational program", "provide for learner needs", "plan for instruction", "use appropriate instructional techniques", "manage the adult learning environment", and "provide a customized curriculum".

The findings, which indicated the need for human relations skills, were closely identified with proprietary school philosophy about desirable teacher characteristics related to training students. The needs rated highest by teachers were to help develop promotional materials, develop a philosophy for working with adults, participate in the student selection process, demonstrate acceptance of the adult as a learner, help the student adjust to the role of student, and to refer the student to helping agencies.

Anderson and Barnes (1979) conducted the only known study which focused on assessment of the in-service competency needs of proprietary school teachers. The needs assessment questionnaire contained 38 competencies and was administered to administrators and teachers in Illinois resident proprietary institutions. Responses were grouped into the four "school type" categories of business, cosmetology, vocational-technical, and other. Although the data did not reveal a great need in any one area among all school respondents, differences in competency needs did emerge when the data were analyzed by school type.

Cosmetology teachers indicated the need to "develop student performance objectives" and "develop program goals and objectives" as their highest priority. Both vocational-technical teachers and business teachers indicated a high priority of need in the areas of "devise self-evaluation techniques for use by students" and "provide a lesson designed to meet the needs of the slower and the more capable students in a class at the same time." Instructors in the "other" category indicated the need to select teaching techniques for a lesson" as their highest priority for development.

In 1985, NATTS conducted an informal instructor needs survey of teachers in its member schools. One of the five open-ended questions asked teachers to "list and describe those skills and/or knowledge that would enhance your teaching performance . . . ." Approximately 1,200 surveys were mailed out, with 277 returns. A summary of available findings focused on the performance needs of how to motivate students, how to test methodology, how to use audiovisual equipment, how to use computer assisted education, how to discipline, and how to develop curriculum.

This survey was undertaken as part of the organization's continuing education program. Another program highly recommended by NATTS for the purpose of both teacher education and staff development is the Performance Based Teacher Education/Competency Based Staff Development (PBTE/CGSD) program. As defined by NATTS, it is a teacher and staff development system consisting of identified and validated competencies requiring performance of the actual skill to specified criteria.

Utilizing this program, NATTS has developed an instructor training program which it recommends to its members. The program consists of 21 PBTE modules structured as follows:

Category A - Program Planning Development and Evaluation
- A-1 Develop a course of study

Category B - Instructional Planning
- B-2 Develop student performance objectives
- B-3 Develop a unit of instruction
- B-4 Develop a lesson plan

Category C - Instructional Execution
- C-10 Introduce a lesson
- C-11 Summarize a lesson
- C-12 Employ oral questioning techniques
- C-13 Employ reinforcement techniques
- C-14 Provide instruction for slower and more capable learners
- C-15 Present an illustrated talk
- C-16 Demonstrate a concept or principle

Category D - Instructional Evaluation
- D-1 Establish student performance criteria
- D-2 Assess student performance: knowledge
- D-4 Assess student performance: skills
- D-5 Determine student grades
- D-6 Evaluate your instructional effectiveness

Category E - Instructional Management
- E-5 Provide for student safety
- E-6 Provide for first aid needs of students

(American Association for Vocational Instructional Materials, Undated, p. 4).

Review of In-service Education

Many proprietary school teachers entered the field of teaching lacking the traditional teacher preparation programs. In-service education has been an integral part of the teacher preparation process for more than 100 years. In the trade and technical field, it fulfills a significant need by helping to correct deficiencies in

the areas of teaching methods and subject matter expertise. Critical aspects of the process must be identified and addressed if in-service programs are to be effective within various proprietary schools.

Definition

Throughout the field of education, in-service education is used interchangeably with other widely used terms. Among those are staff development, faculty development, professional development, in-service training, continuing education, professional growth, and on-the-job training.

Early in its development, Barr, Burton, and Brueckner (1947) cautioned about the use of "in-service training" synonymously with "in-service education" because the former suggested the distribution of prearranged procedures without the input of the recipients. They referred to in-service education as opportunities for growth and development of teacher judgment. Marks, King-Stoops and Stoops (1971) defined in-service education as including "all activities of school personnel which contribute to their continued professional growth and competence" (p. 219).

Francis (1975) referred to in-service education as a process implemented by the institution which had as its aim the altering of teacher attitudes, skills and behavior. This process was called faculty development. Another view was expressed by Crosby, Goddu and Massey (1977), who distinguished in-service education from teacher preparation (preservice) and staff development. In their opinion,

> It is neither decision making by the university nor by

> the school administrator, but rather mutual decision making by many parties, including representatives of participants. Successful in-service programs require commitment by a school system or resources--time, personnel, space, and funds--to help personnel learn to do their jobs better (p. 24).

Harris (1980) reviewed the variety of terms and definitions currently in use and found the possible similarities and variations in meaning bewildering. Seeking to clarify the use of terms, Harris defined in-service education as any planned program of learning opportunities afforded to staff members for the purposes of improving the performance of the individual in already assigned positions (p. 21).

Hass (1957) provided a broadly conceived definition of in-service education. He defined it as a process which includes all activities engaged in by the professional personnel during their service and designed to contribute to their professional improvement (p. 13). From a practical standpoint, his definition refers to actively employed teachers and encompasses all outlets of in-service activities as long as they contribute to professional improvement.

The Need for In-service Education

The overall need for in-service education is based historically on the need for the educational establishment to insure that teachers stay technologically updated in both subject matter and teaching methods in a rapidly changing, complex society.

Hass (1957) pointed to new developments in society which demonstrated the need for continuous in-service education. Among

these were the acquisition of new knowledge about human growth and learning and teaching methods; the development of skill in providing for the needs of individual learners; and the acquisition of the techniques and skills necessary for working with adults.

Hass (1957) translated this need into three fundamental purposes for in-service education. First, he believed the major reason was to promote ongoing professional development of the entire staff in the areas of subject matter expertise and theory and practice of teaching. Second, in-service education provided a valuable source of assistance to teachers who either were new to a school, had new responsibilities, or engaged in a new specialty within the profession. Third, in-service education served to eliminate deficiencies in the background preparation of the teaching staff.

Hill (1971) based the need for in-service education on three assumptions about the role of the vocational educator.

> 1. It is imperative that vocational educators continue to improve their performance and keep up-to-date in the discipline . . . the occupational field . . . and new educational processes and methods . . . .
>
> 2. Increased insight into individual differences among learners and the ability to accept and cope with learning difficulties is an important facet of in-service education for vocational educators.
>
> 3. An important function of in-service education is to help each vocational educator develop and maintain a zest for his or her role as a vocational educator (pp. 77-78).

Tuckman (1966) implied a need for continuous in-service education for vocational educators when he wrote,

> Vocational teachers must not only be adept in their

> field, but must have a thorough grasp of methodology. This requirement for theory and practice, intellectual exposure and practical experience, knowing "how to teach" as well as "what to teach," having breadth and depth in industrial work experience and the same in technical courses as part of industrial teacher preparation, has been emphasized and reemphasized (p. 37).

Rubin (1978) described teaching as an unusually complex undertaking, involving a wide range of skills, ideas, knowledge and emotions. He cautioned that obsolescence commences immediately after the teacher completes formal training. According to Rubin, the trend towards an overabundance of teachers in a changing job market would create a declining need for preservice training. Therefore, the greatest hope for improving the quality of instruction might not have been in the training of new individuals as teachers, but in the continuous upgrade of the teachers already at work.

Frantz's (1984) observations support earlier forecasts by Rubin (1978). He found a dramatic drop in the number of young people entering and graduating from teacher education programs in the previous 10 years. He attributed the decline to a lack of interest, but as a consequence, saw expanding opportunities for teachers in community colleges, skill development centers and proprietary schools.

Harris and Bessent (1969) suggested four reasons why in-service education continued to be important.

1. Preservice preparation of professional staff members is rarely ideal and may be primarily an introduction to professional preparation rather than professional preparation as such.

2. Social and educational changes makes current professional practices obsolete or relatively

> ineffective in a very short period of time. This applies to methods and techniques, tools and substantive knowledge itself.
>
> 3. Coordination and articulation of instructional practices require changes in people.
>
> 4. Morale can be stimulated and maintained through in-service education, and is a contribution to instruction in itself . . . (p. 4).

Proprietary schools, the most recent arrivals on the educational forefront, have not received the same degree of assistance as public schools in the area of training new teachers. Teaching experience is often viewed as less important in some proprietary schools when consideration is being given to the hiring of new individuals to teach. Occupational experience and the interview impression tend to be of much more importance (Pederson, 1979).

Typically, the proprietary school teacher has attained a significantly lower level of education than his public counterpart (Wolman, 1972). This lack of pedagogical training tends to handicap the teacher, although he is critically evaluated on a continual basis by the school and is under pressure to provide a credible teaching performance because of lack of tenure (Katz, 1973).

NATTS, concerned about teacher quality and school accountability, has taken an aggressive role at the national level in implementing and encouraging in-service education through its continuing education program. The ultimate goal is a collaborative effort of both administrators and teachers at all levels of education in the proprietary school sector.

The Responsibility for In-service Education

In-service education is imperative for both teachers and administrators in a rapidly changing, complex environment of systems technology, accountability, needs assessment . . . . (Harris and Bessent, 1969 p. 591). In the field of vocational education, few educators debate the need for in-service education. However, the question of who is ultimately responsible for in-service education has not been clearly answered.

Many contend that responsibility for in-service education rests with each individual teacher. A basic assumption in vocational education, according to Hill (1971), was that the extent to which in-service education would yield improvements in the field was dependent upon the degree to which individuals accepted this responsibility. Brandon (1960) also emphasized the need for teacher involvement when she wrote, "There is no blueprint for in-service organization. Probably the most satisfying in-service program is one planned on the expressed needs of individual teachers" (p. 243).

A Florida State Department of Education (1971) module on individualized in-service teacher education presented a similar view, indicating that effective in-service would only occur when the teacher was ready to learn and the educational opportunities and resources were readily at hand.

A supporting view was expressed by Lefforge (1971), who proposed that colleges would receive the greatest return on in-service training when it was based on student learning outcomes. Therefore,

the teacher was responsible for seeking, designing and evaluating these outcomes. Lefforge called this a reversal of usual responsibilities, but felt that the teacher's involvement in every aspect of in-service training was the key to maximizing capability, responsibility and accountability.

According to Lefforge (1971), a teacher support mechanism would need to be in place in order for the teacher to successfully carry out these responsibilities. In other words, administrators, supervisors and vocational educators would have to share the full burden of responsibility for unsuccessful outcomes. Stoops, Johnson and Rafferty (1975) also believed that the individual was responsible for seeking self-improvement, yet placed the burden on the school to provide teachers with ample opportunities to pursue these endeavors.

This concept of shared responsibility has been a basic principle of in-service education for many years. Knoll (1968) strongly supported this principle when he wrote,

> An in-service training program should help teachers to stay current in their particular field and should help the teacher to communicate effectively with his students. It is the opinion of this writer that the responsibility of keeping abreast of modern developments and communications techniques should be apportioned between the individual teacher and his administrator in the educational system. Each teacher has a responsibility to use his initiative to upgrade his teaching effectiveness and ability, taking advantage of opportunities which are presented. It is the responsibility of the administrators to provide training opportunities for the teachers. Effective in-service training, then would seem to be a balancing of these two factors (p. 2).

Pucel (1979) called for a strategy which placed ultimate responsibility for in-service education at the individual level and

charged administrators, supervisors and vocational educators at all educational levels with the role of facilitator. Marks et al. (1971) believed in-service education was most effective when the initiation and planning was a collaborative effort. Supporting views were expressed by Harris and Bessent (1969), Lutz (1976), Goddu et al. (1977) and Rubin (1971).

The Needs Assessment Process

In-service education programs should be based upon competent needs assessment by all individuals involved in the educational process (Stoops, Russell, and Rafferty, 1975). A needs assessment was considered to be the first step in the in-service education planning process and should have the support and commitment of top administrators (Davis, 1980).

The needs assessment process can be conceptualized in five phases:

1. Initiation--The Preassessment Planning Process
2. Data Collection and Analysis
3. Data Interpretation--Findings Transmittal
4. Implementation--Dissemination
5. Evaluation--Was It Worth Doing

(United Way Institute, 1982, p. 29).

The first and most critical question to answer during the initiation phase is whether there is actually a "need" for a needs assessment. According to Kuh (1980), it is important to ascertain for whom a needs assessment is necessary, wanted or demanded. There must be mutual collaboration of effort at this point among the proposed recipients of the program, the administrators and the

program planners (Goddu et al., 1977).

Various methods or techniques may be used to conduct needs assessment. As there is no one best approach for all situations, selection criteria should be established to facilitate the task of selecting the most appropriate assessment technique for the situation. Among the most critical factors to consider are:

1. What resources are required and available?
2. What are the expected outcomes?
3. How healthy is the environment in light of strategies being considered?
4. Who is to be involved in the data collection?
5. What kinds of needs are to be determined?
6. What standards have been set for reliability and validity?
7. What time constraints have been established? (Davis, 1980; United Way Institute, 1982; Steadham and Clay, 1985).

When examining the types of needs to be assessed, it should be remembered that there are perceived needs as well as real needs, and that often the two overlap (Mann, 1980). Anderson and Barnes (1979) and Steadham and Clay (1985) provided similar guidance, using the need categories of "perceived/unperceived" and "learning/nonlearning" respectively. Goddu et al. (1977) stated that in developing an assessment instrument, it is imperative to consider the points, "What are all the kinds/categories/types of participants' needs?", and "What is it possible to provide in order to meet these needs within the constraints of the in-service program?"

Considering the need for in-service education programs that will help teachers stay current in their field in the areas of both subject matter expertise and teaching methods, needs should be interpreted in terms of product objectives that include the

cognitive, affective, and psychomotor domains (Yuskiewicz, 1980).

The following are some of the procedures that can be used to assess needs:

- Interviews
- Tests
- Questionnaires
- Class/Shop Observations
- Records and Reports
- Group Discussions
- Staff Conferences
- Key Consultations
- Videotaping
- Audiotaping

Because each procedure has advantages and disadvantages, the reliance upon any one method as a "panacea" is not likely to be efficient. When conducting needs assessments, Davis (1980) suggests that the information be gathered from more than one source and that several different data collection techniques be utilized for a more comprehensive determination of needs.

When analyzing data collected from needs assessment instruments, Steadham and Clay (1985) stressed that the major focus should be on differentiating between categories of needs. By looking closely at all categories, issues or problems may surface which require further investigation.

Report formats can be either qualitative, quantitative or a combination of both, depending on the type or types of assessment

technique(s) used. Questionnaires and tests are typically reported in quantitative format, while interviews and observations are good examples of the use of the qualitative format.

When answering the question of who should receive the report, Davis (1980) recommended making it available to the participants and to other audiences who may have an interest in it.

Continuous evaluation of the needs assessment process is required if in-service education programs are to achieve maximum effectiveness. Davis (1980) stressed that even if needs emerged during the in-service program implementation phase, the program should be able to integrate these needs.

Summary

The research and literature related to the study of proprietary schools revealed that this sector of postsecondary education has played a long and important role in the training of skilled workers in American society. Owing largely to the profit motive and a history tainted by widespread charges of unethical business practices, their contributions were largely unrecognized until 1972.

Accreditation is one measure of credibility that has enhanced the standing of proprietary schools associated with NATTS. An integral part of the accreditation process is the ongoing evaluation and upgrade of teachers to insure an effective educational system exists in each school. The literature indicated that the effective or competent teacher had not been clearly defined in the area of vocational-technical education. Defining the competent teacher

involves the process of identifying and validating those competencies considered to be of most importance to effective teaching in the field. Once determined, they can be implemented as part of pre-service and in-service education programs.

