

THE EDUCATIONAL ORIENTATIONS
OF
OCCUPATIONAL-TECHNICAL EDUCATORS,

by

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DEDICATION

I dedicate this dissertation to my Mother,

and to my Father,

who taught me about the value of an education
and of caring for others.

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Chapter I

THE PROBLEM

Background of the Problem

Since the sixties, the student populations of community colleges and technical institutes have become more heterogeneous (Hyde, 1980). During the fifties and sixties, "traditional college students" found in the two-year schools were predominantly described as: recent high school graduates, having a median age of nineteen years, white and male, attending school on a full-time basis and enrolled in transfer programs for the most part (Medsker, 1960; Koos, 1970; Medsker and Tillery, 1971; Monroe, 1977).

Today, the two-year post-secondary student can be the above described "traditional" college student but is more likely to be one who is characterized as an out-of-school person, having a mean age of 27, five out of ten chances female, possibly a minority (minorities make up 26.7% of full-time enrollment and 19.8% of part-time enrollment), and attending school on a part-time basis because of role as a head or spouse of household (Hyde, 1980; AACJC, 1979). In addition, more students in both of these categories have enrolled in occupational-technical programs, due to increased technology, competition in the job market, and changes in career goals (Johnstone and Rivera, 1964;

National Center for Educational Statistics, 1975). In 1976 57.7 percent of the associate degrees awarded were in occupational categories (AACJC, 1979).

Therefore, the diversity of students presents community college faculties with a significant task, that of effectively meeting the needs of a student body which has changed considerably in recent years. To accomplish this task, flexibility is needed in student services, curriculum, support services, and instruction (Monroe, 1977). Specifically, in the area of instruction, there is evidence that the needs of today's community college students can be better met through innovative and nonconventional methods of teaching. The learning needs and styles of the community college student body are as varied as the students themselves. According to Joyce and Hodge (1981), greater diversity in these students and their learning styles logically leads to an increased need for flexibility in teaching styles, methods, and strategies.

As two-year post-secondary school enrollments increase around the nation, the need for well-trained teachers at this level has also increased. Surveys of enrollment patterns emphasize a demand for greater numbers of teachers with specific occupational-technical expertise (National

Center for Educational Statistics, 1975; Johnstone and Rivera, 1964). Administrators are recruiting these kinds of educators from teacher education institutions as well as business, industry, military, and government settings (Brown, 1976).

Consequently, occupational-technical faculty in the community college and technical institute come from a variety of backgrounds (Brown, 1976; Monroe, 1977). Some have been educated in four-year institutions to be teachers of their specific subject matter. Most of these faculty members have been schooled in secondary teaching methods. Other instructors come from extensive and lengthy backgrounds in industry and/or business. Still others qualify to teach certain vocational-technical subjects because of their military, government, or public service-related experience and skills (Keim, 1978). As a result, there is considerable variability in formal teacher training and level of familiarity with contemporary learning theory and practice among occupational-teaching faculty. Numerous studies on community college faculty have been conducted in recent years (Berry, 1978; Hill, 1978; Brawer, 1979; Sanchez, 1979). However, studies that focus specifically on the occupational-technical educator at the community college are few (Larson, 1965; Gunderson, 1971; Phair, 1974). This lack of research involving

vocational educators and students coupled with the increasing heterogeneity of both students and faculty at the technical institute level, points up the need for increased research efforts.

Consequently, with the presence of diverse community college student bodies and diverse occupational-technical faculties, increased flexibility in teaching style is an important consideration. This idea of flexibility in teaching is not a new notion. In the past researchers have addressed this issue especially in regard to flexibility in teaching methodology (Joyce and Weil, 1972; McKibbin, Weil and Joyce, 1977). Most recently, Madsen (1978) discussed flexibility in teaching style with an emphasis on personality role. Joyce and Hodgins (1981) endorse a teacher training program which attends to the development of a "repertoire" of personal interaction skills as well as a variety of teaching strategies.

All in all, the case for flexibility in teaching implies that teachers need to move from the traditionally prescribed role of "dispensers of knowledge" to the role of "facilitators of learning." In doing so, researchers and practitioners must examine where classroom educators currently stand regarding educational orientation, interper-

sonal behavior, and as a result, what this implies about current teaching styles. It is the intention of this study to focus on two of those factors: educational orientation and interpersonal behavior of a specific group of teachers in two-year post-secondary schools.

Statement of the Problem

The purpose of this study was to identify the variation in the educational orientation of occupational-technical faculty in four technical institutes in Tennessee and to investigate the relationship between that orientation and certain demographic and personality variables.

In a review of the literature on andragogical (student-oriented) and pedagogical (teacher or subject-oriented) teaching style, Kerwin (1979) states that "little is known about the factors that are related to the education orientations and teaching behavior of andragogical and pedagogical oriented educators." He also states that "more research in this area may help educators recognize the factors that might affect teaching behavior" (Kerwin, 1979, p. 112). Similarly, Holmes' (1977) research on Alabama university faculty and Alabama cooperative extension personnel showed a distinct dichotomy of educational orientations. Holmes' study also revealed certain relationships between educa-

tional orientation and variables of interpersonal behavior, sex and age.

The present study builds upon the research by Holmes (1977). Specifically, this study will seek to answer the following research questions:

1. What is the educational orientation of occupational-technical instructors at the post-secondary level as defined by the andragogical-pedagogical continuum? How much variability is there in educational orientation of these instructors?
2. What are the interpersonal behaviors reported by occupational-technical instructors at the post-secondary level in these technical institutes? How much variability is there in interpersonal styles of these instructors?
3. What is the relationship between educational orientation, interpersonal behaviors, sex, age, class size, years of schooling and years of occupational experience in a teaching speciality?

Significance of the Study

There are several reasons for studying this particular problem. In the past, a great deal of research has been conducted on elementary, secondary, university and college learning environments. Teaching styles in these settings have been examined in numerous studies (Acland, 1974; Brophy, 1973; Domino, 1971; Flanders, 1970; Heath and Nielson, 1979; McKeachie, 1968; Rosenshine and Furst, 1973, Ryans, 1960; Trent and Cohen, 1973). These studies omitted the two-year schools for the most part (Trent and Cohen, 1973). Since the two-year schools are different in purpose, clientele, and characteristics of teaching staff from these other educational settings, generalizing from those settings to the two-year college is inappropriate.

The clientele of two-year schools offering occupational-technical programs varies from adults to out-of-school youth. The vocational-technical faculties have a mixture of educational backgrounds, work experiences, professional beliefs, and personality types. With less uniformity on the part of these students and educators as compared with those in other institutions, there is a need for research on many aspects of teaching learning processes in the two-year setting.

The findings of this study will be helpful in determining whether occupational-technical educators are prepared to meet the increasingly difficult challenges of teaching very dissimilar students in the same classroom. The use of a predominantly teacher- or subject-centered approach throughout one's curriculum may stifle the effectiveness of the occupational-technical instructor who is serving a diverse group of students (South, 1975). However, the use of an andragogical approach (student-centered) may be more applicable to teaching the highly variable but predominantly adult population in occupational programs (South, 1975; Joseph, 1977). This is suggested by Knowles (1970) in his comparison of the pedagogical and andragogical models of teaching. Historically, instruction in this country has drawn from the pedagogical model. The style of teaching associated with this predominant model is characterized by an authoritarian approach. The teacher's judgment is rooted in tradition, accepted views, and practices of the physical and social universe. This style of teaching promotes student achievement through the efficient transmission of ideas and logical organizations of thought. Teacher-centered behavior and philosophy prevail in this approach to learning (Knowles, 1970).

As adult education came into being, educators resorted to the same pedagogical model for teaching methods and practices, as it was the only model at hand. In time, educators found that this approach did not always work effectively with older students. With the advent of more diverse student populations, other educators suggested alternatives to the pedagogical style (London and Werkert, 1972; Chickering, 1975). Knowles defines the more autocratic method as pedagogical and offers a mode of teaching that will attend to the developmental, social, and physiological needs of students. Knowles (1975) calls his alternative "'andragogy'" which he defines as follows:

'Andragogy' from the combining of the form andr of the Greek word aner (meaning 'man') and agogus (meaning 'leader'). Andragogy is defined therefore as the art and science of helping adults (or, even better, maturing human beings) learn (p. 19).