Many proprietary school teachers entered the field of trade and technical education lacking the traditional teacher preparation programs. Therefore, the need for a sound program of in-service education was of utmost importance. Planning of such programs was best accomplished as a collaborative effort between administrators and teachers. A needs assessment was considered to be the first step in the in-service education planning process.

CHAPTER III

METHODS AND PROCEDURES

Introduction

The purpose of this study was to determine the in-service education needs of full-time proprietary trade and technical school teachers in schools accredited by NATTS as perceived by experienced teachers and school administrators. A review of the literature revealed that although research in the area of in-service needs assessment of vocational-technical education teachers in general was quite extensive, there was a limited amount of research in this area relevant to the proprietary school teacher. The review of literature also indicated that research in the area of teacher competency needs directly related to schools associated with NATTS was limited, and that no comprehensive studies on a nationwide basis had been attempted.

The following research questions were developed for this study.

1. What is the nature of the teacher sample, based on factors of sex, age, occupation taught, years of work experience, years of teaching experience, method of recruitment for teaching, highest educational level completed, and occupational training background?

2. What are the teacher competencies identified by teachers in

which either more development is needed or more development is essential?

3. What order of importance do teachers place on the required competencies needed for teaching students in the proprietary trade and technical schools?

4. What are the competencies, other than the requirements, which teachers identify as important to develop in in-service education programs?

5. What are the teacher competencies identified by administrators in which either more development is needed or more development is essential?

6. What order of importance do administrators place on the required competencies needed by their teachers in order to teach students in the proprietary trade and technical schools?

7. What are the competencies, other than the requirements, which administrators identify as important for their teachers to develop in in-service education programs?

8. What are the differences in teacher and administrator responses to the degree of importance placed on the 38 competencies needed to teach students in the proprietary trade and technical schools?

Instrument Development and Design

The primary data collection instrument used in this study was the mail questionnaire (Appendix A). The questionnaire consisted of two parts. Part I was designed to identify in-service competency

needs of full-time teachers as perceived by the teachers and by their administrators.

Research literature directly related to the identification of in-service competency needs of proprietary trade and technical school teachers is limited. This survey instrument was adapted from proprietary school research conducted in Illinois by Anderson and Barnes (1979). Anderson and Barnes had developed a Teacher Self-Assessment Survey Instrument which they used to conduct a needs assessment of proprietary school teachers in the State of Illinois. Their survey was validated by a panel of vocational curriculum specialists and field tested at two proprietary schools in Illinois. Reliability of the instrument was .9695.

Their list of competencies was derived from the Model Curricula Program developed by Cottrell (1971) at the Ohio State University Center for Vocational Education. The original 384 performance elements were scaled down and simplified by Anderson and Barnes into 38 competencies in which proprietary school teachers had a special interest.

Respondents to the current study were grouped into two categories, teachers and administrators. Teachers were asked to assess their own in-service education needs in areas represented by competency statements. Administrators were asked to assess the in-service education needs of their teachers utilizing the same competency statements. Each survey participant was asked to identify competencies, other than those included among the 38 competency statements on the questionnaire, which they felt were

important for additional development by teachers. Responses to the 38 competency statements ranged from zero to five as follows: 0 represented "not applicable", 1 represented "not sure or undecided", 2 represented "have adequate skills", 3 represented "little development is needed", 4 represented "more development is needed", and 5 represented "more development is essential".

Performance competency statements covered the topics of instructional planning, instructional delivery, instructional evaluation, instructional management, guidance and counseling, school-community relations, and student organizations.

Part II of the survey instrument was developed by reviewing the literature relevant to the background of the proprietary school teacher. Studies by Podesta and Kincaid (1966), Johnson (1967), Wolman (1972), Wilms (1973), Pederson (1979), and Anderson and Barnes (1979) proved particularly helpful in the structuring of questions in this part of the survey in order to yield the data required to meet the objectives of this study.

The revised instrument was submitted to a panel of experts composed of three education specialists from the Oklahoma Department of Vocational-Technical Education, two educational administrators from schools accredited by NATTS, and the NATTS Director of Professional Development. Members of the panel were asked to respond to the overall suitability of the questionnaire and to identify any additions, deletions and/or suggestions for general refinement of the instrument. The instrument was also reviewed independently by each member of the investigator's dissertation committee. Suggestions for

improvement were incorporated into the instrument. The list of panel members is located in Appendix B.

Pilot Study

A representative sampling of teachers similar to the respondent group was sent a copy of the questionnaire. Eight schools were randomly selected from among those schools not selected as part of the survey sample. A total of 32 questionnaires were mailed, eight administrator questionnaires and 24 teacher questionnaires. Twenty questionnaires were returned. From the suggestions, the questionnaire was revised into its final form.

Population Used for the Study

The population used for this study consisted of full-time teachers and their administrators of schools accredited by the National Association of Trade and Technical Schools. An attempt was made to contact the administrators of the 978 schools listed in the Handbook of Accredited Private Trade and Technical Schools (1985-1986) by mail on December 27, 1987. The purpose was to inform each of the planned survey, ascertain number of full-time teachers, and request the schools participation. Table 1 summarizes the responses to this request.

Sample Selection and Size

The final school population total was 886, based on 400 schools which responded to the survey participation request, and 486 schools

TABLE 1

ADMINISTRATORS' RESPONSES TO REQUESTED PARTICIPATION IN PLANNED IN-SERVICE EDUCATION NEEDS ASSESSMENT

Questionnaires	Number	% of Total
Returned--Completed	400	40.90
Returned--Not Completed	40	4.09
Returned--Undeliverable	47	4.89
Returned--No longer affiliated with NATTS	5	.51
Failed to Return	486	49.69
Total	978	100

which did not respond for unknown reasons. The schools were grouped into two categories, "respondents" and "non-respondents". Within each category the schools were identified by type of occupational program specialty. To simplify selection, the schools were stratified into 16 categories by school type. These school types were art schools, automotive/diesel schools, aviation schools, barber/hairstyling schools, broadcasting schools, computer schools, computer-electronics schools, drafting schools, electronics schools, fashion schools, health occupations schools, multiple program schools, other schools, travel schools, truck driving schools, and welding schools. For those schools with more than one specialty, where one could not be identified as predominant over the other, a "multiple occupational program" designation was established. In addition, an "other" designation was established for those schools with highly unique or one-of-a-kind programs. A stratified random sample of schools from both categories was then taken using a table of random numbers.

The guidelines of Zemke and Kramlinger (1982) were followed in determining sample size. Based on a 95 percent confidence level, a sample of 196 of the schools in the response category, and 213 of the 486 schools in the non-response category, represents an appropriate sample size. Total number of schools selected was 409.

Within each school selected, the administrator was asked to complete a questionnaire which contained only teacher competency statements. This equated to 409 administrator questionnaires being mailed. Teacher participation was limited to one teacher in each

occupational program specialty at each school Selection of teachers to complete the questionnaire was determined by the administrator based on the criterion of the teacher having the most teaching experience in years, within each occupational program specialty. Total teacher questionnaires were therefore 1050.

Administration of the Questionnaire

Each school selected for the study received a packet containing the following:

1. A cover letter from the investigator of the study describing the study and requesting their support.

2. A questionnaire for each teacher and the administrator at each school who is responsible for the school's in-service education program.

3. An envelope for each participant so that responses could be sealed after completion for confidentiality.

4. A self-addressed, stamped manila envelope for return of all completed questionnaires.

Each school that had only one occupational program specialty received one questionnaire for the teacher with the most teaching experience, and one administrator questionnaire. The administrators were asked to complete the questionnaire by assessing the collective in-service education needs of all the school's teachers, not their own personal development needs. For those schools with more than one occupational program specialty, each questionnaire was labeled by occupational specialty. Administrators were asked to distribute the

questionnaires and collect them for return.

Each school which failed to respond to the first mailing within 21 days received a postcard reminding them to return the questionnaires as soon as possible. The follow-up was conducted 28 days after the first mailing. Due to a low response rate to the first mailing, the follow-up was conducted using a different strategy from that originally proposed. The major change was to provide a self-addressed stamped envelope to each participant so that questionnaires could be returned directly to the investigator. Therefore, in the second mailing, each non-respondent school received the following:

1. A revised cover letter.
2. A questionnaire for each teacher and the administrator.
3. A self-addressed, stamped envelope for each participant.

Analysis of Data

Statistical treatment of the data was carried out through the use of the Statistical Package for the Social Sciences (SPSS) computer program.

The data analysis for this study consisted of tabulating and tabling the data by percentages and frequency of response for each item contained in Part II of the questionnaire, and the determination of mean scores, percentages and frequency of response for all items listed in Part I. This analysis made it possible to describe the sample and its subgroups in terms of the responses from the data collection instrument.

An independent t-test was used to determine if significant differences existed between administrator and teacher responses to the 38 competency statements. A probability level of 0.05 was used in all tests for significance.

Due to the small N sizes in many school categories, responses were condensed into four school categories as follows: (1) trade and technical, (2) business, (3) health occupations, and (4) other. Those schools categorized under "other" were acting, barber/ hairstyling, cosmetology, dog grooming, driving, electrolysis, and guitar construction.

For each competency, teachers and administrators were asked to respond to one of six categories as follows:

5 more development essential

4 more development needed

3 little development needed

2 have adequate skills

1 not sure or undecided

0 not applicable

To permit statistical treatment of the data, numerical values were assigned to the top four categories which represented absolute descriptors of the range of considered need within this study. This four point rating scale permitted the investigator to obtain the mean

responses according to the following pattern:

Category	Category Identifier	Value	Range for Mean Response
More Development Essential	E	5	4.50 - 5.00
More Development Needed	N	4	3.50 - 4.49
Little Development Needed	L	3	2.50 - 3.49
Have Adequate Skills	A	2	2.00 - 2.49

It was determined that a high score was a positive indicator of the need for more development. Based on the scale above, a value of 4 or above was considered significant. Since the true limits for the number 4 are 3.5 to 4.5, the level of 3.5 was established as the lower limit of significance. Categories 0 and 1 were not rated because "not sure or undecided" and "not applicable" were not considered to be absolute need indicators. However, since all competencies were considered important by proprietary school educators, "not applicable" responses were also analyzed.

For each rated category, a category identifier was assigned in order to indicate in the statistical tables where the highest percentage of responses for each competency was concentrated.

CHAPTER IV

REPORT OF THE DATA

Introduction

The purpose of this study was to determine the in-service education needs of full-time proprietary trade and technical school teachers in NATTS accredited schools as perceived by experienced teachers and school administrators.

This chapter focuses upon the analysis and discussion of the data from the respondents. It is presented under the following headings: (a) teacher respondents, (b) teacher competency needs as perceived by teachers, (c) teacher competency needs as perceived by administrators, (d) comparison of teacher to administrator responses, and (e) reliability of the instrument.

Teacher Respondents

The demographic data reported in Tables 2 through 15 are presented in the order in which they appeared in Part II of the questionnaire. This section provides a description of the teacher respondents and a basis for interpreting the data contained in Part I.

Summary of Returns from Respondents

Table 2 presents a summary of returns of the questionnaire.

TABLE 2

SUMMARY OF RESPONSES TO THE QUESTIONNAIRE

Category	Initial Mailing Mailed N	Initial Mailing Returned N	Percent	Follow-up Mailing Mailed N	Follow-up Mailing Returned N	Cumulative Return N	Cumulative Return %
Administrators/ Schools	409	52	12.7	357	116	168	41.0
Teachers	1050	135	12.8	915	274	409	38.9
Total	1459	187	12.7	1272	390	577	39.9

The return of the initial mailing was 187 responses, or 12.7 percent of the total sample. There were 390 responses to the second mailing. The overall return of the questionnaire was 577, or approximately 40 percent of the total sample.

Respondents by School Type

Table 3 shows the number of respondents and the percent of the total by school type. Trade and technical schools represented 41.6 percent of the schools responding and 41 percent of the total respondents. Business schools were second at 29.7 percent and approximately 29 percent respectively. Although schools categorized as "other" had a higher number of schools responding, health occupations schools had a slightly higher number of respondents, indicating that many of the schools in the "other" school category probably specialized in only one occupational program.

Classification of Respondents

Table 4 shows the number of respondents and the percent of the total by position classification. There were 168 administrator respondents, representing 29 percent of the total sample. There were 409 teacher respondents, representing approximately 71 percent of the total sample. Administrators were included in the above data since their opinions were sought about the competency needs of their schools' teachers. However, the focus of the study was upon the in-service needs of teachers. Therefore, background information about administrators was not collected for analysis.

TABLE 3

RESPONDENTS BY SCHOOL TYPE

School Type	School		Respondents	
	N	%	N	%
Trade and Technical	70	41.6	266	46.1
Business	50	29.7	167	28.9
Health	21	12.5	79	13.7
Other	27	16.1	65	11.3
Total	168	100.0	577	100.0

TABLE 4

CLASSIFICATION OF RESPONDENTS

Classification	No. of Respondents	Percent of Total Sample
Administrators	168	29.0
Teachers	409	71.0
Total	577	100.0

Gender of Respondents

Item 1 (Part II) of the questionnaire requested that teachers indicate whether they were male or female. Table 5 indicates the number of males and females by school type. By far the largest group of respondents, or 43 percent, was male teachers in trade and technical schools. Among females, almost half taught in business schools. Male teachers outnumbered females overall by more than one and one-half to one. The data also suggested that teachers were grouped along traditional occupational lines. Males were predominant in trade and technical and "other" schools, while females were predominant in business and health occupations schools.

Age of Respondents

Item 2 (Part II) of the questionnaire requested that each teacher respondent indicate their year of birth as a basis for determining their age. Table 6 indicates the age groups in five year increments of respondents by school type. It also shows the percentage of teachers falling within each age group. As indicated in the table, only 2.4 percent of all respondents were under 25 years of age. The largest percentage of respondents, or 21.8 percent, fell in the 35-39 year group. Respondents in the 30-34 year group and those in the 40-44 year group were second with 16.6 percent each.

Table 7 depicts the average age of respondents by school type and shows the average age for all respondents. As indicated, 41 years was the average age for all teachers. Although trade and

TABLE 5

GENDER OF RESPONDENTS

School Type	Respondents			
	Female		Male	
	N	%	N	%
Trade and Technical	20	4.9	176	43.0
Business	77	18.8	40	9.8
Health Occupations	47	11.5	11	2.7
Other	13	3.2	25	6.1
Total	157	38.4	252	61.6

TABLE 6

AGE OF RESPONDENTS

Age	Trade & Tech.		Business		Health		Other		Total Group	
	N	%	N	%	N	%	N	%	N	%
< 25	3	1.5	5	4.3	0	0	2	5.3	10	2.4
25-29	17	8.7	14	12.0	4	6.9	3	7.9	38	9.3
30-34	31	15.8	20	17.1	13	22.4	4	10.5	68	16.6
35-39	41	20.9	26	22.2	16	27.6	6	15.8	89	21.8
40-44	31	15.8	19	16.2	10	17.2	8	21.1	68	16.6
45-49	25	12.8	13	11.1	7	12.1	5	13.2	50	12.2
50-54	19	9.7	9	7.7	5	8.6	5	13.2	38	9.3
55-59	14	7.1	5	4.3	1	1.7	3	7.9	23	5.6
> 59	15	7.7	6	5.1	2	3.4	2	5.3	25	6.1
TOTAL	196	100	117	100	58	100	38	100	409	100

TABLE 7

AVERAGE AGE OF RESPONDENTS

School Type	Average
Trade and Technical	42.0
Business	39.5
Health Occupations	39.4
Other	42.3
Cumulative Average	41.0

technical and "other" school teachers were slightly older, there was no significant difference in average age among respondents from the four school types.

Occupational Specialty Program Taught

Item 3 (Part II) of the questionnaire requested respondents to indicate their primary occupational specialty program taught. Since a wide variety of responses was given, only those programs reported by 10 or more teachers are shown in Table 8. Therefore, the N size is smaller than 409. As depicted by school type, electronics was reported by 50 teachers, representing 20 percent of the total respondents. Computer related programs were second with 39 teachers and 15.6 percent. Both programs were most often taught in trade and technical schools. Medical assisting was third, followed by fashion related occupations and barber/hairstyling with 23 responses each.

Work Experience

Item 4 (Part II) of the questionnaire requested respondents to indicate the number of years of work experience in their occupational specialty prior to teaching. Table 9 shows the number of years of work experience in five year increments for each school type. Also shown is the overall number and percentage of teachers in each year group.

As reported in Table 9, 24.9 percent of all teachers had fewer than five years of work experience. Teachers in the 5-9 year group and the 10-14 year group followed closely at 23.2 and 23.7 percent

TABLE 8

OCCUPATIONAL SPECIALTY OF PROGRAMS REPORTING TEN OR MORE TEACHERS

School Type	Program	Number of Teachers	Percentage of Total Teachers
Trade and Technical	Electronics	50	20.0
Trade and Technical	Computers	39	15.6
Health Occupations	Medical Assisting	26	10.4
Business	Fashion Careers	23	9.2
Other	Barber/Hairstyling	23	9.2
Business	Clerical	21	8.4
Trade and Technical	Automotive/Diesel	17	6.8
Health Occupations	Dental Assisting	16	6.4
Trade and Technical	Drafting	13	5.2
Trade and Technical	Welding	11	4.4
Business	Interior Design	11	4.4
Total		250	100

TABLE 9

WORK EXPERIENCE

Year Group	Trade & Tech. N	Trade & Tech. %	Business N	Business %	Health N	Health %	Other N	Other %	Total Group N	Total Group %
< 5	51	26.0	28	23.9	11	28.9	12	20.7	102	24.9
5-9	43	21.9	30	25.6	16	27.6	6	15.8	95	23.2
10-14	43	21.9	31	26.5	13	22.4	10	26.3	97	23.7
15-19	20	10.2	10	8.5	8	13.8	1	2.6	39	9.5
> 19	39	19.9	18	15.4	9	15.5	10	26.3	76	18.6
Total	196	100	117	100	58	100	38	100	409	100

respectively. At the 28.9 percent, teachers in the "other" school category had the highest percentage of teachers with less than five years of work experience. The data also indicated a high percentage of teachers with more than 19 years of work experience.

Table 10 shows the average number of years of work experience by school type. As noted, 11 years was the average for all teachers and there was no significant difference in average work experience among all school types.

Teaching Experience

Item 5 (Part II) of the questionnaire requested respondents to indicate their total number of years teaching experience. Table 11 shows the number of years teaching experience in five year increments for each school type. It also shows the percentage of teachers in each year group.

It was found that 39.9 percent of all teachers had less than five years of teaching experience and approximately 70 percent had less than ten years teaching experience. Only 9.3 percent had more than 19 years of teaching experience. At 48.3 percent, health occupations schools had the highest percentage of teachers with less than five years teaching experience and had no teachers with 19 or more years of teaching experience.

Business and "other" schools had a high percentage of teachers with less than five years of teaching experience at 47.0 and 47.4 percent respectively. Teachers in the "other" school type had the highest percentage of teachers with more than 19 years at 18.3

TABLE 10

AVERAGE YEARS OF WORK EXPERIENCE

School Type	Average
Trade and Technical	11.2
Business	10.3
Health	11.7
Other	10.9
Total	11.0

TABLE 11

TEACHING EXPERIENCE

Year Group	Trade & Tech. N	Trade & Tech. %	Business N	Business %	Health N	Health %	Other N	Other %	Total Group N	Total Group %
< 5	62	31.6	55	47.0	28	48.3	18	47.4	163	39.9
5-9	58	29.6	38	32.5	19	32.8	8	21.1	123	30.1
10-14	32	16.3	13	11.1	7	12.1	1	2.6	53	13.0
15-19	17	8.7	5	4.3	4	6.9	4	10.5	30	7.3
> 19	27	13.8	6	5.1	0	0	7	18.4	40	9.8
Total	196	100	117	100	58	100	38	100	409	100

percent. Only eight teachers made up this total. Trade and technical teachers were second at 13.8 percent, yet had 27 teachers in this year group.

Table 12 shows the average number of years of teaching experience by school type. Trade and technical school teachers and health occupations school teachers both averaged 9.6 years. Business and teachers in the "other" school category had about three years less experience. Average teaching experience for all teachers was about eight years.

Method of Recruitment

Item 6 (Part II) of the questionnaire requested participants to indicate how they were recruited for their teaching job. As reported in Table 13, 35.7 percent of all teachers were placed as a result of a newspaper or magazine advertisement. Personal inquiry was the second most frequently used method, followed closely by direct recruitment by the school at 18.1 percent, and referral, 16.9 percent. With only 16 of 409 teachers reporting such, private employment agencies, state and county employment agencies and "other" methods very seldom accounted for job placement.

Trade and technical, business, and health occupations school teachers all indicated newspaper or magazine advertisement as their primary method of job placement. Teachers in "other" schools indicated direct recruitment as the method most often used for employment. Write-in methods under the category "other" were

TABLE 12

AVERAGE YEARS OF TEACHING EXPERIENCE

School Type	Average
Trade and Technical	9.67
Business	6.52
Health Occupations	9.66
Other	6.02
Total	8.25

TABLE 13

METHOD OF RECRUITMENT

Method	Trade & Tech N	Trade & Tech %	Business N	Business %	Health N	Health %	Other N	Other %	Total Group N	Total Group %
Direct School Recruitment	32	16.3	16	13.7	15	25.9	11	28.9	74	18.1
Newspaper	70	35.7	49	41.9	21	36.2	6	15.8	146	35.7
Personal Inquiry	29	14.8	27	23.1	10	17.2	9	23.7	75	18.3
Remained	18	9.2	4	3.4	1	1.7	6	15.8	29	7.1
Private Employment	4	2.0	1	.9	0	0	0	0	5	1.2
State County Employment	2	1.0	2	1.7	1	1.7	0	0	5	1.2
Referral	39	19.9	16	13.7	9	15.5	5	13.2	69	16.9
Other	2	1.0	2	1.7	1	1.7	1	2.6	6	1.5
Total	196	100	117	100	58	100	38	100	409	100

"transfer from administrative duties", "called by school", "owner of school", "school placement office", and "yellow pages".

Education Level

Item 7 (Part II) of the questionnaire requested respondents to indicate the highest level of education attained. As noted in Table 14, only 1.4 percent of all teachers had less than a high school diploma. Thirty percent of teachers had some college, representing the largest percentage of all education levels. Among teachers with degrees, 14 percent had associate degrees, 25 percent had bachelor's degrees and 12 percent had master's degrees. Although the lowest percentage of all teachers with some college were the business teachers, they had the highest percentage of all teachers with bachelor's and master's degrees. Only 10 of 409 teachers held doctorate degrees. Seven of these taught in trade and technical schools.

The low percentage of degreed teachers in the "other" school category is probably explained by their occupational specialty. The majority of teachers in this school category are barbers. Barbering is a licensed occupation that does not require or emphasize degrees as a prerequisite for practice. It is also interesting to note that a high percentage of barber teachers had some college. A possible explanation is that many barbers initially attended college to study or train in other career areas prior to undertaking their current occupational specialty.

TABLE 14

TEACHER EDUCATION LEVELS

Level	Trade & Tech N	Trade & Tech %	Business N	Business %	Health N	Health %	Other N	Other %	Total Group N	Total Group %
< H.S.	5	2.5	0	0	0	0	1	2.6	6	5.1
H.S. Diploma	33	16.8	2	1.7	7	12.1	16	42.1	58	14.2
Some College	63	32.1	23	19.7	24	41.4	13	34.2	123	30.1
Associate	25	12.8	23	19.7	8	13.8	4	10.5	60	14.7
Bachelors	42	21.4	48	41.0	12	20.7	1	2.6	103	25.2
Masters	21	10.7	21	17.9	5	8.6	2	5.3	49	12.0
Doctorate	7	3.6	0	0	2	3.4	1	2.6	10	2.4
Total	196	100	117	100	58	100	38	100	409	100

Occupational Training Program

Item 8 (Part II) of the questionnaire requested respondents to indicate the source of any occupational training programs in which they had participated. Since there was more than one possible response to this question, N size was greater than 409.

As indicated in Table 15, participation in occupational training programs was most often conducted in trade and technical schools. Two hundred twenty-two responses or 25.8 percent of total responses indicated this method. Company training programs were next with 185 responses and 21.5 percent. Armed forces and apprenticeship training programs were also frequently utilized. A wide variety of special training activities was reported under "other". The most frequent write-in under this category was specialized courses, with 15 reported. Other write-in responses are listed in Appendix C.

Teacher Competency Needs as Perceived by Teachers

This section of the questionnaire attempted to determine competency needs as perceived by teachers in order to answer the following questions:

1. What are the teacher competencies identified by teachers in which either more development is needed or more development is essential?

2. What order of importance do teachers place on the required competencies needed to teach students in the proprietary trade and

TABLE 15

TEACHER PARTICIPATION IN OCCUPATIONAL TRAINING PROGRAMS

Program Type	Frequency	Percentage
Trade or Technical School	222	25.8
Company Training Program	185	21.5
Armed Forces	119	13.9
Apprenticeship	97	11.3
Correspondence Courses	65	7.6
Other	61	7.1
Internship	60	7.0
Business School	50	5.8
Total	859	100

technical school?

3. What are the competencies, other than the requirements, which teachers identify as important to develop in in-service education programs?

Responses by Trade and Technical Teachers

There were 196 respondents from trade and technical schools. Table 16 shows the rank order of competency needs by trade and technical teachers based on the computed mean scores for each competency. Also indicated are the frequencies, percentage of teachers who responded in each category, and the category identifier.

A review of the ten highest ranked competencies showed that item 35, "aid students in applying for scholarships and loans", was ranked highest with a mean score of 3.320. Although ranked highest, the mean score indicated "little development needed" in this area. Mean scores for the next nine competencies ranged from 3.130 to 2.872.

Classification of the top ten competencies under their performance competency areas showed that four of the competencies, items 33, 35, 37, and 38, fell under either the competency areas of guidance and counseling, school-community relations, or student organizations. Of significance was that these three performance competency areas represented only seven of the 38 competencies included in this study.

A review of the ten lowest ranked competencies showed that item

TABLE 16

MEAN RANK ORDER OF 38 TEACHER COMPETENCY NEEDS AS PERCEIVED BY TRADE AND TECHNICAL TEACHERS

Rank	Item Number	Competency	More Development Essential		More Development Needed		Little Development Needed		Have Adequate Skills		Mean	Category ID
			N	%	N	%	N	%	N	%		
1	35	Aid students in applying for scholarships, loans, etc.	12	6.1	30	15.3	32	16.3	23	11.7	3.320	L
2	37	School-community relations	19	9.7	32	16.3	44	22.5	51	26.0	3.130	A
3	18	Assist slow and more capable learners in same class	13	6.6	46	23.5	59	30.1	70	35.7	3.011	A
4	25	Devise self-evaluation techniques	10	5.1	49	25.0	56	28.6	68	34.7	3.005	A
5	30	Determine OSHA requirements	10	5.1	44	22.5	52	26.5	68	34.7	2.977	A
6	38	Develop/coordinate student extracurricular activities	6	3.0	28	14.3	35	17.9	44	22.5	2.965	A
7	33	Help students develop self-discipline and confidence	7	3.6	50	25.5	55	28.0	79	40.3	2.921	A
8	24	Assess students' output according to industry employment standards	15	7.7	33	16.8	59	30.1	85	43.4	2.885	A
9	3	Determine student program needs	6	3.0	42	21.4	59	30.1	76	38.8	2.880	A

TABLE 16 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
10	11	Select audio-visual materials	11	5.6	40	20.4	50	25.5	86	43.9	2.872	A
11	34	Help students pursue opportunities	9	4.6	40	20.4	49	25.0	85	43.4	2.852	A
12	1	Develop course or program goals and objectives	2	1.0	51	26.0	52	26.5	84	42.9	2.847	A
13	32	Review students' records	7	3.6	34	17.4	60	30.6	81	41.3	2.819	A
14	31	Manage lab/shop areas	17	8.7	26	13.3	43	21.9	98	50.0	2.793	A
15	29	Maintain records	14	7.1	29	14.8	45	23.0	99	50.5	2.775	A
16	2	Develop student program performance objectives for program offerings	0	0	38	19.4	69	35.2	84	42.9	2.759	A
17	36	Assist graduates in job placement	7	3.6	20	10.2	41	20.9	68	34.7	2.750	A
18	19	Perform team teaching methods	4	2.0	31	15.8	54	27.6	91	46.4	2.711	A
19	15	Help students develop habits	5	2.6	34	17.4	52	26.5	100	51.0	2.707	A
20	28	Evaluate program effectiveness	6	3.1	24	12.2	64	32.7	91	46.4	2.703	A
21	6	Select methods of evaluation	5	2.6	32	16.3	52	26.5	101	51.5	2.689	A

TABLE 16 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
22	17	Employ reinforcement techniques	5	2.6	26	13.3	62	31.6	96	49.0	2.683	A
23	12	Utilize duplicating equipment	7	3.6	33	16.8	31	15.8	107	54.6	2.663	A
24	27	Evaluate test instrument validity	7	3.6	25	12.8	51	26.0	103	52.6	2.656	A
25	14	Help students develop problem solving skills	5	2.6	31	15.8	48	24.5	108	55.1	2.651	A
26	8	Plan activities for a lesson	8	4.1	27	13.8	44	22.5	111	56.6	2.642	A
27.5	10	Select instructional materials	7	3.6	21	10.7	55	28.1	104	53.1	2.631	A
27.5	21	Utilize audio-visual aids	7	3.6	25	12.8	47	24.0	108	55.1	2.631	A
29	4	Develop student performance objectives for a unit or lesson	2	1.0	28	14.3	54	27.6	107	54.6	2.607	A
30	16	Utilize/evaluate teaching methods	2	1.0	25	12.8	58	29.6	103	52.6	2.606	A
31	7	Select teaching techniques	3	1.5	29	14.8	47	24.0	111	56.6	2.600	A
32	5	Write course outlines	5	2.6	26	13.3	45	23.0	111	56.6	2.599	A
33.5	20	Utilize visual aids	7	3.6	23	11.7	42	21.4	113	57.7	2.589	A

TABLE 16 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
33.5	22	Establish performance criteria	1	0.5	25	12.8	60	30.6	106	54.1	2.589	A
35	23	Determine student grades	3	1.5	20	10.2	45	23.0	126	64.3	2.485	A
36	26	Develop tests	3	1.5	18	9.2	46	23.5	124	63.3	2.476	A
37	9	Plan, present and evaluate a lesson	4	2.0	14	7.1	46	23.5	129	65.8	2.446	A
38	13	Coordinate/supervise lab/shop	2	1.0	18	9.2	41	20.9	126	64.3	2.444	A

13, "coordinate/supervise lab/shop", was least emphasized. Sixty-four percent of the respondents indicated "have adequate skills" in this area. The mean score was 2.444. Mean scores for the next nine competencies, ranked in ascending order of need, ranged from 2.446 to 2.607.

As indicated by the category identifier for each competency, the highest percentage of responses fell into the category of "have adequate skills".

Classification of the ten lowest ranked competencies under performance competency areas showed that all ten items fell under either the competency areas of planning instruction, instructional delivery or instructional evaluation.