Herschel Hadley (1975) offers a more specific account:

The orientation of an andragogical educator stresses free choice of alternative goals for learning, with interdependent decision and action among students and between students and educator as the basis of effective learning. The educator perceives his relationship to the student as that of helper, resource, consultant, and co-learner. The goal is to increase effectiveness of learning by encouraging situations which increase cooperative interaction among learners and increase their participation in the direction of their learning (pp. 7-8).

Knowles (1970) has proposed five assumptions on which he makes a case for supporting an andragogical teaching style.

This is not to say that pedagogy is better or worse than andragogy; it is only to say that perhaps the use of andragogy should be better understood and used more comprehensively in traditional as well as nontraditional college classrooms. First, Knowles (1970) states that as a person matures, the self-concept moves from one of being a dependent personality toward one of being a self-directed personality. Second, the maturing person accumulates a growing reservoir of experience which becomes an increasing resource for learning. The third assumption concerns readiness to learn arising from developmental tasks. As a person matures, readiness to learn becomes increasingly oriented toward the developmental task of that person's social roles. The fourth assumption concerns different time perspectives. Learning for the adult has more immediacy of application. The fifth assumption relates to the organization of learning. During maturation, orientation toward learning shifts from one of "subject-centeredness" to one of "problem-centeredness." All of these suppositions should affect instructional techniques in a variety of ways.

The notion of flexibility is implicit in Knowles' five assumptions. The andragogical model offers more elasticity than does its predecessor, the pedagogical model, by virtue of the fact that it provides more potential for adjustment

to student needs. The more student-focused model allows the teacher to move from less effective teaching modes to more effective modes which enhance student learning and satisfaction with learning (Cunningham, 1975; Scerba, 1976; Tuckman, 1968).

One way to examine a teacher's willingness to adapt is to identify his/her educational orientation. In describing a teacher's educational orientation, researchers can discover the possible sources and reasons for a teacher's behavior in the classroom. By analyzing a selected group of vocational-technical faculties, it will be possible to estimate to what degree these educators already adhere and/or believe in student-centered principles and concepts. Since "the teacher is both a person and a practitioner: the better he understands himself, the more his performance can benefit his student" (Cohen and Brawer, 1972, p. 13).

Knowledge of the educational orientations of post-secondary occupational-technical educators and the variables which are related to that orientation will assist in developing relevant pre-service and in-service programs for these individuals. The findings of the study will:

1. Reveal the degree to which occupational-technical educators are predisposed to accommodate students.

2. Show the occupational-technical educator's awareness of adult students and their learning needs.
3. Reveal whether there is a relationship between interpersonal factors and educational orientation.

Assumptions

This study makes the following assumption:

1. The self-reported interpersonal relations of the FIRO-B are indicators of classroom interactions as well as social interactions.

Limitations

The study was limited to the extent that:

1. The sample was primarily male. Females represented only a small proportion of the occupational-technical faculty contained in the study population.
2. Participation by subjects was voluntary.

Delimitation

1. The study population was restricted to the occupational-technical education faculty in the four State Technical Institutes in Tennessee.

Definition of Terms

1. Technical institute - "A regional two-year school . . . which provides technical training . . . ; a two year terminal training center for the purpose of (a) training engineering technicians for industry, and (b) preparing the student to earn a living as a technician or technical worker in the field of production, distribution, or service" (Catalogue State Technical Institute at Memphis, 1980).
2. Occupational-technical educators - Those faculty who teach vocational and technical subjects at the two-year post-secondary level; also known as vocational, occupational, or vocational-technical educators; or career program instructors.
3. Education orientation - The beliefs, opinions, and values that one has concerning the act of teaching as measured by the Educational Orientation Questionnaire.

4. Teaching style - an individual's distinctive approach used to convey information and foster learning.
5. Pedagogical orientation - The orientation of a pedagogical adult educator emphasizes the learners' acquiring knowledge and skills that the educator judges as true and effective. The personal judgment of the educator is based on tradition, accepted views and practices, or current knowledge of the physical and social universes. In the judgement of the educator this knowledge and skills tend to have values, inherent and instrumental, that are perennial and universal. The pedagogical adult educator therefore, sees his/her primary relationship to learners as that of an authority, technical expert, director of their learning, and judge of their achievement, and a person who maintains control of what is learned (Hadley, 1975, p. 7-8).
6. Andragogical orientation - The orientation of an andragogical adult educator stresses free choice of alternative goals for learning, with interdependent decision and action among students and

between students and educator as a basis of effective learning. The educator perceives his/her relationship with students as that of helper, resource, consultant, and co-learner. The goal is to increase effectiveness of learning by encouraging situations which increase cooperative interaction among learners, and increase their participation in and direction of their learning

(Hadley, 1975, p. 7-8.)

Summary

With increased student enrollments in career programs in two-year post-secondary schools, greater attention is being placed on maintaining an effective learning climate. By examining the educational orientations of current faculty in the occupational-technical education divisions of these institutions, staff development coordinators and teacher educators can better predict staff development needs. Are faculty members aware of student needs? Are they restricted by their teaching styles and educational orientations? Are there relationships between personality characteristics and occupational-technical educators' educational orientations?

The purpose of this research was to answer these questions. The study did not assume that andragogical educational orientation is a panacea for ineffective teaching. It did assume that those people with an andragogical frame of reference in the classroom might have more flexibility to adapt teaching methods to the needs of the student.

Chapter I reported the nature of the study and its purpose. Chapter II presents a review of the literature concerning teaching style and effectiveness as well as the relationship between personality and teaching style. Chapter III discusses the methodology used in the study. Chapter IV presents findings related to research questions posed. Chapter V summarizes the findings, suggests implications, draws conclusions, and make recommendations for future research and practice.

Chapter II

REVIEW OF LITERATURE

Over the past fifty years, research on teaching effectiveness has gone through four phases (Peterson and Walberg, 1979). In the first phase, teaching personality was emphasized, followed by an increased focus on teaching methods in the second phase. Then the attention of researchers shifted to the arena of teacher behavior in the classroom. Most recently, educational research has converged upon the teacher's mastery of specific teaching competencies (Medley, 1979). A common element throughout these phases has been the variable of teaching style.

Teaching style has been defined in a variety of manners (Good, 1959; Gage, 1978). For the purpose of this review of literature, the following definition is most appropriate:

Teaching style is the "mode of teaching preferred by a teacher, with varying degrees of social contact Often defined in terms of the way in which teachers encourage motivation and therefore, related to classroom climate, e.g. authoritarian, democratic, etc." (Page and Thomas, 1977, p. 339)

According to Gage (1978), in describing an instructor's teaching style the researcher is qualifying the educator's "implicit theory of teaching." For the purpose of research, an instructor's teaching style can be identified in many ways: by observation, by student ratings or peer

ratings, and so on. Lately, self-report instruments have been developed which measure a teacher's educational orientation on an andragogical-pedagogical continuum (Hadley, 1975) or by a student/content teaching style orientation (Canfield and Lafferty, 1973). Since educational orientation is the belief system that supports teaching style (Hadley, 1975), by identifying this belief system and its influences, more can be known about teaching style. It has been suggested that a belief system characterized by positive views towards student-centeredness and flexibility in instruction is advantageous to teachers who are working with students of differing talents and backgrounds (Berliner and Gage, 1976; Knowles, 1973). Implications of research in teacher training also suggest that people with an educational orientation described as "yielding to the needs of the learner" may have greater ease in serving diverse student populations. In addition, if teachers have the skills or if they are motivated to use a variety of instructional approaches, the learning environment is enhanced. (Joyce and Hodges, 1981).

Educational orientation and teaching style are influenced by many forces, one of which is the personality of the teacher as he or she engages in the teaching process. "Teachers adaptation to students is the heart of the teach-

ing-learning process" (Hunt, 1981, p. 59); therefore, an understanding of the interpersonal qualities found in teachers who adapt more readily and effectively is an important issue in relation to teaching effectiveness. Do teachers exhibiting a belief system that is student-centered have personal interaction styles or configurations that are similar? There are a variety of ways to categorize peoples' personality and interactional styles. Some of the standardized measures of interpersonal relations are the Myers Briggs Type Indicator (Briggs, 1976), the Fundamental Interpersonal Relation Orientation Questionnaires on Behavior ([FIRO-B] Schutz, 1967), Edwards Personal Preference Schedule (Edwards, 1959), and the Gordon Personal Profile (Gordon, 1963). Many of the studies in this review use these measures, as well as others, in identifying specific dimensions of the interpersonal process between teachers and students.

This review of literature examines educational orientation through an investigation of teaching style and its relation to personality variables and student differences. Most of the past studies on this topic have taken place in elementary and university classrooms. Comparatively few studies have been conducted in community college settings (Dunkin and Biddle, 1974; Travers, 1973). Because the most

significant studies on teaching style have occurred in elementary and university classrooms, a discussion of these studies precedes those studies at the two-year school level. Following the description of teaching style - related research, a summary of the research on teacher personality is discussed.

Research on Teaching Style in Elementary Settings

Research on the effects of different teaching styles on student achievement and satisfaction has most often examined two contrasting conditions - high discipline and low discipline. High discipline styles incorporate high teacher or machine control over the delivery of information (comparable to the pedagogical or subject/teacher-centered teaching style) and the learning environment. Low discipline styles stress little teacher control and great amounts of student self-direction in regard to structure and selection of learning materials (comparable to the andragogical or student-centered teaching style).

These conditions were those investigated by Lewin and associates (1939). In their study of elementary school students, a basic premise was that teacher leadership in the form of classroom management would determine students' morale and performance. The leadership styles used in the

experiment were: authoritarian, democratic, and laissez-faire. The results indicated that authoritarian teachers had greater quality of work produced but only while the teacher was present in the classroom. When the laissez-faire teacher left the room, productivity increased! The democratic teacher experienced higher levels of satisfaction, a sense of esprit de corps, and lower levels of group member aggression. Student learning was increased when the leader told children what to do, but student satisfaction was enhanced by group methods, equalitarian teacher characteristics, and group decision methods.

A later study of teacher leadership styles (White and Lippitt, 1962) confirmed Lewin's research. In 1963, researchers Medley and Mitzel (1963) and Gordon and Adler (1963) conducted studies that emphasized the need for more specific measures and definitions of teacher behavior. In effect, these researchers suggested that more definitive research was needed concerning teaching behavior.

Kounin (1970) summarizes related research on teacher classroom management. The teachers who can successfully manage a classroom are: (1) more alert in monitoring classrooms and remaining aware of what is going on at all times (Kounin calls this "with-it-ness"); (2) are able to sus-

tain more than one activity at once ("overlapping"); (3) are able to provide variety in instructional activities (flexible and creative); and (4) can generate enthusiasm directly and often (momentum). Brophy and Evertson (1974a, 1974b) reinforce these findings in their study showing that performance by students was enhanced by these types of classroom management and teaching styles. Kounin's teacher management characteristics produced some of the strongest and most consistent correlations with student learning gains among several hundred variables included in Brophy and Evertson's study (Good, Biddle, and Brophy, 1975). Rosenshine and Furst (1973) allude to these gains when they discuss teacher behavior and teaching styles.

Some caution should be used in applying the practices of classroom management as favored in these studies. Although it has been suggested by these studies that managing the learning environment is extremely important to achievement (especially for the low socio-economic status child), the need for directed teaching environment changes as the child's learning is maximized. As children learn the ways to be "good" students by adhering to the order of school routines and using fundamental skills, and become more independent and self-directed, they reach a point where they learn more and better when they are taught using indirect

methods. It could be concluded that "teaching is a matter of optimizing by matching curriculum and methods to the present needs of the students, and not just a matter of teaching one type of student one way and another type of student differently" (Good, Biddle, and Brophy, 1975, p. 78).

A similar point has been made in studies by Brophy and Everston (1974a, 1974b). First, it has been shown that teaching behaviors differed according to whether the school was a high socio-economic status (SES) or low SES school. Data from this study suggest that high SES students learn more when taught with methods such as indirect teaching, use of student ideas, and frequent pupil-to-pupil interaction, whereas low SES school children tend to learn more when taught at a slower pace, using smaller steps and including more repetition and redundancy with more teacher direction and more teacher implementation activities. It appears that indirect teaching is probably effective, but only after students have mastered the fundamental tool skills and work habits required to assume responsibility for initiating and maintaining their own learning efforts.

What this later research implies is that teacher effectiveness is not dependent solely on the teacher's characteristics or style of classroom behavior. The characteristics

of learners also need to be taken into account. This position was made explicit in a study by Parent et al. (1975) which suggested that an interactive relationship exists between the teaching method, student characteristics, and some more dynamics aspects of the learning process. For example, most students in the beginning course of study probably have some relatively low levels of competence in or familiarity with the subject. These people benefit most from a fairly high level of external discipline. As these students progress and gain in competence and skills, less teacher control should be required for optimal performance. More teacher control at this point may be detrimental to performance for these students. The major school of thought on the effects of high and low discipline conditions have tended to neglect such simple ever-changing aspects of the problem.

There seems to have been a gradual change in emphasis in research on teacher effectiveness. First, there was an emphasis upon the teacher's leadership style and the children's reactions to the different styles (Lewin et al., 1939; White and Lippitt, 1962). Then, there was an emphasis upon the teacher's behavior (Medley and Mitzel, 1963; Gordon and Adler (1963). The next emphasis was on an interactive approach towards studying teacher effectiveness (Good, Bidle and Brophy, 1975).

This gradual change in the focus of research on teaching styles can be explained in many ways. First, the earlier studies were conducted primarily on preschool and elementary populations. As time went by, the members of these populations were influenced by Sesame Street and other educational alternatives outside the school, thereby increasing their knowledge bases. Secondly, the growing sophistication of research methods allowed more comprehensive studies to be done. Third, it became increasingly apparent that the strength of teacher-student relationships was affected by student age and grade level (Flanders, 1970).

Nonetheless, in the elementary settings, there appear to be some common findings that are helpful in examining teaching style effects. First, as indicated in Lewin's study (1939), certain students respond differently to specific teacher leadership styles. Second, since student differences exist, flexibility is vital in teaching style. Flexibility is a favorable trait (Kounin, 1970), especially in using appropriate direct and indirect methods with students as they mature and go from dependent to independent learning styles in various subjects (Good, Brophy, and Biddle, 1975). This seems to suggest that teaching style needs to be supported by an educational orientation that is sensitive to the learner.

Research on Teaching Styles in Colleges and Universities

In Trent and Cohen's review (1973) of a thousand studies performed on teaching style and effectiveness only 20 studies used student learning as the measure of success (Most of the studies used teacher rating scales.). Inconsistencies plague the research because, according to Trent and Cohen (1973) teacher behavior that maximizes learning often is unrelated to student affect or even negatively related to student evaluation. In the same way, a given teacher or method may have a positive effect on one type of student but no effect (or a negative effect) on a different type of student.

Trent and Cohen (1973) state that more use of student learning gain as a criterion measure will provide better information concerning the effectiveness of teachers. Using student rating forms, college students seem to favor younger teachers over older ones, to favor higher level course teachers over lower level course teachers, and to prefer other attributes that seem unrelated to teaching skill. In general, student evaluations at the college level appear to take into account teaching skill, rapport with students, and classroom organization and management as three separate factors; in addition, students vary in how they weigh these factors (Gaynor and Millham, 1973; Domino, 1971).

A combined use of student rating and student achievement as measures of teacher competence can be seen in the studies of Robinson (1973),; Scerba (1976), and Daniels and Stevens (1976). In a doctoral study, Robinson examined the effects of teaching methods, grading, and examination frequency on the academic performance of students in higher education. Using a lecture format with one class and a go-at-your-own-pace format in another class (a lectureless class), Robinson found that the self-directed class outscored the lecture class on the final examination and on a six month retention test.

In his doctoral study, Scerba (1976) found that matching teaching styles with learning styles of 500 freshman did more for student satisfaction than for student achievement. A second order interaction effect indicated that students preferring certain learning styles are more compatible with certain teaching styles in other disciplines. Because of this, a relationship was found among learning style, teaching style, and subject matter. Also, a relationship was found between teaching styles and subject matter or discipline of teaching. Overall, the results of the study imply that matching student learning styles to appropriate teaching styles cannot be done effectively through the use of self-report instruments only. Still, it appears that cer-

tain teaching methods are more effective in certain subject areas and with certain types of students. Scerba suggests that matching learning styles with teaching styles may be more cost effective in the future if one can match real learning style rather than preferred learning style to the most suitable teaching style.

Daniels and Stevens (1976) used achievement measures and locus of control measures and discovered a strong interaction between locus of control and instructional methods in their study of 46 undergraduates. The results showed externalized control (other-directed) students gained in achievement when taught by a teacher of traditional orientation (similar to a pedagogical style) whereas the internalized control (self-directed) subjects gained in achievement when taught using a contract learning situation often termed in adult education as self-directed learning style (Tough, 1971).