Table 17 shows a list of competencies with a large number of total responses in the "not applicable" category. It is interesting to note that at 49 percent, item 35 accounted for almost half of the total teacher responses, yet was also ranked highest in the "needed" category. Anderson and Barnes (1979) found similar results in their study. They suggested that teachers may not have been aware of some of the new financial aid programs then available to students attending postsecondary schools. Another suggestion was that proprietary school directors may have viewed their roles as strictly short term skills training and not as helping students in this area.

Responses by Business Teachers

There were 117 respondents from business schools. Table 18 shows the rank order of competency needs by business teachers based

TABLE 17

NOT APPLICABLE RESPONSES AS PERCEIVED BY
TRADE AND TECHNICAL TEACHERS
N = 196

Item Number	Competency	N	%
35	Help students apply for scholarships, loans, etc.	96	49.0
36	Assist graduates in job placement	57	29.1
38	Develop/coordinate student extracurricular activities	79	40.3

TABLE 18

MEAN RANK ORDER OF 38 TEACHER COMPETENCY NEEDS AS PERCEIVED BY BUSINESS TEACHERS

Rank	Item Number	Competency	More Development Essential		More Development Needed		Little Development Needed		Have Adequate Skills		Mean	Category ID
			N	%	N	%	N	%	N	%		
1	38	Aid students in applying for extracurricular activities	6	5.1	25	21.4	27	23.1	22	18.8	3.188	L
2	35	Aid students in applying for scholarships, loans, etc.	5	4.3	20	17.1	15	12.8	19	16.2	3.186	N
3	25	Develop self-evaluation techniques	6	5.1	33	28.2	34	29.1	39	33.3	3.054	L
4	33	Help students develop self-discipline and confidence	6	5.1	32	27.4	32	27.4	44	37.6	3.000	A
5	27	Evaluate test instrument validity	8	6.8	27	23.1	25	21.4	44	37.6	2.990	A
6	18	Assist slow and more capable learners in same class	6	5.1	35	29.9	23	19.7	49	41.9	2.982	A
7	37	School community relations	5	4.3	19	16.2	28	23.9	33	28.2	2.953	A
8	30	Determine OSHA requirements	4	3.4	17	14.5	27	23.1	31	26.5	2.924	A
9	3	Determine student program needs	3	2.6	30	25.6	28	23.9	53	45.3	2.851	A
10	15	Help students develop habits	5	4.3	26	22.2	29	24.8	53	45.3	2.850	A

TABLE 18 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
11	11	Select audio-visual materials	10	8.6	16	13.7	28	24.0	53	45.3	2.841	A
12	34	Help students pursue opportunities	4	3.4	24	20.5	32	27.4	50	42.7	2.836	A
13	21	Utilize audio-visual aids	9	7.7	21	18.0	19	16.2	58	49.6	2.822	A
14	32	Review students' records	6	5.1	21	18.0	29	24.8	54	46.2	2.809	A
15	14	Help students develop problem skills	1	0.9	31	26.5	26	22.2	56	47.9	2.798	A
16	12	Utilize duplicating equipment	6	5.1	18	15.4	28	23.9	51	43.6	2.796	A
17.5	17	Employ reinforcement techniques	3	2.6	24	20.5	31	26.5	55	47.0	2.779	A
17.5	28	Evaluate program effectiveness	3	2.6	24	20.5	31	26.5	55	47.0	2.779	A
19	22	Establish performance criteria	3	2.6	23	19.7	34	29.1	55	47.0	2.774	A
20	2	Develop student performance objectives for program offerings	3	2.6	24	20.5	29	24.8	56	47.9	2.768	A
21	19	Perform team teaching methods	5	4.3	16	13.7	23	19.7	52	44.4	2.729	A
22	6	Select methods of evaluation	2	1.7	22	18.8	32	27.4	57	48.7	2.726	A

TABLE 18 (Continued)

Rank	Item Number	Competency	More Development Essential		More Development Needed		Little Development Needed		Have Adequate Skills		Mean	Category ID
			N	%	N	%	N	%	N	%		
23	16	Utilize/evaluate teaching methods	4	3.4	22	18.8	26	22.2	62	53.0	2.719	A
24.5	1	Develop course or program goals and objectives	5	4.3	19	16.2	26	22.2	61	52.1	2.712	A
24.5	24	Assess students' output according to industry employment standards	2	1.7	21	18.0	31	26.5	57	48.7	2.712	A
26	20	Utilize visual aids	4	3.4	18	15.4	23	19.7	60	51.3	2.676	A
27	29	Maintain records	4	3.4	18	15.4	24	20.5	64	54.7	2.655	A
28	10	Select instructional materials	5	4.3	14	12.0	23	19.7	63	53.9	2.629	A
29	8	Plan activities for a lesson	1	0.9	18	15.4	29	24.8	64	54.7	2.607	A
30	31	Manage lab/shop areas	3	2.6	13	11.1	20	17.1	57	48.7	2.591	A
31	4	Develop student performance objectives for a unit or lesson	1	0.9	13	11.1	37	31.6	64	54.7	2.574	A
32	7	Select teaching techniques	3	2.6	14	12.0	27	23.1	70	59.8	2.561	A
33	13	Coordinate/supervise lab/shop	3	2.6	9	7.7	27	23.1	63	53.9	2.529	A

TABLE 18 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
34.5	5	Write course outlines	5	4.3	11	9.4	21	18.0	75	64.1	2.518	A
34.5	23	Determine student grades	2	1.7	9	7.7	33	28.2	66	56.4	2.518	A
36	26	Develop tests	1	0.9	14	12.0	21	18.0	74	63.3	2.473	A
37	9	Plan, present and evaluate a lesson	1	0.9	11	9.4	28	23.9	73	62.4	2.469	A
38	36	Assist graduates in job placement	3	2.6	9	7.7	17	14.5	71	60.7	2.440	A

on the computed mean score for each competency. Also indicated are the frequencies, percentages of teachers who responded in each category, and the category identifier.

A review of the ten highest ranked competencies showed that item 38, "develop/coordinate student extracurricular activities" was ranked highest with a mean score of 3.188. Although ranked highest, the mean score indicated "little development needed" in this area. Mean scores for the next nine competencies ranged from 3.186 to 2.850.

Classification of the ten highest ranked competencies under their performance competency areas showed that four of the competencies, items 33, 35, 37, and 38, fell under either the areas of guidance and counseling, school-community relations, or student organizations. Items 14, 18 and 21 fell under the area of instructional evaluation.

A review of the ten lowest ranked competencies showed that item 36, "assist graduates in job placement", was the competency least emphasized. Sixty percent of the respondents indicated "little development needed" in this area. The mean score was 2.440. Mean scores for the next nine competencies, ranked in ascending order of need, ranged from 2.469 to 2.607.

As indicated by the category identifier for each competency, the highest percentage of responses fell into the category of "have adequate skills".

Classification of the ten lowest ranked competencies under their performance competency areas showed that five competencies, items 4,

5, 7, 8, and 9, fell under the area of planning instruction.

Table 19 shows a list of competencies with a large number of responses in the "not applicable" category. The two highest ranked competencies in the "need" category, items 35 and 38, were also competencies with the highest number of "not applicable" responses. Item 30, "determine OSHA requirements", was also identified as "not applicable". Since OSHA requirements apply to all businesses and industry, it may be unusual to see the high number of responses that occurred in this category. It could be that teachers did not closely associate OSHA requirements to the office or classroom environment in which they traditionally trained or worked.

Responses by Health Occupations

Teachers

There were 58 respondents from health occupations schools. Table 20 shows the rank order of competency needs by health occupations teachers based on the computed mean score for each competency. Also indicated are the frequencies, percentage of teachers who responded in each category and the category identifier.

A review of the ten highest ranked competencies showed that item 35, "aid students in applying for scholarships and loans", was ranked highest with a mean score of 3.538. This mean score indicated "more development needed" in this area. The high percentage of teachers indicating "more development needed" in this competency could be related to the high cost of medical training. Many students in health occupations may routinely seek additional guidance and

TABLE 19

NOT APPLICABLE RESPONSES AS PERCEIVED BY BUSINESS TEACHERS
N = 117

Item Number	Competency	N	%
30	Determine OSHA requirements	31	26.5
35	Aid students in applying for scholarships, loans, etc.	54	46.2
38	Develop/coordinate student extracurricular activities	34	29.0

TABLE 20

MEAN RANK ORDER OF 38 TEACHER COMPETENCY NEEDS AS PERCEIVED BY HEALTH OCCUPATIONS TEACHERS

Rank	Item Number	Competency	More Development Essential		More Development Needed		Little Development Needed		Have Adequate Skills		Mean	Category ID
			N	%	N	%	N	%	N	%		
1	35	Aid students in applying for scholarships, loans, etc.	5	8.6	19	32.8	7	12.1	8	13.8	3.538	N
2	38	Develop/coordinate student extracurricular activities	3	5.2	13	22.4	17	29.3	9	15.5	3.238	L
3	25	Devise self-evaluation techniques	2	3.5	12	20.7	23	39.7	16	27.6	3.000	L
4	18	Assist slow and more capable learners in same class	1	1.7	16	27.6	17	29.3	21	36.2	2.945	A
5.5	33	Help students develop self-discipline and confidence	5	8.6	9	15.5	16	27.6	27	46.6	2.860	A
5.5	36	Assist graduates in job placement	1	1.7	9	15.5	16	27.6	17	29.3	2.860	A
7	27	Evaluate test instrument validity	3	5.2	13	22.4	11	19.0	27	46.6	2.852	A
8	15	Help student develop habits	4	6.9	9	15.5	17	29.3	27	46.6	2.825	A
9	3	Determine students' program needs	4	6.9	8	13.8	16	27.6	26	44.8	2.815	A
10	30	Determine OSHA requirements	2	3.5	12	20.7	12	20.7	26	44.8	2.808	A

TABLE 20 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
11	37	School-community relations	1	1.7	9	15.5	15	25.9	21	36.2	2.783	A
12	34	Help students pursue opportunities	2	3.5	8	13.8	20	34.5	24	41.4	2.778	A
13	28	Evaluate program effectiveness	2	3.5	9	15.5	17	29.3	26	44.8	2.759	A
14.5	17	Employ reinforcement techniques	1	1.7	7	12.1	26	44.8	23	39.7	2.754	L
14.5	32	Review students' records	4	6.9	5	8.6	21	36.2	27	47.6	2.754	A
16	2	Develop student program performance objectives for program offerings	1	1.7	10	17.2	16	27.6	25	43.1	2.750	A
17	1	Develop course or program goals and objectives	1	1.7	9	15.5	18	31.0	25	43.1	2.736	A
18	11	Select audio-visual materials	4	6.9	7	12.1	14	24.1	30	51.7	2.727	A
19	12	Utilize duplicating equipment	1	1.7	12	20.7	11	19.0	29	50.0	2.717	A
20	21	Utilize audio-visual aids	1	1.7	9	15.5	18	31.0	28	48.3	2.696	A
21	4	Develop student performance objectives for a unit or lesson	0	0	9	15.5	18	31.0	25	43.1	2.692	A

TABLE 20 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
22.5	6	Select methods of evaluation	0	0	12	20.7	14	24.1	29	50.0	2.691	A
22.5	20	Utilize visual aids	1	1.7	9	15.5	17	29.3	28	48.3	2.691	A
24	29	Maintain records	1	1.7	11	19.0	12	20.7	30	51.7	2.685	A
25	14	Help students develop problem solving skills	3	5.2	5	8.6	20	34.5	29	50.0	2.684	A
26	5	Write course outlines	1	1.7	9	15.5	13	22.4	27	46.6	2.680	A
27	24	Assess students' output according to industry employment standards	1	1.7	8	13.8	16	27.6	28	48.3	2.660	A
28	8	Plan activities for a lesson	1	1.7	9	15.5	14	24.1	31	53.5	2.636	A
29	10	Select instructional materials	0	0	8	13.8	13	22.4	30	51.7	2.569	A
30.5	7	Select teaching techniques	0	0	8	13.8	15	25.9	32	55.2	2.564	A
30.5	22	Establish performance criteria	0	0	9	15.5	13	22.4	33	56.9	2.564	A
30.5	26	Develop tests	1	1.7	8	13.8	12	20.7	34	58.6	2.564	A

TABLE 20 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
33	9	Plan, present and evaluate a lesson	2	3.5	5	8.6	15	25.9	34	58.6	2.554	A
34	31	Manage lab/shop areas	1	1.7	8	13.8	11	19.0	35	60.3	2.545	A
35	13	Coordinate/supervise lab/shop	1	1.7	5	8.6	14	24.1	37	63.8	2.474	A
36	16	Utilize/evaluate teaching methods	1	1.7	5	8.6	13	22.4	36	62.1	2.473	A
37	23	Determine students' grades	0	0	6	10.3	13	22.4	35	60.3	2.463	A
38	19	Perform team teaching methods	0	0	5	8.6	13	22.4	32	55.2	2.460	A

counseling in preparation for more advanced stages of training after completing their basic programs. Mean scores for the next nine competencies, ranked in descending order of need, ranged from 3.238 to 2.808.

Classification of the ten highest ranked competencies under their performance competency areas showed that four competencies, items 33, 35, 36 and 38, fell under either the areas of guidance and counseling, school-community relations, or student organizations.

A review of the ten lowest ranked competencies showed that the competency least emphasized was item 19, "perform teaching methods". Fifty-five percent of the respondents indicated "have adequate skills" in this area. The mean score was 2.460. Mean scores for the next nine competencies, ranked in ascending order of need, ranged from 2.463 to 2.569.

As indicated by the category identifier for each competency, the highest percentage of responses fell into the category of "have adequate skills".

Classification of the ten lowest ranked competencies under their performance competency areas showed that three competencies, items 13, 16 and 19, fell under the area of instructional delivery. Three competencies, items 7, 9 and 10, fell under the area of planning instruction. There were also three competencies under the area of instructional evaluation, items 22, 23 and 26.

Table 21 shows a list of competencies with a large number of total responses in the "not applicable" category. As noted, 32.7 percent of all teachers felt that item 35 did not apply to their

TABLE 21

NOT APPLICABLE RESPONSES AS PERCEIVED BY
HEALTH OCCUPATIONS TEACHERS
N = 58

Item Number	Competency	N	%
35	Aid students in applying for for scholarships, loans, etc.	19	32.7

programs, yet it still ranked highest in the "more development needed" category.

Responses by Other Teachers

There were 38 respondents from the "other" school category. Table 22 shows the rank order of competency needs by other teachers based on the computed mean score for each competency. Also indicated are the frequencies, percentage of teachers who responded in each category, and the category identifier.

A review of the ten highest ranked competencies showed that item 38, "develop/coordinate student extracurricular activities," was ranked highest with a mean score of 3.455. Although ranked highest, the mean score indicated "little development needed" in this area. Mean scores for the next nine competencies ranged from 3.000 to 2.757.

Classification of the ten highest ranked competencies under their performance competency areas showed that four competencies, items 33, 34, 37, and 38 fell under either the areas of guidance and counseling, school-community relations, or student organizations. Three competencies, items 24, 25 and 27, fell under the area of instructional evaluation.