Therefore, it appears that the findings from university studies of teaching style effects reinforce the results found in earlier grades of public schooling. At the university and collegiate levels, studies on teaching style were largely dependent on student ratings (Trent and Cohen, 1973), which created a methodological problem in the bulk of

research. Because of student differences, Trent and Cohen (1973) believe that the use of student achievement should be included as a key element of the criterion measure of teaching style and effectiveness.

This problem is alleviated in the later studies of Robinson (1973), Scerba (1976), and Daniels and Stevens (1976). These researchers cite student satisfaction and achievement as two important measures of teaching style suitability. All of these studies gave support for both achievement and/or satisfaction gains when students were taught using a teaching style that they preferred. In addition, a relationship between subject matter and teaching style has emerged throughout the studies of teaching style in the universities and colleges.

Research on Teaching Styles in the Two-Year College

In reviewing the literature on teaching style in the two year post-secondary school, it is necessary to inspect as many studies as possible to gain sufficient information that can be generalized to this particular study. The bulk of research data on teacher behavior in universities and colleges does not have this quality of generalizability (Trent and Cohen, 1973). According to these authors:

Most of the studies of college environments are restricted to four year colleges. The approxi-

imately 1,000 accredited junior colleges in the United State have been for the most part neglected . . . (Trent and Cohen, 1973, p. 1004)

Also, in a study comparing differences in community college student role expectations, results indicated that junior colleges have entirely different settings with different types of students (Richards, Band and Band, 1966).

Most of the studies conducted on teaching style at the two-year schools were administered in the related or developmental subjects (i.e. math, English, history, and so on). Nonetheless, the findings may be useful in regard to this study, since the students found in these classes are frequently the same students enrolled in vocational courses.

In a survey of 933 full-time community college faculty, it was shown that these faculty believe that there is a connection between student learning and teacher behavior (Gibson, 1979). In addition, these same instructors believed that effective teachers do things differently from non-effective teachers.

Another study by Hill and associates (1978), revealed faculty ambivalence towards the total acceptance of either a progressive or traditional educational orientation in the classroom. Those faculty with more progressive attitudes toward teaching style were found to be social science and

humanities instructors who were 35 years of age or younger. In addition, they had experienced career patterns that included graduate school. On the other hand, the faculty who showed traditional educational orientations were described as natural science and vocational educators who were older than 35 years of age and whose career patterns included experiences predominantly in business and industry. The variance in educational orientation was attributed to previous occupational and educational experiences (limited statistical significance) and to age and subject matter taught (significant statistical bearing). Other findings showed a tendency toward student-centered teaching approaches for all teachers and that students perceived faculty as being student-centered in addition to being effective teachers overall.

Strong concern for the role of the instructor in interpersonal relationships with students was emphasized in a study by Twa (1970). This study included both faculty and students in adult education, occupational, and transfer programs. The most significant finding was that all groups involved had stronger feelings about the personal relationship element of the role of the instructor. Other elements included use of instructional methods and materials, management and control of learning activities, communication of

course content, and evaluation of student progress. Twa states that on the basis of this finding, "... it appears that studies designed to identify and distinguish variables in personal relationships of instructors with students should produce worthwhile information for those responsible for the improvement of instruction in community colleges." (p. 5)

In a study of 278 faculty and 12,396 students in five Pennsylvania community colleges, role orientation and teaching effectiveness of faculty were investigated (South et al., 1975). Results showed that student-centered teachers were perceived by their students as more effective than subject-centered teachers. However, this did not hold true across the board for all students and all faculty. The relationship between perceived teaching effectiveness and role-orientation was strongly influenced by the student's expected course grade (i.e. If a student expected a higher grade from the teacher being rated, then that student's rating of the teacher was also high. With an anticipated low grade, a student's rating of the teacher was correspondingly low.) Student differences again came into play when dealing with teaching style and learning style match-ups as they occur naturally.

Another study of 300 community college students enrolled in 15 courses at three different schools, revealed that students with higher grades in their courses preferred listening and direct experience to reading activities. (Hunter, 1979) Also, it was revealed that there was no statistically significant relationship between student-teacher differences and grade and/or rating of instructor. However, it is worthwhile to note that this study was conducted in 15 different subject matters with just 300 students in the sample. The difference in subject matters and small sample sizes may account for the lack of significant findings to reinforce the notion of matching learning and teaching styles.

A Florida study on matching teaching styles found other information having to do with compatibility of teaching strategies and learning styles (Scerba, 1979). A significant second order interaction effect was found on grades among learning style, teaching style, and course. Other interactions were found between teaching style and subject on teacher and course evaluations. The implications of this study are "that students may have an eclectic approach to learning dependent upon the subject matter; that teaching style is one factor to consider in interpreting teacher and course evaluations; and that teaching style which uses a direct experience may reduce class attrition." (Scerba, 1979).

Student ratings of "effective" teachers and a control group revealed that students saw effective teachers as "adaptable, stimulating, and student-centered" (Vickers, 1979). The characteristic of "knowledgeable" did not separate out the more effective teacher from the less effective teacher in this study.

In a comparison between two-year schools and universities, verbal interaction was analyzed to see if a difference existed (Johnson, 1979). An analysis of variance revealed significant differences between the community college and university faculty in several categories. The former used more praise and reinforcement, asked more questions, and reflected greater verbal flexibility than did university instructors.

Proceedings from many conferences on the two-year school have focused on the concern for effective teaching in the classroom. Bogart (1971) concluded in his summary of the 1971 Junior College Conference that "a junior college teacher training program requires the prospective teacher to mold his educational philosophy in terms of student and community needs..." and that "such a program demands a new approach to the selection of candidates and attention to the qualifications of those doing the training" (p. 5).

In a paper focusing on desirable values for two-year school instructors, Joseph (1977) confirms Bogart's statements by stating that:

Community college teachers should be student centered and should have a humanistic perspective that sees learning as possible for anyone under the right conditions, an ability to be flexible, creative, and innovative, knowledge of a wide range of teaching strategies, as well as subject matter, and the ability to communicate effectively. (Joseph, 1977, p. 10)

These traits are a prerequisite for the community college occupational-technical instructor because of the kinds of adult students that enter his/her programs. They possess a multiplicity of backgrounds and experiences, have different motivations for seeking vocational training, want courses that are relevant and presented in a manner that communicates with them, and expect a substantial amount of feedback on their performance (Darkenwald, 1977; Franks, 1980). Finding faculty members who can exhibit qualities described by Joseph (1977) is no easy task (Grabowski, 1977).

The National Advisory Council on Extension and Continuing Education (1976) states that "... if institutions are to respond better to the educational requirements of adult part-time students, ... then it is the Council's conclusion that a core of trained manpower is urgently needed (p. 407)." In the case of the occupational-technical teacher,

previous educational and occupational experiences may not have equipped this educator to deal with a diverse group of students who require teacher sensitivity and diagnosis of learning style needs. For this reason, preservice and inservice programs are professional lifelines for these teachers.

Basically, at the two-year school setting, little research has been done specifically on teaching style (Twa, 1970). What research has been conducted is limited, as the majority of it focuses upon humanities faculties. In the studies that included all faculty members, some variables emerged that seem to influence educational orientation. A teacher's sex, age, program area, and occupational/educational experiences determined whether that person had progressive or traditional educational orientations (Hill et al., 1978).

Also, it appears from this group of studies that diversity in students enrolled in vocational programs may cause instructional problems. The demand is great for faculty who can cope with this diversity through understanding of the differences in student learning needs and responding appropriately (Darkenwald, 1977; Franks, 1980). Being able to respond appropriately may entail adjusting one's implicit

theory of teaching to the situation. It may mean increasing one's repertoire of teaching strategies and communication skills. In effect, the demands call for faculty members who can be flexible and versatile in teaching situations.

Research on Teacher Personality and Teaching Style

If teaching style can be said to have an effect on students' affective response to the learning situation and to some extent what they learn, one might ask what accounts for differences in teacher style. Melvyn Holmes (1977) has conducted a pertinent review of the literature on the effects of personality on teaching style. The following is a summary of his findings.