A review of the ten lowest ranked competencies showed that item 23, "determine student's grades", was least emphasized. Seventy-four percent of the respondents indicated "have adequate skills" in this area. This competency also had the lowest mean score at 2.289. Mean scores for the next nine competencies, ranked in ascending order

TABLE 22

MEAN RANK ORDER OF 38 TEACHER COMPETENCY NEEDS AS PERCEIVED BY OTHER TEACHERS

Rank	Item Number	Competency	More Development Essential		More Development Needed		Little Development Needed		Have Adequate Skills		Mean	Category ID
			N	%	N	%	N	%	N	%		
1	38	Develop/coordinate student extracurricular activities	2	5.3	8	21.1	10	26.3	2	5.3	3.455	L
2	25	Devise self-evaluation techniques	3	7.9	7	18.4	14	36.8	13	34.2	3.000	L
3	37	School-community relations	2	5.3	6	15.8	10	26.3	13	34.2	2.903	A
4.5	33	Help students develop self-discipline and confidence	0	0	12	31.6	9	23.7	16	42.1	2.892	A
4.5	34	Help students pursue opportunities	2	5.3	7	18.4	13	34.2	15	39.5	2.892	A
6	18	Assist slow and more capable learners in the same class	1	2.6	8	21.1	13	34.2	14	36.8	2.889	A
7	27	Evaluate test instrument validity	1	2.6	7	18.4	9	23.7	13	34.2	2.867	A
8	14	Help students develop problem solving skills	1	2.6	7	18.4	13	34.2	16	42.1	2.811	A
9	3	Determine student program needs	1	2.6	8	21.1	10	26.3	19	50.0	2.763	A
10	2	Develop student performance objectives for program offerings	0	0	9	23.7	10	26.3	18	47.4	2.757	A

TABLE 22 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
11	24	Assess students' output according to industry employment standards	0	0	8	21.1	8	21.1	16	42.1	2.750	A
12	15	Help students develop habits	2	5.3	6	15.8	9	23.7	20	52.6	2.730	A
13	30	Determine OSHA requirements	2	5.3	5	13.2	8	21.1	19	50.0	2.706	A
14.5	11	Select audio-visual materials	4	10.5	3	7.9	6	15.8	22	57.9	2.686	A
14.5	21	Utilize audio-visual aids	4	10.5	2	5.3	8	21.1	21	55.3	2.686	A
16	35	Aid students in applying for scholarships, loans, etc.	2	5.3	3	7.9	7	18.4	17	44.7	2.655	A
17.5	1	Develop course or program goals and objectives	0	0	6	15.8	12	31.6	19	50.0	2.649	A
17.5	17	Employ reinforcement techniques	1	2.6	3	7.9	15	39.5	18	47.4	2.649	A
19	13	Coordinate/supervise lab/shop	1	2.6	5	13.2	9	23.7	20	52.6	2.629	A
20	12	Utilize duplicating equipment	1	2.6	5	13.2	8	21.1	20	52.6	2.618	A
21	32	Reviews students' records	0	0	3	7.9	17	44.7	18	47.4	2.605	A

TABLE 22 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
22	10	Select instructional materials	2	5.3	3	7.9	8	21.1	21	55.3	2.588	A
23	19	Perform team teaching methods	1	2.6	3	7.9	11	29.0	21	55.3	2.556	A
24	8	Plan activities for a lesson	0	0	4	10.5	12	31.6	21	55.3	2.541	A
25.5	29	Maintain records	0	0	4	10.5	10	26.3	22	57.9	2.500	A
25.5	31	Manage lab/shop areas	1	2.6	4	10.5	7	18.4	24	63.2	2.500	A
27.5	9	Plan, present and evaluate a lesson	0	0	3	7.9	12	31.6	23	60.5	2.474	A
27.5	16	Utilize/evaluate teaching methods	0	0	4	10.5	10	26.3	24	63.2	2.474	A
29.5	7	Select teaching techniques	0	0	4	10.5	9	23.7	23	60.5	2.472	A
29.5	28	Evaluate program effectiveness	1	2.6	2	5.3	10	26.3	23	60.5	2.472	A
31	36	Assist graduates in job placement	0	0	5	13.2	6	15.8	23	60.5	2.471	A
32.5	4	Develop student performance objectives for a unit or lesson	0	0	3	7.9	11	29.0	23	60.5	2.459	A
32.5	22	Establish performance criteria	0	0	5	13.2	7	18.4	25	65.8	2.459	A

TABLE 22 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
32.5	26	Develop tests	0	0	3	7.9	11	29.0	23	60.5	2.459	A
35	20	Utilize visual aids	0	0	2	5.3	10	26.3	25	65.8	2.378	A
36	5	Write course outlines	0	0	2	5.3	9	23.7	25	65.8	2.361	A
37	6	Select methods of evaluation	0	0	2	5.3	7	18.4	27	71.1	2.306	A
38	23	Determine student grades	0	0	1	2.6	9	23.7	28	73.7	2.289	A

of need, ranged from 2.306 to 2.541, based on equal mean scores of 2.459 for items 4, 22, and 26, 2.472 for items 7 and 28, 2.474 for items 9 and 16, and 2.500 for items 29 and 31.

Classification of the ten lowest ranked competencies under their performance competency areas showed that five competencies, items 4, 5, 6, 7, and 9, fell under the area of planning instruction. Four competencies, items 22, 23, 26 and 28, fell under the area of instructional evaluation.

As indicated by the category identifier for each competency, the highest percentage of responses fell into the category of "have adequate skills".

Table 23 shows a list of competencies with a large number of total responses in the "not applicable" category. According to 34 percent of the teachers in these schools, item 38 did not apply to their programs.

Responses by All Teachers

There were 409 total teacher respondents. Table 24 shows the rank order of competency needs of all teachers based on the computed mean score for each competency. Also indicated are the frequencies, percentages of teachers who responded in each category, and the category identifier.

A review of the ten highest ranked competencies showed that item 35, "aid students in applying for scholarships and loans", was ranked highest with a mean score of 3.237. This was not surprising since three of the four school types ranked this competency highest

TABLE 23

NOT APPLICABLE RESPONSES AS PERCEIVED BY OTHER TEACHERS
N = 38

Item Number	Competency	N	%
38	Develop/coordinate student extracurricular activities	13	34.2

TABLE 24

MEAN RANK ORDER OF 38 TEACHER COMPETENCY NEEDS AS PERCEIVED BY ALL TEACHERS

Rank	Item Number	Competency	More Development Essential		More Development Needed		Little Development Needed		Have Adequate Skills		Mean	Category ID
			N	%	N	%	N	%	N	%		
1	35	Aid students in applying for scholarships and loans	24	5.9	72	17.6	61	14.9	67	16.4	3.237	N
2	38	Develop/coordinate student extracurricular activities	17	4.2	74	18.1	89	21.8	77	18.8	3.121	L
3	25	Devise self evaluation techniques	21	5.1	101	24.7	127	31.1	136	33.3	3.018	A
4	37	School-community relations	27	6.6	66	16.1	97	23.7	118	28.9	3.006	A
5	18	Assist slow and more capable learners in the same class	21	5.1	105	25.7	112	27.4	154	37.7	2.982	A
6	33	Help students develop self-discipline and confidence	18	4.4	103	25.2	112	27.4	166	40.6	2.932	A
7	30	Determine OSHA requirements	18	4.4	78	19.1	99	24.2	144	35.2	2.912	A
8	3	Plan activities for a lesson	14	3.4	88	21.5	113	27.6	174	42.5	2.851	A

TABLE 24 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
9	34	Help students pursue opportunities	17	4.2	79	19.3	114	27.9	174	42.5	2.841	A
10	11	Select audio-visual materials	29	7.1	66	16.1	98	24.0	191	46.7	2.826	A
11.5	24	Assess student output according to industry employment standards	18	4.4	70	17.1	114	27.9	186	45.5	2.794	A
11.5	27	Evaluate test instrument validity	19	4.7	72	17.6	96	23.5	187	45.7	2.794	A
13	32	Review students' records	17	4.2	63	15.4	127	31.1	180	44.0	2.786	A
14	1	Develop course or program goals and objectives	8	2.0	85	20.8	108	26.4	189	46.2	2.774	A
15	15	Help students develop habits	16	3.9	75	18.3	107	26.2	200	48.9	2.766	A
16	2	Develop student performance objectives for program offerings	4	1.0	81	19.8	124	30.3	183	44.7	2.760	A
17	17	Employ reinforcement techniques	10	2.4	60	14.7	134	32.8	192	46.9	2.717	A
18	14	Help students develop problem solving skills	10	2.4	74	18.1	107	26.2	209	51.1	2.713	A
19	28	Evaluate program effectiveness	12	2.9	59	14.4	122	29.8	195	47.7	2.711	A

TABLE 24 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
20	12	Utilize duplicating equipment	15	3.7	68	16.6	78	19.1	207	50.6	2.704	A
21	29	Maintain records	19	4.7	62	15.2	91	22.3	215	52.6	2.703	A
22	21	Utilize audio-visual aids	21	5.1	57	13.9	92	22.5	215	52.6	2.699	A
23	31	Manage lab/shop areas	22	5.4	51	12.5	81	19.8	214	52.3	2.677	A
24	19	Perform team teaching methods	10	2.4	55	13.5	101	24.7	196	47.9	2.666	A
25	6	Select methods of evaluation	7	1.7	68	16.6	105	25.7	214	52.3	2.665	A
26	36	Assist graduates in job placement	11	2.7	43	10.5	80	19.6	179	43.8	2.636	A
27	22	Establish performance criteria	4	1.0	62	15.2	114	27.9	219	53.6	2.627	A
28	8	Plan activities for a lesson	10	2.4	58	14.2	99	24.2	227	55.5	2.622	A
29	10	Select instructional materials	14	3.4	46	11.3	99	24.2	218	53.3	2.618	A
30	16	Utilize/evaluate teaching methods	7	1.7	56	13.7	107	26.2	225	55.0	2.608	A
31	20	Utilize visual aids	12	2.9	52	12.7	92	22.5	226	55.3	2.607	A
32	4	Develop student performance objectives for a lesson or unit	3	0.7	53	13.0	120	29.3	219	53.6	2.595	A

TABLE 24 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
33	7	Select teaching techniques	6	1.5	55	13.5	98	24.0	236	57.7	2.572	A
34	5	Write course outlines	11	2.7	48	11.7	88	21.5	238	58.2	2.564	A
35	13	Coordinate/supervise lab/shop	7	1.7	37	9.1	91	22.3	246	60.2	2.488	A
36	26	Develop tests	5	1.2	43	10.5	90	22.0	255	62.4	2.486	A
37	23	Determine student grades	5	1.2	36	8.8	100	24.5	255	62.4	2.472	A
38	9	Plan, present and evaluate a lesson	7	1.7	33	8.1	101	24.7	259	63.3	2.470	A

overall. Although ranked highest, the mean score indicated "little development needed" in this area. Mean scores for the next nine competencies ranged from 3.121 to 2.826.

Classification of the ten highest ranked competencies under their performance competency areas showed that five competencies, items 33, 34, 35, 37, and 38, fell under either the areas of guidance and counseling, school-community relations or student organizations.

A review of the ten lowest ranked competencies showed that item 9, "plan, present and evaluate a lesson", was least emphasized. Sixty-three percent of the respondents indicated "have adequate skills" in this area. The mean score was 2.470. Mean scores for the next nine competencies, ranked in ascending order of need, ranged from 2.472 to 2.618.

As indicated by the category identifier for each competency, the highest percentage of responses fell into the category of "have adequate skills".

Classification of the ten lowest ranked competencies under their performance competency areas showed that five competencies, items 4, 5, 7, 9, and 10 were under the area of planning instruction. Three competencies, items 13, 16 and 20, were under the area of instructional delivery.

Table 25 shows a list of competencies with a large number of total responses in the "not applicable" category. Items 35 and 38 were identified at 43 percent and 33.7 percent, respectively, by teachers as not applicable to their programs.

TABLE 25

NOT APPLICABLE RESPONSES AS PERCEIVED BY
OVERALL TEACHERS
N = 409

Item Number	Competency	N	%
35	Aid student in applying for scholarships, loans, etc.	177	43.3
38	Develop/coordinate student extracurricular activities	138	33.7

Other Important Teacher Competencies

A total of 75 responses was submitted by teachers relevant to other competencies not listed in the questionnaire, which teachers considered important to develop in in-service education programs. The most frequent write-in responses related to the following areas:

1. Deal with student problems
2. Update occupational skills
3. Articulate program needs to school administrators
4. School-business/industry interface
5. Teaching methodology
6. Time management

Write-in responses to this question are listed in Appendix D.

Teacher Competency Needs as Perceived by Administrators

The administrator questionnaire attempted to determine in-service competency needs of teachers as perceived by their administrators in order to answer the following questions.

1. What are the teacher competencies identified by administrators in which more development is needed or more development is essential?
2. What order of importance do school administrators place on the required competencies needed by their teachers in order to teach students in the proprietary trade and technical schools?
3. What are the competencies, other than the requirements,

which administrators identify as important for teachers to develop in in-service education programs?

Responses by Administrators

There were 168 administrator respondents. Table 26 shows the rank order of teacher competency needs as determined by school administrators. The rank order was based on the computed mean score for each competency. Also indicated are the frequencies, percentages of administrators in each category, and the category identifier.

A review of the ten highest ranked competencies showed that item 18, "assist slow and more capable learners in the same class", was ranked highest with a mean score of 3.454. Although ranked highest, the mean score indicated "little development needed" in this area. Mean scores for the next nine competencies ranged from 3.373 to 3.205.

Classification of the ten highest ranked competencies under their performance competency areas showed that three competencies, items 1, 2 and 3, fell under the area of planning instruction. Three competencies, items 14, 15 and 18, fell under the area of instructional delivery. Additionally, two competencies fell under the area of guidance and counseling, items 33 and 34.

A review of the ten lowest ranked competencies showed that item 12, "utilize duplicating equipment", was least emphasized. Sixty percent of the respondents indicated "have adequate skills" in this area. The mean score was 2.472. The next nine competencies, ranked in ascending order of need, ranged from 2.752 to 2.953.