Davies (1961) explored certain relationships between personality characteristics and patterns of teacher influence. She hypothesized that teachers who scored higher on certain items of Cattell's 16 Personality Factors Questionnaire (1956) (items measuring outgoingness, enthusiasm and spontaneity) would use more indirect influence as opposed to direct influence in dealing with students. Indirect influence was defined as facilitating expanded student participation as opposed to direct teacher influence which restricts student participation. "Results of the Davies study indicated a significant relationship between enthusiasm and use

of more indirect influence. An analysis of variance of teachers grouped as scoring high on the spontaneity and scoring low on self-sufficiency was interpreted to imply that adventurous teachers who like meeting people and like doing things in groups tend to use more indirect influence in the classroom" (Holmes, 1977, p. 24).

Jones (1967) studied the connection between personality and the use of group or lecture techniques. Results indicated that teachers with high subscores (Gordon, 1963) on Ascendancy, Personal Relations, Responsibility, or Original Thinking were apt to be more group-oriented than lecture-oriented. The variable of "subject area taught" did not significantly correlate with "preferred method" of teaching.

Emmerling (1961) focused on the teacher personalities and the learning climates they provide. He found that teachers who were identified as "more open" were seen by their students as being more positive in regard for the student's self-esteem, more empathetic, and more student centered than "less open" teachers. (Open teachers were defined as positive, central problem related, student-centered; whereas less open teachers were defined as negative problem-oriented, dealing with peripheral problems, less student-centered).

Smith's (1968) studies on home economics teachers concerned the relationship between open-mindedness and self-actualization as they affect teaching behaviors. Results disclosed that a significant relationship existed between teachers' levels of self-actualization, degrees of dogmatism, and the perceptions of using teaching techniques conducive to the development of self-directed learners. The more highly self-actualized teachers perceived themselves as using a significantly greater amount of teaching strategies which encourage learners to become more self-directed. The more self-actualized teachers also displayed more open-mindedness.

Whalley (1955) and Del Popolo (1960) investigated the relationship of authoritarian and equalitarian teacher personality types to attitudes about the educational process. The findings support the hypothesis that a significant relationship exists between an individual's personality structure and his opinions and attitudes toward the educational process. Authoritarian and equalitarian types are similar to pedagogical and andragogical types, respectively.

Biggs (1963) examined the relationship between the psychological traits of dogmatism, opinionation, and intellectual conviction and teacher educational viewpoint. He found

that an educator's attitude structure or belief system is related to certain psychological characteristics.

Walberg (1968) used the Minnesota Teacher Attitude Inventory (MTAI) to measure the attitude toward democratic teaching methods versus autocratic methods. In addition, personality measures from the Edwards Personal Preference Schedule (Edwards, 1959) and the Study of Values Questionnaire (Allport, Vernon, and Lindsey, 1960) were used. Laissez-Faire attitudes, as defined by the MTAI are andragogical in nature. Emphasis is on student freedom in carrying out the learning activities, since it is believed that the learner can be resourceful when left to his own. Walberg suggests that the relationships indicated by the results of his research are psychologically valid since the teacher who is willing to place faith in the responsibility of students to guide their own learning would tend to be altruistic and accepting of new ideas and activities (which is characteristic of adult-oriented learning).

Sherman (1970) identified two compatible educator personalities based upon two educational models which were very similar to the pedagogical and andragogical approaches. The model resembling the andragogical approach yielded a personality type that was categorized by tolerance of uncertainty

and ambiguity, tendency to withhold judgement, and control of emotional influences.

Other studies by Cagle (1970), Hill (1971) Ralph (1973) reinforce the idea that personality types can be matched to certain belief systems. Studies concerning relationships between certain philosophies and educator's personalities were established by Laury (1971), Roper (1975), and Colleta (1975).

Beyond Holmes' (1979) review of literature on the effects of teacher personality on learner gain and/or satisfaction, there is additional research to support the notion that student-oriented teacher personality can have an effect on teaching style. A study by Perry (1974) on the effects of interpersonal styles concerned teachers who were compliant, aggressive, detached or static in reaction to motivating students to learn. Teachers who were more compliant in their interpersonal relations with students had classes that were more enthusiastic and less anxious. Teachers who were more aggressive or detached in their interpersonal relations had classes of students who were more anxious, hostile, and less willing to make an effort to learn. In relation to teacher personality and communication, a study by Armstrong (1979) on adult vocational education teachers noted that

there was a relationship between the teacher's verbal behavior and attendance in adult vocational classes. Teachers who used praise freely had better attendance than those teachers who used contradiction and rejection in their communication techniques. The indirect teacher (one who used more questions, acceptance of student ideas, and praise) had better attendance than the direct teacher (one who used lecture, instructions, and reproof).

In a study using student perceptions of the differences between teaching behaviors of andragogically and pedagogically-oriented educators, Kerwin (1979) found that students could detect that andragogically-oriented educators were more student-centered than pedagogically-oriented educators. Also, andragogically-oriented educators were perceived by students as having less control over their classes than pedagogically-oriented teachers. When controlling for sex and program area, the andragogically-oriented educators tended to be women while the pedagogically-oriented educators tended to be men; educators in vocational programs tended to be pedagogically-oriented whereas educators in technical and general education programs tended to be andragogically-oriented.

As a result of these studies, there appears to be substantial evidence to support the assumption that there are relationships between educational orientation (teaching style) and personality (Perry, 1974, Armstrong, 1979). In addition, there is evidence that suggests that sex and program are might affect one's educational orientation. (Kerwin, 1979)

Summary

In studies of teacher behavior in elementary settings, there is ample evidence of a dichotomy in teaching styles (Lewin and associates, 1939; White and Lippitt, 1962; Brophy and Everston 1974a, 1974b; Parent et al, 1975). Teachers appear to use either a teacher-centered or student-centered approach to instruction. Initially, teacher personality was examined. Researchers chose next to examine not only teacher personality but other behavioral factors such as actual classroom control, communication styles, and personal characteristics (Medley and Mitzel, 1963; Kounin, 1970; Flanders, 1970). Currently, studies involve the interaction of teacher traits with student characteristics and how this impacts on teaching competency development (Gordon and Adler, 1963; Brophy and Everston, 1974a, 1974b; Good, Bidle, and Brophy, 1975). Despite the differences in

approach, the bulk of research on teacher style suggests that those teachers adopting a student-centered educational orientation are generally more effective as teachers, provided their students have appropriate basic skills and comparable learning styles.

The few studies on teacher style in colleges and universities led to a similar conclusion. Research on student-oriented teaching style in these settings was exemplified by matching teacher styles and learner capabilities can result in increased learning and student satisfaction (Robinson, 1973; Scerba, 1976; Daniels and Stevens; 1976).

Studies at the two-year school level, examine the differences between this educational environment and the previous ones (Trent and Cohen, 1973; Richards, Rand and Rand, 1966) and found those differences to be great. Significant research on the correlates of educational orientation were revealed in studies like Gibson (1979), Hill et al. (1978) and South et al., (1975). Variables of faculty age, program area, occupational background and educational experiences at the graduate level appear to determine ones beliefs in certain progressive or traditional principles. Studies imply that the student-oriented philosophy of the community college and adult education programs is affecting the teacher in the two-year school.

Personality factors discussed in this review are concerned with the way in which interpersonal relations affect teaching style (Holmes, 1977; Armstrong, 1979). Teachers with a student-oriented philosophy are likely to be extroverted, sympathetic, and tolerant. Those using a teacher-centered approach, on the other hand, are more likely to be introverted, less empathetic, and opinionated and dominant (Kerwin, 1979; Perry, 1974; Armstrong, 1979). In addition, other factors related to differences in teaching style and educational orientation can be attributable to sex and subject matter taught, according to Holmes (1975) and Kerwin (1979). Women more likely than men are found to be student-oriented while those teaching the humanities are more likely than those teaching vocational subjects to be student-centered (Kerwin, 1979; Holmes, 1975).

This review of literature endorses the need for student-centered teaching styles and educational orientation when dealing with students whose learning needs differ greatly. The review also shows the necessity for teachers to alternate their teaching methods when required. To move from one's implicit teaching style to a more atypical style may place demands on teachers to use unfamiliar teaching strategies. The amount of ease in making these transitions varies from person to person, depending on one's age, personality, previous experiences, and interpersonal needs.

In other words, teachers vary in their educational orientations and the degree to which they can be flexible. Identifying one's educational orientation may serve to assess one's flexibility. Then it would seem that for professional growth to occur in teaching effectiveness, more must be known about educational orientation's status among certain type of teachers and more must be known about what affects the nature of educational orientation.