TABLE 26

MEAN RANK ORDER OF 38 TEACHER COMPETENCY NEEDS AS PERCEIVED BY SCHOOL ADMINISTRATORS

Rank	Item Number	Competency	More Development Essential		More Development Needed		Little Development Needed		Have Adequate Skills		Mean	Category ID
			N	%	N	%	N	%	N	%		
1	18	Assist slow and more capable learners in the same class	19	11.3	63	37.5	54	32.1	27	16.1	3.454	N
2	33	Help students develop self-discipline and confidence	19	11.3	60	35.7	51	30.4	36	21.4	3.373	N
3	25	Devise self evaluation techniques	14	8.3	55	32.7	51	30.4	32	19.1	3.336	N
4	15	Help students develop habits	16	9.5	54	32.1	57	33.9	37	22.0	3.299	L
5	2	Develop student performance objectives for program offerings	12	7.1	52	31.0	60	35.7	35	20.8	3.258	L
6	3	Determine student program needs	13	7.7	54	32.1	51	30.4	44	26.2	3.222	N
7	1	Develop course or program goals and objectives	8	4.8	57	33.9	54	32.1	39	23.2	3.215	N
8	14	Help students develop problem solving skills	13	7.7	53	31.6	54	32.1	45	26.8	3.206	L
9.5	34	Help students pursue opportunities	13	7.7	42	25.0	65	38.7	36	21.4	3.205	L

TABLE 26 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
9.5	38	Develop/coordinate student extracurricular activities	8	4.8	37	22.0	43	25.6	29	17.3	3.205	L
11.5	27	Evaluate test instrument validity	18	10.7	37	22.0	48	28.6	51	30.4	3.143	L
11.5	37	School-community relations	10	6.0	40	23.8	50	29.8	40	23.8	3.143	L
13	8	Plan activities for a lesson	10	6.0	45	26.8	66	39.3	42	25.0	3.141	L
14	17	Employ reinforcement techniques	13	7.7	41	24.4	61	36.3	47	28.0	3.123	L
15	7	Select teaching techniques	16	9.5	38	22.6	57	33.9	53	31.5	3.104	L
16	5	Write course outlines	11	6.6	41	24.4	51	30.4	49	29.2	3.092	L
17	32	Review students' records	9	5.4	45	26.8	52	31.0	52	31.0	3.070	A
18	28	Evaluate program effectiveness	16	9.5	30	17.9	57	33.9	52	31.0	3.065	L
19	16	Utilize/evaluate teaching methods	10	6.0	41	24.4	62	36.9	52	31.0	3.055	L
20	19	Perform team teaching methods	8	4.8	37	22.0	53	31.6	50	29.8	3.020	L

TABLE 26 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
21	9	Plan, present and evaluate a lesson	9	5.4	43	25.6	53	31.6	59	35.1	3.012	A
22	6	Select methods of evaluation	13	7.7	32	19.1	57	33.9	57	33.9	3.006	A
23	4	Develop student performance objectives for a unit or lesson	9	5.4	37	22.0	57	33.9	55	32.7	3.000	L
24	24	Assess students' output according to industry employment standards	9	5.4	37	22.0	52	31.0	58	34.5	2.981	A
25	22	Establish performance criterias	9	5.4	37	22.0	54	32.1	59	35.1	2.975	A
26	26	Develop tests	12	7.1	32	19.1	50	29.8	60	35.7	2.974	A
27	30	Determine OSHA requirements	7	4.2	36	21.4	39	23.2	56	33.3	2.957	A
28	29	Maintain records	6	3.6	37	22.0	50	29.8	56	33.3	2.953	A
29	13	Coordinate/supervise lab/shops	9	5.4	35	20.8	51	30.4	63	37.5	2.937	A
30	31	Manage lab/shop areas	16	9.5	26	15.5	41	24.4	71	42.3	2.916	A

TABLE 26 (Continued)

Rank	Item Number	Competency	More Development Essential N	%	More Development Needed N	%	Little Development Needed N	%	Have Adequate Skills N	%	Mean	Category ID
31	35	Aid students in applying for scholarships, loans, etc.	3	1.8	29	17.3	29	17.3	49	29.2	2.873	A
32	11	Select audio-visual materials	4	2.4	29	17.3	57	33.9	66	39.3	2.814	A
33	20	Utilize visual aids	8	4.8	22	13.1	60	35.7	68	40.5	2.810	A
34.5	10	Select instructional materials	5	3.0	26	15.5	50	29.8	71	42.3	2.770	A
34.5	23	Determine student grades	8	4.8	27	16.1	46	27.4	80	47.6	2.770	A
36	36	Assist graduates in job placement	6	3.6	21	12.5	40	23.8	64	38.1	2.763	A
37	21	Utilize audio-visual aids	4	2.4	23	13.7	60	35.7	70	41.7	2.752	A
38	12	Utilize duplicating equipment	3	1.8	12	7.1	35	20.8	94	56.0	2.472	A

As indicated by the category identifier for each competency, the highest percentage of responses fell into the category of "have adequate skills". It was also noted that administrators perceived a need for some teacher development in 19 of the top 23 competencies.

Classification of the ten lowest ranked competencies under their performance competency areas showed that three competencies, items 10, 11 and 12, fell under the area of planning instruction. Three competencies also fell under the area of instructional delivery, items 13, 20 and 21.

Table 27 shows a list of competencies with a large number of total responses in the "not applicable" category. Items 35 and 38 were identified by 30.3 and 26.1 percent of administrators respectively, as not applicable to their programs.

Other Important Teacher Competencies

There were 15 responses submitted by administrators relevant to other competencies considered important for teachers to develop in in-service programs. The most frequent write-in responses related to two areas.

1. Dealing with students' problems
2. Teaching methodology

Comparison of Teacher Responses to Administrator Responses

One of the questions to be answered in this study was, "What are the differences in teacher and administrator responses to the degree

TABLE 27

NOT APPLICABLE RESPONSES AS PERCEIVED BY ADMINISTRATORS
N = 168

Item Number	Competency	N	%
35	Develop/coordinate student extracurricular activities	51	30.3
38	Aid students in applying for scholarships, loans, etc.	44	26.1

of importance placed on the 38 competencies needed for teaching students in the proprietary trade and technical school?" Teacher and administrator responses were compared on the basis of rank order of importance, frequency of not applicable responses and other write-in competencies considered important for teacher development in in-service education programs. A t-test was also conducted to determine if significant differences existed between teacher and administrator responses.

Table 28 shows the rank order comparison of teacher and administrator responses to the 38 teacher competency needs. Teachers as a group identified item 35, "aid students in applying for scholarships and loans" as the highest ranked competency in the "more development needed" category. Rated second was item 38, "develop/coordinate student extracurricular activities". The same competencies were also reported by 43.2 percent and 33.7 percent of teachers, respectively, as not applicable to their programs. The competency receiving the least amount of emphasis by teachers was item 9, "plan, present and evaluate a lesson".

Inspection of the ten highest ranked competencies determined by teachers would tend to suggest that the performance competency areas most emphasized were guidance and counseling, school-community relations and student organizations. The performance competency areas least emphasized were those aspects of planning instruction related to planning and development and instructional evaluation.

Administrators reported item 18, "assist slow and more capable learners in the same class", as the highest ranked competency in the

TABLE 28

RANK ORDER COMPARISON OF 38 TEACHER COMPETENCIES AS PERCEIVED BY TEACHERS AND ADMINISTRATORS

Teachers			Administrators		
Rank	Item Number	Competency	Rank	Item Number	Competency
1	35	Aid students in applying for scholarships, loans, etc.	1	18	Assist slow and more capable learners in same class
2	38	Develop/coordinate student extracurricular activities	2	33	Help students develop self-discipline and confidence
3	25	Devise self-evaluation techniques	3	25	Devise self-evaluation techniques
4	37	School-community relations	4	15	Help students develop habits
5	18	Assist slow and more capable learners in same class	5	2	Develop student performance objectives for program offerings
6	33	Help students develop self-discipline and confidence	6	3	Determine student program needs
7	30	Determine OSHA requirements	7	1	Develop course or program goals and objectives
8	3	Determine student program needs	8	14	Help students develop self-discipline and confidence

TABLE 28 (Continued)

Teachers			Administrators		
Rank	Item Number	Competency	Rank	Item Number	Competency
9	34	Help students pursue opportunities	9.5	34	Help students pursue opportunities
10	11	Select audio-visual materials	9.5	38	Develop/coordinate student extracurricular activities
11.5	24	Assess student output according to industry employment standards	11.5	27	Evaluate test instrument validity
11.5	27	Evaluate test instrument validity	11.5	37	School-community relations
13	32	Review students' records	13	8	Plan activities for a lesson
14	1	Develop course or program goals and objectives	14	17	Employ reinforcement techniques
15	15	Help students develop habits	15	7	Select teaching techniques
16	2	Develop student performance objectives for program offerings	16	5	Write course outlines
17	17	Employ reinforcement techniques	17	32	Review student's records
18	14	Help students develop problem solving skills	18	28	Evaluate program effectiveness

TABLE 28 (Continued)

Teachers			Administrators		
Rank	Item Number	Competency	Rank	Item Number	Competency
19	28	Evaluate program effectiveness	19	16	Utilize/evaluate teaching methods
20	12	Utilizing duplicating equipment	20	19	Perform team teaching methods
21	29	Maintain records	21	9	Plan, present and evaluate a lesson
22	21	Utilize audio-visual aids	22	6	Select methods of evaluation
23	31	Manage lab/shop areas	23	4	Develop student performance objectives for a unit or lesson
24	19	Perform team teaching methods	24	24	Assess student output according to industry employment standards
25	6	Select methods of evaluation	25	22	Establish performance criteria
26	36	Assist graduates in job placement	26	26	Develop tests
27	22	Establish performance criteria	27	30	Determine OSHA requirements
28	8	Plan activities for a lesson	28	29	Maintain records
29	10	Select instructional materials	29	13	Coordinate/supervise lab/shop

TABLE 28 (Continued)

Teachers			Administrators		
Rank	Item Number	Competency	Rank	Item Number	Competency
30	16	Utilize/evaluate teaching methods	30	31	Manage lab/shop areas
31	20	Utilize visual aids	31	35	Aid students in applying for scholarships, loans, etc.
32	4	Develop student performance objectives for a unit or lesson	32	11	Select audio-visual materials
33	7	Select teaching techniques	33	20	Utilize visual aids
34	5	Write course outlines	34.5	10	Select instructional materials
35	13	Coordinate/supervise lab/shop	34.5	23	Determine student grades
36	26	Develop tests	36	36	Assist graduates in job placement
37	23	Determine student grades	37	21	Utilize audio-visual aids
38	9	Plan, present and evaluate a lesson	38	12	Utilize duplicating equipment

"more development needed" category. Rated second was item 33, "help students develop self-discipline and confidence". The competency least emphasized by administrators was item 12, "utilize duplicating equipment".

Inspection of the ten highest ranked competencies by administrators would tend to suggest that the performance competency areas most emphasized were instructional delivery and those aspects of planning instruction related to developing objectives and determining student needs. At the same time, certain aspects of planning instruction were among the least emphasized by administrators. Administrators indicated that teachers needed the least amount of development in the selection of methods to evaluate students and the selection of instructional material aspects of planning instruction.

Table 29 shows a comparison of the number and percentage of teachers and administrators who had a large number of total responses in the "not applicable" category for the competencies listed. Inspection of the table shows a consistency of agreement between the two groups. Both teachers and administrators indicated that item 35, "aid students in applying for scholarships and loans", and item 38, "develop/coordinate student extracurricular activities", did not apply to their schools' programs. At 43.2 and 33.7 percent, respectively, a higher percentage of teachers than administrators felt that these competencies did not apply.

A review of teacher and administrator write-in responses related to other areas important to develop in in-service education programs

TABLE 29

COMPARISON OF NOT APPLICABLE RESPONSES BY TEACHERS AND ADMINISTRATORS
N = 177

Item Number	Competency	Teachers N	Teachers %	Administrators N	Administrators %
35	Aid students in applying for scholarships and loans, etc.	177	43.2	51	30.3
38	Develop/coordinate student extracurricular activities	138	33.7	44	26.1

revealed that there was some consistency of agreement in four areas, even though there were considerably fewer overall administrator responses. As indicated in Figure 1, teachers and administrators felt that more development was needed in the areas of "dealing with student problems", "teaching methodology", "time management", and "update of occupational skills". Teacher response items 4 and 5 might show some evidence of lack of agreement or lack of communication between teachers and administrators about program needs.

Table 30 shows the results of the t-test between teachers and administrators on the 38 teacher competency needs. Indicated on this table are the mean scores and standard deviations of teachers and administrators for the 38 competencies, the t-value, number of degrees of freedom for each competency and the confidence interval tabulated at the .05 level. Also presented is a significance statement for each competency where comparisons between the two groups were made.

Observation of this table shows 31 competencies where significant differences exist between teachers and administrators. Administrators recorded higher mean scores than did teachers on all but two of the 31 competency needs found to have significant differences. Item 12, "utilize duplicating equipment", and item 35, "aid students in applying for scholarships and loans", showed that teachers felt more strongly that they needed more development in these areas than did administrators. Administrators attached a greater degree of importance to 29 of the 31 competencies where

Teachers	Administrators
1. Deal with student problems	1. Deal with student problems
2. Update occupational skills	2. Teaching methodology
3. Teaching methodology	3. Time management
4. Articulate program needs to school administrators	4. Update occupational skills
5. School-business/industry interface	
6. Time management	

Figure 1. A Comparison of Teacher and Administrator Write-In Responses

TABLE 30

COMPARISON OF t-TEST RESULTS OF TEACHERS VERSUS ADMINISTRATORS

Item Number	Competency	Teachers Mean	Teachers SD	Administrators Mean	Administrators SD	T Value	DF	P	P <.05
1	Develop course or program goals and objectives	2.774	.858	3.215	.877	-5.42	546	.000	YES
2	Determine student performance objectives for program offerings	2.760	.811	3.257	.887	-6.35	549	.000	YES
3	Determine student program needs	2.850	.893	3.222	.939	-4.38	549	.000	YES
4	Develop student performance objectives for a unit or lesson	2.594	.746	3.000	.903	-5.42	551	.000	YES
5	Write course outlines	2.563	.818	3.092	.937	-6.47	535	.000	YES
6	Select methods of evaluation	2.665	.822	3.006	.945	-4.23	551	.000	YES
7	Select teaching techniques	2.572	.785	3.103	.970	-6.79	557	.000	YES
8	Plan activities for a lesson	2.621	.827	3.141	.874	-6.63	555	.000	YES
9	Plan, present and evaluate a lesson	2.470	.721	3.012	.920	-7.46	562	.000	YES
10	Select instructional materials	2.618	.840	2.769	.849	-1.87	527	.061	NO
11	Select audio-visual materials	2.825	.971	2.814	.825	.13	538	.897	NO
12	Utilize duplicating equipment	2.703	.908	2.472	.738	2.73	510	.007	YES

TABLE 30 (Continued)

Item Number	Competency	Teachers Mean	Teachers SD	Administrators Mean	Administrators SD	T Value	DF	P	P <.05
13	Coordinate/supervise lab/shop	2.488	.746	2.936	.922	-5.92	537	.000	YES
14	Help students develop problem solving skills	2.712	.852	3.206	.934	-6.08	563	.000	YES
15	Help students develop habits	2.766	.894	3.298	.928	-6.35	560	.000	YES
16	Utilize/evaluate teaching methods	2.607	.794	3.054	.899	-5.84	558	.000	YES
17	Employ reinforcement techniques	2.717	.812	3.123	.924	-5.15	556	.000	YES
18	Assist slow and more capable learners in same class	2.982	.936	3.454	.904	-5.46	553	.000	YES
19	Perform team teaching methods	2.665	.833	3.020	.900	-4.26	508	.000	YES
20	Utilize visual aids	2.607	.837	2.810	.861	-2.54	538	.011	YES
21	Utilize audio-visual aids	2.698	.914	2.751	.798	-.63	540	.527	NO
22	Establish performance criteria	2.626	.779	2.974	.914	-4.53	556	.000	YES
23	Determine student grades	2.472	.713	2.770	.903	-4.13	555	.000	YES
24	Assess student output according to industry employment standards	2.793	.897	2.980	.919	-2.18	542	.029	YES

TABLE 30 (Continued)

Item Number	Competency	Teachers Mean	Teachers SD	Administrators Mean	Administrators SD	T Value	DF	P	P <.05
25	Devise self evaluation techniques	3.018	.914	3.335	.913	-3.63	535	.000	YES
26	Develop tests	2.486	.739	2.974	.956	-6.36	545	.000	YES
27	Evaluate test instrument validity	2.794	.925	3.142	1.013	-3.83	526	.000	YES
28	Evaluate program effectiveness	2.711	.835	3.064	.972	-4.24	541	.000	YES
29	Maintain records	2.702	.909	2.953	.888	-2.87	534	.004	YES
30	Determine OSHA requirements	2.911	.928	2.956	.935	-.48	475	.632	YES
31	Manage lab/shop areas	2.676	.926	2.915	1.022	-2.61	475	.009	NO
32	Review students' records	2.785	.872	3.069	.918	-3.40	543	.001	YES
33	Help students develop self-discipline and confidence	2.932	.923	3.373	.950	-5.13	563	.000	YES
34	Help students pursue opportunities	2.841	.902	3.205	.892	-4.26	538	.000	YES
35	Aid students in applying for scholarships and loans, etc.	3.236	.999	2.872	.900	3.23	332	.001	YES

TABLE 30 (Continued)

Item Number	Competency	Teachers Mean	Teachers SD	Administrators Mean	Administrators SD	T Value	DF	P	P <.05
36	Assist graduating students in job placement	2.635	.848	2.763	.884	-1.43	442	.154	NO
37	School-community relations	3.006	.975	3.142	.918	-1.40	446	.163	NO
38	Develop/coordinate student extra-curricular activities	3.120	.917	3.205	.896	-.83	372	.406	NO

significant differences were noted.