The present study seeks to answer those questions in regard to occupational-technical educators in four technical institutes. Chapter III describes the methodology used to college information to answer the above questions.

Chapter III

METHODOLOGY

Introduction

Chapter I provided an overview of this study on educational orientations and interpersonal qualities of Tennessee occupational-technical educators. Then in a series of literature reviews, Chapter II presented an explanation of the relationship between teaching styles, educational orientation, and interpersonal needs. In addition, an emphasis on the need for flexibility of teaching style of occupational-technical educators in the two-year school was discussed.

In Chapter III, the following elements of the study's methodology are described: the population, sampling procedures, instrument qualities, procedures for data collection, and subsequent data analysis techniques.

Design of the Study

This study determined the educational orientations of occupational-technical educators in the four State Technical Institutes of Tennessee. The educational orientation of these educators was identified on an andragogical-pedagogical continuum using the Educational Orientation Questionnaire (Hadley, 1975). In addition, the study examined the extent of a relationship between educational orientation and

psychological constraints concerning interpersonal behavior. These constructs were measured by the Fundamental Interpersonal Relations Orientation - Behavior Scale (Schutz, 1967). Biographical data on age, sex, class size, years of education, and years of occupational experience was obtained from technical institute faculties.

A pilot study was conducted at Central Piedmont Community College in Charlotte, North Carolina prior to the Tennessee study. Participants included eighteen faculty members who represented a wide range of career programs similar to the kinds of programs found in occupational-technical departments of Tennessee technical institutes. This advance study provided the researcher with necessary corrections in the packet of information used, as well as ideas and clues to ways in which the larger study could be improved. An analysis was made using the 18 responses, and the results showed valuable information regarding the effects of data collection procedures. Appropriate corrections and adjustments were made to the questionnaire packet and the data collection procedure as a result of the pilot study.

Subjects

This research was conducted in the four State Technical Institutes of Tennessee. The institutes are located in Memphis, Nashville, Knoxville, and Blountville. Faculty members were volunteered from entire populations of business science, computer science, engineering science, and other technical education subjects. Related studies and developmental education instructors were not included in the study.

The population included full-time and part-time occupational-technical faculty members who were currently teaching. Because of the types of occupational background, more men were included in the study than women.

Selected from the study population were 132 subjects from business, computer, health, and engineering science technologies. Of the 132 faculty members, 85% (n=112) were male and 15% (n=20) were female. Since an administrative condition of the study was voluntary participation by instructors, individual responses by school varied. The actual proportion of participants from the relevant faculties at the schools ranged from a low of 75 percent to a high of 95 percent. This resulted in an overall proportion of 88 percent voluntary response rate.

Instrumentation

To measure the dependent variable of educational orientation, the Educational Orientation Questionnaire ([EOQ] Hadley, 1975) was selected. This instrument was designed to measure andragogical-pedagogical preferences in educational orientations. It has been used in several recent studies in education (Kerwin, 1979; Holmes, 1977; Peterson, 1980). Hadley (1975) constructed the EOQ based upon the beliefs of pedagogical and andragogical theories and practices. The instrument was designed incorporating items representing six attitudinal dimensions of an adult educator's role: Purpose of Education, Nature of Learners, Characteristics of Learning Experience, Management of Learning Experience, Evaluation, and Relationships of Educator to Learners and Among Learners. Half of the items in his questionnaire were stated affirming a pedagogical approach. This "approach to learning assumes that learning is inspired, directed, and controlled by external forces (i.e. the teacher) ... a mechanistic model of learning" (Knowles, 1973, p. 17). The remaining items on the EOQ were described in an andragogical mode. This approach "assumes that the learner is proactive, not reactive, [and] self-directed [and that this learning is best described as] "the organismic model." (Knowles, 1973, p. 18). According to Hadley (1975), the

teacher's role, as reflected by the results of the EQQ, shows varied amounts of control and direction dependent upon the educational orientation.

In addition, the EQQ scores can subsequently serve as indicators of teacher flexibility. To understand how these scores estimate teaching flexibility, more must be known about the underlying philosophical foundations of the instrument. Again, the andragogical-pedagogical continuum is involved, for the EQQ has to do with a teacher's willingness to adjust instructional style through elements of control and direction. A high score would reveal more andragogical tendencies which in effect would suggest that the instructor wanted less control and direction over the learner. On the other hand, a low score would reveal a more pedagogically-oriented instructor who would prefer to have more control and direction over the learner. To this extent, the EQQ can serve as an indicator of probable teaching flexibility (Hadley, 1975). In turn, the relationship of the EQQ score and independent variables such as interpersonal behavior, sex, age, class size, years of educational preparation and years of occupational experience, should explain the variance in EQQ scores and corresponding teaching flexibility.

The instrument was validated on a population of adult educators from public and private educational institutions, business and industry, religious institutions, and government agencies. (Hadley, 1975). The largest percentage of respondents were teachers (54%), followed by program directors (33%). Of the total group, 56% were male, and 44% were female. Approximately, 86% of the respondents were between the ages of 20-49 years of age. Within the validation sample, 17.6% were teachers of vocational education subjects. Hadley (1975) presents the major validation concerns as substantiation for its use:

Reliability of the instrument was measured by test-retest reliability and coefficient alpha. Test-retest reliability measured 0.89, and coefficient alpha was 0.94. The use-validity measure of the EOQ was its effectiveness in discriminating among adult educators. Analysis of variance demonstrated the EOQ detected differences in orientation (significant at the 0.05 level or less) with respect to variable of: Sex, Subject Matter, Area of Speciality, Level of Position, and Type of Organization. (p. VII)

Appendix A contains a copy of the EOQ as it appeared in the research packet distributed to subjects.

To measure the independent variables of interpersonal behavior, the Fundamental Interpersonal Relation Orientation Behavior Scale ([FIRO-B], Appendix A) was used. This scale is a Guttman-type psychological instrument developed by Schutz (1967). The instrument was designed to "concentrate

on how a person behaves rather than how he feels" (Schutz, 1966, p. 58). In addition, this tool has been used in a wide variety of fields including other dissertations and research projects (Holmes, 1977; Peterson, 1980). It is easy to administer and score requiring approximately 15 minutes to complete.

The primary purposes of the FIRO-B are "to measure how an individual acts in interpersonal situations, and to provide an instrument that will facilitate the prediction of interaction between people" (Schutz, 1967, p. 4). The FIRO-B is unique in that it assesses individuals' personality characteristics in addition to measuring characteristics in such a manner that scores of two or more people may be combined to predict interaction.

To accomplish the second purpose, Schutz (1967) derived two aspects of behavior in each dimension assessed. They are the behavior a person expresses towards others and the behavior that person wants others to express toward him/her. Figure 1 'Schema of Interpersonal Behaviors' explains what is meant by expressed and wanted behaviors in each of the three dimensions (Schutz, 1966, p. 59).

Altogether the schema of interpersonal behaviors contains six dimensions which are defined as follows:

DIMENSION	EXPRESSED BEHAVIOR	WANTED BEHAVIOR
Inclusion	I initiate interaction with people.	I want to be included.
Control	I control people.	I want people to control me.
Affection	I act close and personal with people.	I want people to get close and personal with me.

Note: From The Interpersonal Underworld by William C. Schutz, Palo Alto, California: Science & Behavior Books, Inc., p. 59, 1966. Copyright by William C. Schutz. Reprinted by permission.

Figure 1: A Schema of Interpersonal Behaviors

1. Expressed Inclusion (EI) is the need to actively establish and maintain a satisfactory relationship with people with respect to interaction and association (Schutz, 1967).
2. Wanted Inclusion (WI) is the need to belong and be accepted by others (Schutz, 1967).
3. Expressed Control (EC) is the need to actively establish and maintain a satisfactory relationship with people by controlling their behavior (Schutz, 1967).
4. Wanted Control (WC) is the need to be dependent or controlled by others (Schutz, 1967).
5. Expressed Affection (EA) is the need to actively initiate close intimate relationships (Schutz, 1967).
6. Wanted Affection (WA) is the need for close intimate relationships to be initiated by others (Schutz, 1967).