The reasons for these differences are not clear. There is a possibility that some administrator and teacher roles were perceived as being the same, or having some overlap within the schools. For example, item 36, "assist graduates in job placement", is a function routinely performed by school administrators. However, 29 percent of trade and technical teachers considered this competency not applicable to their programs. The sample size may also help explain some of the differences. There were 168 administrator respondents, while teachers represented 409 of the 577 total. A larger administrator sample may have produced other differences, or no significant differences at all.

Reliability of the Instrument

The overall reliability of the responses to the 38 teacher competency needs yielded a coefficient of .9424. This compared favorably to the Anderson and Barnes (1979) results which yielded a coefficient of .9695.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to identify the in-service education needs of full-time proprietary trade and technical school teachers in NATTS accredited schools. The questions to be answered concerned teacher and administrator perceptions of the need for more development in 38 required teacher competencies, the rank order of importance of those competencies, the determination of whether differences existed between teacher and administrator responses to those competencies, and the identification of other competencies which were perceived by both groups as important for teachers to develop in in-service education programs.

A review of the literature and related research was conducted for the purposes of gaining greater insight into the background and operations of proprietary schools, identifying relevant trade and technical school teacher competencies, and reviewing the process of in-service education.

The data for this study were gathered using the mail questionnaire. The population consisted of full-time teachers and their administrators in schools accredited by NATTS. The selection of teachers was based on type of school and the occupational

specialty program taught within each, using the criterion of the most experienced teacher in each program. The top administrator from each school selected also answered the questionnaire.

Packets containing questionnaires for each participant were mailed to each school administrator for distribution and return. Each mailing of the questionnaire included a cover letter explaining the purpose of the study and encouraging their cooperation and early response. The total return of the questionnaire was 577. This figure represented 40 percent of the sample.

Due to the low response rates of many of the school types represented, the original 16 school types were condensed into four school types, trade and technical, business, health occupations and "other." Statistical treatment of the data was carried out through the use of the Statistical Package for the Social Sciences (SPSS). The data received from the respondents were keypunched and visually verified.

The data analysis for the study consisted of tabulating and tabling the data by percentages and frequency of response for each item contained in Part II of the questionnaire, and the determination of mean scores, percentages and frequency of responses for all items in Part I. This analysis made it possible to describe the sample and its subgroups in terms of the responses obtained from the data collection instrument.

T-tests were used to determine if significant differences existed between teacher and administrator responses to the 38 competency statements which made up Part I of the questionnaire.

Reliability coefficients were generated using Cronbach's Alpha to determine the overall reliability of the responses to the 38 competency statements.

Teacher Demographics

The following is a summary of the data collected in this study. The first group of findings relate to the background information gathered from the teacher respondents and describe this segment of the sample.

1. The largest group of respondents to this study, or 61.5 percent, were male teachers in which the majority taught in trade and technical schools. The almost two to one preponderance of males over females support findings by Podesta (1966), Johnson (1967), Wolman (1972), and Wilms (1973).

2. Fifty-five percent of all respondents were between 30 and 44 years of age. The average was 41 years.

3. Among programs taught by ten or more teachers, approximately 36 percent were either electronics or computer occupations provided at trade and technical schools.

4. Approximately 47 percent of all teachers had between five and 14 years of work experience. Those respondents reporting less than five years represented about 30 percent of the teacher sample. The average work experience for all teachers was 11 years.

5. Seventy percent of all teachers had less than 10 years of teaching experience. Approximately 40 percent had less than five years of teaching experience. The average teaching experience for

all teachers was eight years.

6. Approximately 36 percent of all respondents reported the newspaper advertisement as their method for employment. Private employment agencies, state and county employment agencies, and various other methods were seldom used to acquire their teaching positions.

7. Sixty percent of all teachers sampled in the study held an associate degree or less. Thirty percent reported having attained some college. This finding has some consistency with the Wilms (1973) study. Wilms found that the average teacher held an associate degree, compared to a bachelor's degree for public school teachers.

8. Approximately 47 percent, or one-half of all teacher respondents, had participated in occupational training programs in either trade and technical schools or company training programs.

Teacher In-service Competency Needs

The following major findings related to data gathered on teacher in-service competency needs which were rated by teachers and administrators.

1. Health occupations teachers indicated the need for more development in the area of developing and coordinating student extra-curricular activities.

2. As a group, teachers felt that their skills were adequate in the 38 required teacher competencies.

3. The required teaching competency most emphasized for additional development by all teachers was providing aid to students

applying for scholarships and loans.

4. The required teaching competency least emphasized by teachers as a group was planning, presenting and evaluating a lesson.

5. Teachers identified two required competencies which they considered not applicable to their programs. Competency number 35 concerned the ability to aid students in applying for scholarships and loans. Competency number 38 concerned the ability to develop and coordinate student extracurricular activities.

6. Among the write-in responses, teachers felt that the area of greatest emphasis for development was in dealing with the variety of student problems encountered in the school environment.

7. The required teaching competency most emphasized by administrators was assisting slow and more capable learners in the same class.

8. The required teaching competency least emphasized by administrators was utilizing duplicating equipment.

9. Although not statistically significant, administrators felt that teachers required some development in 19 of the 38 competencies rated.

10. Among write-in responses, administrators felt that the area of greatest emphasis for teacher development was in dealing with the variety of student problems encountered in the school environment.

11. There was general agreement among a large number of teachers and administrators about the non-applicability to proprietary school programs of competencies related to aiding students in applying for scholarships and loans and developing/coordinating student

extracurricular activities.

12. Significant disagreement existed between teachers and administrators with respect to the degree of perceived need for development of 31 of the 38 teacher competencies.

Conclusions

Based on the findings of the present study, several conclusions were drawn.

1. Based on the data collected, a profile of the proprietary trade and technical school teacher associated with NATTS was developed. This teacher is typically male, between 30 and 44 years old and teaches either electronics or computer occupations at a trade and technical school. He has an average of ten years of work experience, eight years of teaching experience and obtained his teaching job as a result of a newspaper advertisement. He typically had some college training but less than a bachelor's degree, and generally received his work related training at a trade and technical school or in a company training program. These findings support evidence in the literature of the tendency of proprietary schools to employ male teachers who are generally younger than teachers at public vocational-technical schools, have less traditional education, and less teaching experience.

2. There was general agreement among all administrators and teachers that in-service teacher education programs, as related to the 38 teacher competencies, are satisfactory. The satisfactory nature of the preparation of teachers as they perceived themselves is

reflected in the fact that only one competency was identified as in need of more development, and this need was only identified by business teachers. The largest percentage of respondents indicated that teachers had adequate skills in the 38 competencies.

3. Teachers perceived their strengths as pedagogic. They were most effective in those competency areas which emphasized planning instruction.

4. Teachers perceived a need to develop those competencies which emphasized a "helping relationship" outside the classroom setting. Teachers were least effective in those competencies which emphasized guidance and counseling, school-community relations and student organizations.

5. Administrators perceived their teachers' strengths to be technical. They indicated that teachers were most effective at those competencies that involved "doing something" with materials or equipment that supported the learning process. These indications were most evident in the areas of planning instruction and instructional delivery.

6. Administrators perceived their teachers' weaknesses to be pedagogic. They perceived their teachers to be least effective in those competencies which entailed developing objectives, assessing student needs and helping students in the classroom setting. These indications were most in evidence in the areas of planning instruction and instructional delivery.

7. Based on open-ended responses, both teachers and their administrators emphasized the need for additional development in

human relations skills necessary to deal with students of diversified ages, backgrounds and abilities. The specific nature of many of these responses indicated that teachers required more development in many sub-areas that were not adequately assessed by the 38 competencies treated in this study.

8. Although analysis of "not applicable" responses was not a primary aim of this study, the consistency of the responses obtained from teachers and administrators provided a basis for reassessment of the content and face validity of the questionnaire.

9. In-service education programs have not identified or clarified the full range of competencies that relate to the job roles of proprietary school teachers.

Recommendations for Practice

Based on the review of the data gathered for this study, the following general recommendations have been made:

1. The data reported in this study should be presented to the accrediting commission and the board of directors of NATTS for appropriate review of the major findings.

2. The data reported in the study should be made available to administrators of NATTS member schools for use as a basis for initiating, expanding, or improving their in-service education programs.

3. In view of the competencies ranked highest by teachers and administrators, it is recommended that in-service education programs stress the performance competency areas of instructional planning,

instructional delivery, and guidance and counseling.

4. The identification of the need for more development by teachers of skills that would prepare them to deal with a variety of problems observed in their students indicates a possible direction for improvement of in-service education programs. Programs which stress behavioral objectives, human relations skills, motivation techniques, guidance and counseling, planning for individual differences and providing for the special needs of disadvantaged students could be effective in strengthening the identified areas of need. Therefore, it is recommended that both pre-service and in-service education programs give greater emphasis to these areas.

5. It is recommended that a joint and cooperative effort be established between teachers and administrators to better determine school curricula and in-service program needs.

6. As a result of this study, a comprehensive profile of the work experience and educational backgrounds of school administrators should be constructed as a basis for determining if significant differences in teacher and administrator responses may be attributed to these factors.

Recommendations for Research

1. It is recommended that the 38 teacher competency statements be revalidated by proprietary school researchers in view of the inconsistent pattern of responses to those competencies which received a substantial number of "not applicable" responses.

2. In view of the fact that all of the 38 competencies were considered essential by proprietary school educators, it is recommended that structured or unstructured interviews be used as data collection techniques in future studies of a similar nature, in order to gain a better understanding of why a significant number of respondents indicated that certain competencies did not apply to their programs.

Recommendations for Additional Research

Additional studies should be conducted in the following areas:

1. A study to determine the in-service education competency needs of part-time proprietary trade and technical school teachers.

2. A study to determine the extent of need for in-service programs to keep teachers updated technologically in their occupational fields.

3. A study to determine the extent of implementation of the NATTS recommended CBTE program and its impact on teacher effectiveness.

4. An analysis of the evaluation systems used within various types of proprietary schools to rate teacher performance.

5. A study to determine the impact of the implementation of a tenure system within proprietary schools related to teacher performance, retention rates and impact on school operating costs.

6. Studies to develop exemplary curriculum programs for the various disciplines in proprietary school education.

7. A comparative analysis of the characteristics of teachers employed by corporate owned and operated schools versus schools that are under other types of ownership.

8. A comparison of the performance of traditionally prepared proprietary school teachers versus those who are nontraditionally prepared.

9. A study of the attitudes and understandings of proprietary school administrators and teachers toward training disadvantaged students.

10. An analysis of the competencies and preparation that proprietary school administrators should have.

11. A review of public financial support and school eligibility requirements since enactment of the Educational Amendments of 1972.

12. Studies to identify and validate competencies unique to proprietary school education programs.

13. An analysis of types of students enrolled in NATTS accredited schools, their program completion rates and their job placement success rates.

14. An indepth study of NATTS teachers to determine who they are and the nature and extent of their teacher education backgrounds.

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APPENDIXES

APPENDIX A

DATA COLLECTION INSTRUMENTS (ADMINISTRATOR QUESTIONNAIRE, INSTRUCTIONS TO ADMINISTRATORS, TEACHER QUESTIONNAIRE)

INSTRUCTIONS TO ADMINISTRATORS

For completing Teacher In-service Education Needs Survey

1. Administrator: Please distribute the enclosed teacher questionnaire(s) to the most experienced full-time teacher in each of the occupational specialty areas designated on the label attached to each questionnaire. If you have teachers that teach more than one of the occupational specialties designated (example: computer programmer also teaches data entry), please have that teacher complete only one survey.

   The directions for completion are on the questionnaire.

2. Administrator: Please complete the pink survey. Complete your questionnaire by assessing the collective in-service development needs of all your teachers, not your own personal development needs.

3. Each questionnaire should take approximately 15 minutes to complete.

4. Each teacher has been asked to seal and return the questionnaire response in the enclosed postage-paid envelope.

5. Please ensure completed questionnaires are returned not later than July 21, 1988.

   Your cooperation and assistance is deeply appreciated.

SURVEY OF IN-SERVICE EDUCATION NEEDS OF PROPRIETARY TRADE AND TECHNICAL SCHOOL TEACHERS

INSTRUCTIONS: Please respond to each item on this survey. When completed, return the survey in the enclosed postage-paid envelope.

The following terms are defined for clarification:

1. Administrator - The educational director, manager, owner, supervisor, or other designated individual within a given school who is responsible for management of the school's in-service teacher development program.

2. Competency - the knowledge, skills, and attitudes required to perform a given task.

3. Occupational Specialty Program - A complete post-secondary trade and technical training program which lasts from six weeks to two years or more.

A variety of competencies required by teachers are listed in this section. Please rate each item by circling one response number following each statement that most nearly expresses your assessment of the needs for additional development or training of the teachers you supervise. Rate your responses using the following scale:

5. More development is essential
4. More development is needed.
3. Very little development is needed
2. Have adequate skills
1. Not sure or undecided
0. Not applicable

I. PLANNING INSTRUCTION

My teachers need additional development in instructional planning to:

1. Develop course or program goals and objectives 5 4 3 2 1 0

2. Develop student performance objectives for the program offerings 5 4 3 2 1 0

3. Determine student needs, interests, abilities and capabilities for program completion 5 4 3 2 1 0

4. Develop student performance objectives for one lesson or unit or a series of lessons (units) 5 4 3 2 1 0

5. Write course outlines for a series of lessons (units) 5 4 3 2 1 0

6. Select methods of evaluating student performance 5 4 3 2 1 0

7. Select teaching techniques for a lesson 5 4 3 2 1 0

5. More development is essential.
4. More development is needed.
3. Very little development is needed.
2. Have adequate skills.
1. Not sure or undecided.
0. Not applicable.

8. Plan student learning experiences (activities) for a lesson 5 4 3 2 1 0

9. Plan, present, and evaluate a lesson 5 4 3 2 1 0

10. Select textbooks, reference and other instructional materials 5 4 3 2 1 0

11. Select appropriate audio-visual materials for instructional purposes 5 4 3 2 1 0

12. Reproduce instructional materials with a variety of duplicating equipment 5 4 3 2 1 0

II. INSTRUCTIONAL DELIVERY

My teachers need additional development in instructional delivery to:

13. Coordinate and supervise lab/shop experiences 5 4 3 2 1 0

14. Assist students in developing problem-solving 5 4 3 2 1 0

15. Assist students in developing appropriate habits 5 4 3 2 1 0

16. Utilize and evaluate the appropriateness of a variety of instructional methods to include illustrated talks, demonstrating manual (hands-on) skills, and directing individualized instruction 5 4 3 2 1 0

17. Employ reinforcement techniques to facilitate learning 5 4 3 2 1 0

18. Provide a lesson designed to meet the needs of the slower and the more capable students in a class at the same time 5 4 3 2 1 0

19. Plan, present, and evaluate a lesson as a member of a teaching team 5 4 3 2 1 0

20. Present information using bulletin boards, exhibits, flannel boards, chalkboard, flip charts, etc. 5 4 3 2 1 0

21. Present information using overhead projectors, opaque projectors, filmstrips, slides, films, records, tapes, and television materials 5 4 3 2 1 0

III. INSTRUCTIONAL EVALUATION

My teachers need additional development in instructional evaluation to:

22. Establish criteria for measuring student performance and progress 5 4 3 2 1 0

23. Determine student's grades based on related instruction and lab/shop work 5 4 3 2 1 0

24. Appraise student's output according to industry employment standards 5 4 3 2 1 0

25. Devise self-evaluation techniques for use by students 5 4 3 2 1 0

26. Develop essay test items; true-false test items; completion test items; matching multiple-choice test items, and lab/shop rating sheets 5 4 3 2 1 0

27. Evaluate the validity of a test instrument 5 4 3 2 1 0

28. Evaluate the overall effectiveness of program in terms of course and program objectives 5 4 3 2 1 0

5. More development is essential.
4. More development is needed.
3. Very little development is needed.
2. Have adequate skills.
1. Not sure or undecided.
0. Not applicable.