The evaluation of a proper fit between what a person wants and what another expresses in an interpersonal relationship is comparable to the interaction process of the

student-teacher situation. According to Schutz (1967), studies of the effects of compatibility on the outcome of several real-life dyads (i.e. experimenter-subject, teacher-student), indicated that there is generally a positive effect when the interaction process is a complementary one. In other words, the students seem to improve, do better and so on. In this case, the FIRO-B has been used to evaluate the relevance of an instructor's ability to interact successfully with students having varied interpersonal needs. Therefore, the FIRO-B appears to be an appropriate second instrument to use with the EOQ as educational orientation is examined for specific group. (In the Tennessee study only teachers' interpersonal needs were examined.)

According to Buros (1975), the FIRO-B has reasonable internal consistency and test-retest stability. The reproducibility index is high for all sub-scales and all test-retest correlations are adequate (over .70). Validity studies on the FIRO-B suggest that its subscales are related to non-test interpersonal behavior as well as to other personality measures. (Holmes, 1977)

Data Collection

Following the pilot study in North Carolina, data collection began in each of the four Tennessee technical institutes. Permission to conduct research at each school was granted by the respective Presidents in early September, 1980. It was suggested that the researcher work directly with the Dean of Instruction at each school. Correspondence concerning research procedures, confidentiality of respondents, type of faculty to be involved, and time requirements for study administration was exchanged with the deans. Since the numbers of occupational-technical faculty were small, a random sampling was not feasible. Instead, it was mutually determined between the researcher and the deans of instruction that with the variety of faculty teaching schedules and the limited population of occupational-technical instructors, the most convenient way to gain faculty involvement was through a volunteer approach.

First, the dean of each school endorsed a memo to faculty encouraging them to participate in a statewide study on educational orientations of vocational-technical instructors. The memo stated that on a specified date, a researcher would be located in a designated classroom or auditorium conducive to testing procedures. At their convenience, faculty members could report to this location and participate in the

study. In only one institute did this procedure differ. In that institution, because of the location of vocational-technical instructors on two separate campuses, the dean of instruction arranged a mandatory faculty meeting after regular teaching hours at a central location.

During the months of November, December, and January, data were collected from each school. Some booklets and answer sheets were left at each school for teachers who were unable to participate on the day of data collection. The dean or staff development director at each school was instructed in proper questionnaire packet completion, so that late-comers' questions could be answered by someone at the school after the researcher's departure. Response rates varied from school to school as did actual occupational-technical faculty size. Nevertheless, most of the schools had an actual response rate in the 75 to 95% range. In addition, faculty interested in participating in a staff development activity concerning the results of the study ranged from 70-95% of the people who actively participated in the study.

Statistical Treatment of the Data

After the data were collected, frequency distributions, measures of central tendency and stepwise multiple regression were used in their analysis. The Statistical Package for the Social Sciences (SPSS) was used in these analyses.

Measures of central tendency and variability were computed across the entire group and specific sub-groups. Distribution of participants by EQQ scores, FIKO-B scores, and biographic data characteristics were revealed in the analysis of data.

Stepwise multiple regression was applied to the data which related to the research question regarding the relationship of selected interpersonal behaviors to educational orientation. This statistical procedure is a method of analyzing the collective and separate contributions of two or more independent variables (X) to the variation of a dependent variable (Y). Multiples R's were then computed allowing for an estimation of the influence that selected interpersonal behaviors had on the variance of educational orientation scores of the occupational-technical educator sample. F ratios were computed to provide information concerning the probability that the multiple R's were statistically significant. Regions of rejection were set at the .05 level.

Summary

Chapter Three has been concerned with the methods and procedures that were used in this study. It has consisted of the following elements: (1) design of the study; (2) a description of the population and participating subjects, and data collection techniques that were used; (3) explanations and background of the Educational Orientation Questionnaire (Hadley, 1975) and the Fundamental Interpersonal Relations Orientation - Behavior Scale (Schutz, 1967); and (4) analysis of data. Information generated from the responses and their analysis served as a basis for the results and conclusions found in the following chapters.

Chapter IV

FINDINGS

The findings of the study are presented in this chapter. The presentation of information is divided into four sections: (1) the general summary statistics for the demographic data accompanied by a comparison of those obtained in similar studies; (2) findings related to the educational orientations of occupational-technical educators; (3) findings related to the interpersonal characteristics of these educators; and (4) findings related to the proposed relationship between educational orientation and interpersonal and demographic characteristics of post-secondary occupational-technical educators.

The Statistical Package for the Social Sciences ([SPSS] Nie, et al., 1975) subprograms used included the programs of 'FREQUENCIES,' 'REGRESSION: STEPWISE,' and 'CONDESCRIPTIVE.' Means, standard deviations, and distributional properties of the variables were found by using the 'CONDESCRIPTIVE' and 'FREQUENCIES' subprograms of the SPSS. Since numerous independent variables were examined in this study and since control over these variables was desired, 'REGRESSION: STEPWISE; and 'PEARSON CORR' subprograms were selected for the data analysis.

General Statistics

In the four occupational-technical divisions involved in this study, 132 full-time and part-time instructors volunteered to participate. The response by individual institute was as follows: School A (N=37); School B (N=40), School C (N=15); and School D (N=40). There were 20 females and 112 males in the total sample. The low number of females was attributed to the unequal representation of male and female instructors commonly found in the trades and technical fields.

Ages of participants ranged from early twenties to late sixties. As shown in Table 1, there were five categories of age groups. Fifteen of the 132 instructors were 21 to 30 years old, while 49 of the 132 instructors were 31 to 40 years of age. There were 34 middle-aged instructors (ages 41 to 50) and 28 late middle-aged instructors (ages 51-60). In the last age range of 61 to 70 years of age there were only six instructors. The majority of occupational-technical instructors (63%) were between 31 and 50 years of age.

The average class sizes were similar for the teachers studied as shown in Table 2. Very few teachers (5%) had classes ranging from zero to ten students. A majority of teachers (84%) had classes ranging from 11 to 30 students.

TABLE 1

Age Ranges of Occupational-Technical Educators

Age Groups	N	Percent of Total Sample
21 to 30 years of age	15	11%
31 to 40 years of age	49	37%
41 to 50 years of age	34	26%
51 to 60 years of age	28	21%
61 to 70 years of age	6	5%
	<hr/>	<hr/>
Total	132	100%

Thirteen percent of the faculty taught courses with average enrollments of 31 to 40 students. Only one instructor had average class sizes of 41 to 50 students.

Six classifications were used to categorize the educational backgrounds of faculty members. Those classifications and the number of instructors in each group are presented in Table 3. The majority of faculty (73%) had completed their baccalaureate degrees (35%) or their masters degrees (38%). In addition, 18% of the faculty members had completed their associate degrees. Finally, a small percentage of instructors had completed only their high school education (2%) while an equally small number of instructors had completed their educational specialists' degree (2%) or doctorate (5%). Overall, most occupational-technical instructors had reached a baccalaureate or masters' degree level of schooling.

Range of years of occupational experience in the trades and technical areas for this sample was extensive. Table 4 illustrates the span of years in work experience. Only five instructors lacked occupational experience in their area of teaching expertise. Sixteen instructors had up to three years of experience compared with 26 who had from four to six years of occupational experience. Twenty-three faculty

TABLE 2

Average Class Sizes for Occupational-Technical
Instructors

Class Size Ranges	N	Percent of Total Sample
Zero to 10 students	7	5%
11 to 20 students	52	39%
21 to 30 students	59	45%
31 to 40 students	13	10%
41 to 50 students	1	1%
	<hr/>	<hr/>
Total	132	100%

TABLE 3

Educational Background of Occupational-Technical
Instructors

Years of Schooling	N	Percent of Total Sample
9-12 years of schooling (high school)	3	2%
13-14 years of schooling (two-year degree)	24	18%
15-16 years of schooling (four year degree)	46	35%
17-18 years of schooling (masters degree)	50	38%
19-20 years of schooling (education specialists degree)	3	2%
19-20 years of schooling (doctoral degree)	6	5%
Total	132	100%

TABLE 4

Occupational Experience of Occupational-Technical
Instructors

Years of Occupational Experience	N	Percent of Total Samples
No occupational experience	5	4%
One to three years of occupational experience	16	12%
Four to six years of occupational experience	26	20%
Seven to ten years of occupational experience	20	15%
Eleven to fifteen years of occupa- tional experience	23	17%
Greater than fifteen years of occupational experience	42	32%
Total	132	100%

members had 11 to 15 years of experience. The remaining instructors (N=42) reported greater than 15 years of occupational experience. Almost half of the instructors had eleven or more years of occupational experience related to their teaching area.