IV. INSTRUCTIONAL MANAGEMENT

My teachers need additional development in instructional management to:

29. Devise and maintain a filing system for records, report forms, and instructional materials 5 4 3 2 1 0

30. Determine current Occupational Safety and Health Administration and industry safety requirements and standards 5 4 3 2 1 0

31. Arrange and manage lab/shop work areas. This include storage and security of supplies and equipment, check-procedures for tools and supplies and scheduling lab/shop equipment for maximum student utilization 5 4 3 2 1 0

V. GUIDANCE AND COUNSELING

My teacher need additional development in student guidance and counseling to:

32. Review student's records for information to aid in understanding the students 5 4 3 2 1 0

33. Assist students in developing self-discipline and confidence 5 4 3 2 1 0

34. Help students discover personal, educational, and occupational opportunities — 5 4 3 2 1 0

35. Assist students in applying for scholarships or educational loans, or other college admission — 5 4 3 2 1 0

36. Assist graduating students in completing applications, resumes and preparing for interviews with potential employers — 5 4 3 2 1 0

5. More development is essential
4. More development is needed.
3. Very little development is needed.
2. Have adequate skills.
1. Not sure or undecided.
0. Not applicable.

VI. SCHOOL-COMMUNITY RELATIONS

My teachers need additional development in school-community relations to:

37. Maintain relations with employment agencies, union officials, professional and/or service organizations — 5 4 3 2 1 0

VII. STUDENT ORGANIZATIONS

My teachers need additional development in student organizations to:

38. Develop and coordinate student extracurricular activities and professional clubs — 5 4 3 2 1 0

VIII. If you have any other areas that your teachers may need improvement or development in, please list and rate them in the same manner.

39. _____ — 5 4 3 2 1 0

_____

40. _____ 5 4 3 2 1 0

_____

Would you like a summary of the findings? Yes___ No___

THANK YOU FOR COMPLETING THIS FORM!

SURVEY OF IN-SERVICE EDUCATION NEEDS OF PROPRIETARY TRADE AND TECHNICAL SCHOOL TEACHERS

INSTRUCTIONS: Please respond to each item on this survey. When completed, return the survey in the enclosed postage-paid envelope.

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2. Competency - The knowledge, skills, and attitudes required to perform a given task.

3. Occupational Specialty Program - A complete post-secondary trade and technical training program which last from six weeks to two years or more.

PART I - TEACHER COMPETENCIES

A variety of competencies required by teachers are listed in this section. Please rate each item by circling one response number following each statement that most nearly expresses your need for additional development or training. Rate your responses using the following scale:

5. More development is essential.
4. More development is needed.
3. Very little development is needed.
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4. Develop student performance objectives for one lesson or unit or a series of lessons (units). 5 4 3 2 1 0

5. Write course outlines for a series of lessons (units). 5 4 3 2 1 0

6. Select methods of evaluating student performance. 5 4 3 2 1 0

7. Select teaching techniques for a lesson. 5 4 3 2 1 0

8. Plan student learning experiences (activities) for a lesson. 5 4 3 2 1 0

9. Plan, present, and evaluate a lesson. 5 4 3 2 1 0

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12. Reproduce instructional materials with a variety of duplicating equipment. 5 4 3 2 1 0

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14. Assist students in developing problem-solving skills. 5 4 3 2 1 0

15. Assist students in developing appropriate habits. 5 4 3 2 1 0

16. Utilize and evaluate the appropriateness of a variety of instructional methods to include illustrated talks, demonstrating manual (hands-on) skills, and directing individualized instruction 5 4 3 2 1 0

17. Employ reinforcement techniques to facilitate learning. 5 4 3 2 1 0

18. Provide a lesson designed to meet the needs of the slower and the more capable students in a class at the same time. 5 4 3 2 1 0

19. Plan, present, and evaluate a lesson as a member of a teaching team. 5 4 3 2 1 0

20. Present information using bulletin boards, exhibits, flannel boards, chalkboard, flip charts, etc. 5 4 3 2 1 0

21. Present information using overhead projectors, opaque projectors, filmstrips, slides, films, records, tapes, and television materials. 5 4 3 2 1 0

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27. Evaluate the validity of a test instrument. 5 4 3 2 1 0

28. Evaluate the overall effectiveness of program in terms of course and program objectives. 5 4 3 2 1 0

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35. Assist students in applying for scholarships or educational loans, or other college admission 5 4 3 2 1 0

36. Assist graduating students in completing applications, resumes and preparing for interviews with potential employers 5 4 3 2 1 0

VI. SCHOOL-COMMUNITY RELATIONS

I need additional development in school-community relations to:

37. Maintain relations with employment agencies, union officials, professional and/or service organizations 5 4 3 2 1 0

VII. STUDENT ORGANIZATION

I need additional development in student organizations to:

38. Develop and coordinate student extracurricular activities and professional clubs 5 4 3 2 1 0

VIII. If you have any other areas that you may need improvement or development in, please list and rate them in the same manner.

39. _____ 5 4 3 2 1 0
_____

40. _____ 5 4 3 2 1 0
_____

PART II - BACKGROUND INFORMATION

1. Sex Male _____ Female _____

2. What year where you born? _____

3. What is the primary occupational specialty program in which you teach?

_____

4. Number of years of work experience in your occupational specialty prior to teaching.

_____

5. Number of years of teaching experience. _____

6. How were you recruited for this teaching job? (Check only one.)

_____ Direct recruitment by school from business or industry

_____ Newspaper or magazine advertisement

_____ Own personal inquiry

_____ Remained to teach after completion of studies

_____ Private employment agency

_____ State or county employment agency

_____ Referral by acquaintance

_____ Other (please specify)

_____

7. Highest Education Level (Check one)

_____ Grade School

_____ High School No Diploma

_____ Associate Degree

_____ Bachelors Degree

_____ High School Diploma or GED

_____ Some College No Degree

_____ Masters Degree

_____ Doctorate Degree

8. Excluding educational training covered in question 7, in which of the following special training programs have you participated? (Check any that apply)

_____ Apprenticeship

_____ Business School(s)

_____ Internship

_____ Company Training Program

_____ Trade or Technical School(s)

_____ Armed Forces

_____ Correspondence Course(s)

_____ Other _____

_____ None

THANK YOU FOR COMPLETING THIS FORM!

APPENDIX B

PANEL OF EXPERTS

PANEL OF EXPERTS

Dr. Jack Bainter
ITT Educational Services
National Director of Education
Indianapolis, IN

Laura Connor
Director of Professional Development
National Association of Trade and Technical Schools
Washington, D.C.

Dr. Sam Kerr
Assistant Superintendent
Moore-Norman Vocational Technical Institute
Norman, OK

Dr. Kay Rogers
Assistant Superintendent
The Francis Tuttle Vocational Technical Center
Oklahoma City, OK

Dr. Brenda Stacy
Evaluation Specialist
Oklahoma State Department of Vocational and
Technical Education
Stillwater, OK

Dr William Schoonmaker
Director of Education
International Career Institute
New York, NY

APPENDIX C

TEACHER AND ADMINISTRATOR COVER LETTERS

Dear Teacher,

I am surveying the in-service education needs of trade and technical school teachers in institutions accredited by the National Association of Trade and Technical Schools and would appreciate your cooperation in this effort.

The attached questionnaire is designed to obtain your assessment of both the competencies required to be effective as a teacher in your occupational field and your perceptions about your need for additional development in those areas. This information can be useful to school administrators in designing in-service education programs to fulfill those needs.

Please take a few minutes to complete the questionnaire. In order to provide for the confidentiality of your responses, I have enclosed a postage-paid envelope in which you may seal and return the questionnaire after completion. Please return the survey no later than June 21, 1988.

Thank you in advance for your cooperation.

Sincerely,

Dear Administrator:

As you will recall from my letter of December 28, 1987, I am surveying the in-service education needs of trade and technical teachers in schools accredited by the National Association of Trade and Technical Schools.

The results of this study will identify the competencies needed by teachers of each trade and technical program, based on the perceptions of teachers and their administrators. The results will also help to determine those competencies where additional development could aid teachers in their teaching effectiveness, and assist administrators in designing a more effective in-service education program.

Enclosed are the following questionnaire items:

(1) instructions for administrators,

(2) ----- teacher questionnaire (s),

(3) ----- envelope (s) for each teacher to seal their completed questionnaire,

(4) one administrator questionnaire, and

(5) one postage-paid return envelope.

You may be assured of complete confidentiality. You will notice a number on your return envelope. This number will be used by me only to ensure that you are not bothered by reminder letters once all questionnaires from your school have been completed and returned. Response data will be reported only by type of program or school. Your school will not be identified in the study.

I appreciate your interest and support in assisting me to complete this study. Please return all questionnaires by June 28, 1988.

Sincerely,

Dear Administrator:

About one month ago I wrote you seeking information on teacher in-service education needs. As of today I have not received the completed questionnaires.

This survey was undertaken because of the belief that an identification of in-service education needs would be very beneficial to administrators in improving or designing an effective teacher in-service education program. As your school is well established within the private trade and technical field, the information you provide is therefore very important.

In the event that your survey packet has been misplaced, a replacement is enclosed which contains the following survey items:

(1) instructions for administrators,
(2) one administrator questionnaire,
(3) _____ teacher questionnaire(s),
(4) _____ postage-paid return envelopes.

Your cooperation is greatly appreciated.

Sincerely,

APPENDIX D

WRITE-IN RESPONSES - OTHER OCCUPATIONAL TRAINING PROGRAMS

OTHER WRITE-IN RESPONSES TO QUESTION NUMBER EIGHT
(Part II)

Additional Credit - 3

Career School - 7

Conferences - 2

Continuing Education - 8

Designing School - 2

Employment - 1

Factory School - 3

Government Training Program - 1

Graduate School - 1

Hobby - 1

Management - 1

On-the-Job-Training - 3

Reading - 1

Self Training by Practice - 2

Seminars - 11

Special Training - 2

Specialized Courses - 15

Specialized Teaching - 4

Teaching Course - 9

University Teaching - 6

University Training Program - 1

Volunteer Work - 1

West Milford Board of Education - 1

Workshops - 6

APPENDIX E

TEACHER AND ADMINISTRATOR WRITE-IN RESPONSES - OTHE IMPORTANT TEACHING COMPETENCY AREAS

OTHER IMPORTANT TEACHER COMPETENCY AREAS

TEACHER WRITE-IN RESPONSES TO

QUESTIONS 39 AND 40

1. New advancements in electronic state of the art
2. New and improved test and measurement systems
3. Develop communication between instructors and staff members
4. Functional workshops on use of various word processing programs
5. Need for feedback from industry on changing skills and skill levels demanded (update the business fields criteria standards for promotable employees)
6. Transcribing students need more physician dictated tapes from various medical fields
7. Time management
8. Instructors need to learn material before trying to teach it
9. Instructors need to work more as a team than as individuals
10. Establishing and maintaining a positive, productive classroom student
11. Vocational education courses in a university
12. Learning methodologies course
13. Metallurgy theory
14. Questioning and discussion techniques
15. Motivating students
16. Orchestrating more communication between the administration and the students
17. Department Director-Coordinator is missing in Fashion. No one in charge to oversee all that is being done by other instructors in the same course
18. How to reach and motivate disinterested students
19. How to offset "burnout" from apathy, even when there may be only one student in the class who does not respond--it has a negative effect
20. Maintain a professional appearance
21. Attrition
22. Help students set and maintain personal goals toward employment and personal success
23. Acquiring cooperation from students
24. Building and keeping the interest of students
25. Teaching handicapped students
26. Teaching students with emotional problems
27. Time management--to allow more effective teaching practices
28. More communication with administration, equally concerned about students' responsibilities as they are about protecting the FTE or income
29. New product evaluation
30. Wage scale incentives
31. Response to changing trade attitudes

32. Evaluate/determine qualifications for entry-level jobs of prospective employers
33. How to determine the kind of work that is legitimate homework, outside the classroom
34. How to determine the kind of material that lends itself to open book tests versus closed book tests
35. Periodic training on latest equipment in the industry, to keep with changing styles, etc.
36. Understanding of all areas of the Hotel-Motel Hospitality Industry, not one-sided
37. Dealing with negative attitudes
38. Motivating students
39. Attendance and promptness
40. Develop a rapport with students
41. Need to attend seminars put on by manufacturers to stay current with latest advancements in our industry
42. Teaching techniques
43. How to deal with the problem student
44. When all else fails, what do you do?
45. School needs more visual aids
46. Computer aided drafting program development
47. Analyzing of student attendance/academic ratios
48. Develop a system for keeping tools repaired
49. Develop a system for economical and timely equipment replacement and maintenance
50. More cutaway and working models
51. Electronic-fuel control training aids
52. Develop and coordinate the student and potential employer relationship
53. Human relations
54. Empathy
55. Upgrading teachers' competencies in different fields pertaining to subjects taught
56. Use of modern audio-visual aids related to subjects taught
57. Course background seminars
58. To learn how to handle the stress of retention rules and still maintain high academic standards
59. Methods to retain students
60. Keeping abreast of industry trends and informing students of daily careers in industry
61. Understanding the learning process
62. Patience
63. Plan programs and workshops specifically to improve teacher morale
64. Instructional/professional speakers for instructors in the various disciplines
65. Porcelain laboratory procedures
66. Development of crown and bridge alloys
67. Learning ways in which to communicate to employers the needs of the program
68. More in-service teaching techniques and special problem areas

69. Becoming a good role model
70. Motivation of students
71. Getting class feedback
72. Time management
73. Time management
74. Plan, present and evaluate lessons with new instructors
75. Coordinate and supervise lab experiences with new instructors

OTHER IMPORTANT TEACHER COMPETENCY AREAS

ADMINISTRATOR RESPONSES

1. Time management
2. Developing criteria for projects that can be objectifiable and measurable
3. Instructional techniques - how to help students develop speed on the shorthand machine
4. Professional appearance
5. Basic teaching skills
6. Motivation techniques
7. Motivating students
8. Assess student affective attitude performance
9. Employing oral questioning techniques in a lab or classroom setting
10. Industry interface for state of the art updating
11. Develop skills in holding students
12. Assistance in dealing with problem students, how to spot them and diffuse the problem early
13. Cooperation and teamwork
14. Extended experience/development in conflict management
15. Loving students in a nurturing way

VITA

Willie James Gladden

Candidate for the Degree of

Doctor of Education

Thesis: AN ASSESSMENT OF PERCEIVED IN-SERVICE EDUCATION NEEDS OF PROPRIETARY TRADE AND TECHNICAL SCHOOL TEACHERS

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in Winnsboro, South Carolina, November 1, 1953, the son of Arthur and Cora M. Gladden.

Education: Graduated from North Rowan High School, Spencer, North Carolina in May 1971; received Bachelor of Science degree in Business Administration from Fayetteville State University, Fayetteville, North Carolina in May, 1975; received Master of Public Administration degree from the University of Oklahoma in May, 1982; completed requirements for the Doctor of Education degree at Oklahoma State University in May, 1991.

Professional Experience: United States Air Force, 1975 to present; Deputy and Missile Combat Crew Commander, 1975-1980; Senior Director and Command, Control and Communications (C3) Crew Instructor, 1980-1981; Airborne Warning and Control System (AWACS) Airborne Weapons Director, 1981-1985; AWACS Exercise Director and Mission Simulator Instructor, 1985; AWACS Chief of Mission Simulation Development and Training Branch, 1985-1986; Battle Staff Instructor and Chief of C3 Systems Division, 1986-1989.

Professional Organizations: Tinker Management Association and American Society for Training and Development.