Other descriptive statistics were derived from scores on the Education Orientation Questionnaire (Hadley, 1975) and the Fundamental Interpersonal Relations Orientation - Behavior Schedule (Schutz, 1968). In the following findings, a discussion of the means, standard deviations, and ranges of the Educational Orientation Questionnaire (EOQ) and the Fundamental Interpersonal Relations Orientation - Behavior Schedule (FIRO-B) scores are presented. In addition, findings from other studies are also examined (Hadley, 1975; Holmes, 1977; Schutz, 1968).

Educational Orientations of Occupational Technical Faculty

The mean EOQ score for all Tennessee occupational-technical educators was 165.91 (SD=18.75). Participants' scores ranged from a low of 124 to a high of 233 on the andragogical-pedagogical continuum which theoretically underlies the EOQ. High scores reflect an andragogical tendency, and low scores reflect a pedagogical tendency. There was little difference in EOQ means by school as shown in Table 5.

TABLE 5

Comparison of EOQ Means by School

School	Mean	SD	N	Percent of Total Sample
School A	166.02	20.63	37	28%
School B	168.07	19.87	40	30%
School C	167.93	19.02	15	12%
School D	162.90	16.75	40	30%

A comparison of EOQ mean (by demographic data) in Table 6 shows variation by grouping. The demographic categories included age, sex, class size, years of school, and years of occupational experience. As shown in Table 6, age differences indicate a curvilinear relationship between EOQ mean and age of the instructor. Secondly, females had a higher EOQ mean than males. Next, EOQ means did not seem to be systematically related to class size but did show some relationship to years of schooling. The EOQ means increased as the level of schooling increased with the exception of the highest level of schooling, the doctoral degree. Those who had doctorates had an average EOQ mean of 152.50. EOQ scores did not appear to be strongly related to the last demographic variable, occupational experience. Those with no experience to six years of experience had higher mean scores than those faculty who had worked in their trade or technical area for seven years or more.

These EOQ results differ from those found by Hadley (1975) in his validation sample of 409 adult educators from business, industry, education, religious organizations, libraries, and health agencies. The mean EOQ score for his group was 210 (SD=25.92). Only a small sub-group of Hadley's sample could be classified as vocational educators (13.7%). Nonetheless, this group of vocational educators

TABLE 6

Educational Orientation Data Summarized
by Demographic Sub-groups

Variable	EOQ MEAN	Standard Deviation	N	Percent in Total Sample
<u>Age</u>				
21 to 30 years	171.73	15.96	15	11%
31 to 40 years	171.73	20.04	49	37%
41 to 50 years	158.20	16.92	34	26%
51 to 60 years	161.42	16.35	28	21%
61 to 70 years	168.50	18.83	6	5%
<u>Sex</u>				
Female	171.55	19.23	20	15%
Male	164.91	18.75	112	85%
<u>Average</u>				
<u>Class Size</u>				
Zero to 10 students	162.57	23.13	7	5%
11 to 20 students	165.09	19.78	52	39%
21 to 30 students	167.37	18.07	49	45%
31 to 40 students	162.38	15.49	13	10%
41 to 50 students	192.00	0.0	1	1%
<u>Years of Schooling</u>				
9 to 12 years				
(high school)	153.66	19.65	3	2%
13 to 14 years				
(two year degree)	161.00	12.56	24	18%
15 to 16 years				
(4 year degree)	168.39	16.61	46	35%
17 to 18 years				
(masters degree)	167.56	22.61	50	38%
19 to 20 years				
(education special- ists degree)	179.00	1.00	3	2%
19 to 20 years				
(doctoral degree)	152.50	15.13	6	5%

Table 6 continued.
 Educational Orientation Data Summarized
 By Demographic Sub-groups

Variable	EOQ MEAN	Standard Deviation	N	Percent in Total Sample
<u>Years of Occupational Experience</u>				
None	175.40	4.87	5	4%
1 to 3 years	169.00	18.93	16	12%
4 to 6 years	170.03	22.37	26	20%
7 to 10 years	160.40	20.14	20	15%
11 to 15 years	166.00	16.91	23	17%
More than 15 years	163.64	17.26	42	32%

had a mean of 194.70 on the EQQ which was higher than the EQQ mean of 165.92 for those vocational educators in the present study. In Hadley's sample, only the physical science teacher subgroup had a lower mean than the vocational educator group in his sample. Their EQQ mean was 193.80. In addition, trainers from business and industry in Hadley's survey also had a low EQQ mean of 196.50.

Hadley compared his group's EQQ means by categories similar to some of those found in the current study. His comparable categories were sex, level of education, and age. A comparison of Hadley's means and this study's means is given in Table 7. Tennessee educators have lower EQQ means regardless of category when compared with Hadley's validation study means. In the age groupings, this also holds true. The percentages of sample members in each category are comparable with one exception: Hadley's study had a higher proportion of predominantly younger teachers than the present study.

The Hadley study showed higher EQQ means for both sexes when compared to the current study. The EQQ means for Hadley's males and females were 218.11 and 206.66, respectively, as compared to 164.91 and 171.55 in the present study.

TABLE 7

Comparison of the EQQ Scores of Tennessee
Occupational Instructors and Hadley's 1975
Validation Sample EQQ Means

Variables	Tennessee Means (N=132)	Hadley (1975) Means (N=409)
<u>Sex</u>		
Male	164.91	218.11
Female	171.55	206.66
<u>Years of Schooling</u>		
High School	153.66	190.00
Baccalaureate	168.39	210.20
Graduate studies	166.35	172.50

A comparison of participants' EQQ means by years of schooling yields still another difference. Since the aforementioned study did not categorize years of schooling in identical ways, only a partial comparison can be made. However, the difference between means of high school graduates is substantial. Hadley's group of adult educators with high school diplomas had a mean of 190.00. In contrast, Tennessee technical educators with high school diplomas had a mean of 153.66. In the baccalaureate degree category. Hadley's group mean was 210.20 while the Tennessee group's mean was 168.39. Graduate level EQQ means are more difficult to compare because of the different breakdowns used by the two studies. Assuming that Hadley's graduate school category included all levels, the EQQ mean for graduate school completers was 217.50. This EQQ mean was greater than that of the immediate study which was 166.35.

Since Hadley (1975) did not collect information on class size or occupational experience, these categories of EQQ mean comparisons cannot be made. However, another researcher did note the EQQ means of his sample and those comparisons follows.

In a doctoral study at Auburn University, Holmes (1977) performed a study using the EQQ and the FIRO-B instruments

to examine relationships similar to those being examined in the present study. From a sample population of 167 Alabama adult educators, a group EOQ mean of 183.65 (SD=23.26) was determined. This EOQ mean exceeds the EOQ mean of 165.91 for Tennessee educators. Accordingly, Holmes' sample EOQ score range of 130 to 254 was somewhat greater than the Tennessee sample EOQ score range of 124 to 233. It should be noted that only two Tennessee occupational educators had EOQ scores greater than 204; therefore, the range of the EOQ scores for the current study is really 124 to 204. Holmes omitted demographic data from his research, thereby preventing the comparison of EOQ means for both subgroups. He did, however, administer the FIRO-B and derive mean scores for each of the six dimensions. These measures are compared to the Tennessee FIRO-B mean scores later in this chapter.

Results of the EOQ in the Hadley (1975) and Holmes (1977) studies were substantially different from the EOQ results of the current study. The EOQ means for Hadley's and Holmes' samples were higher than the EOQ means of the current study (See Table 8). In addition, the range of scores in Holmes' study is greater than the range of scores in the current study. Finally, the EOQ scores of the previous studies differ greatly from the current study within age, sex, and years of schooling categories.

TABLE 8

Comparison of EOQ Mean Scores in Hadley (1975) and
Holmes (1977) Studies with EOQ Mean Scores of
Current Study

Study	EOQ Mean	SD	Range
Tennessee teachers (N=132)	165.91	18.70	124-233
Hadley (1975) (N=409)	210.00	25.92	N.G.
Holmes (1977) (N=167)	183.65	23.26	130-254

NOTE: N.G. = Range not given in this study.

Interpersonal Relations of Occupational Technical Faculty

Mean scores and standard deviations on the FIRO-B for the 132 occupational-technical instructors are presented in Table 9. Tennessee occupational-technical educators displayed FIRO-B mean scores ranging from 4.54 on the Wanted Affection (WA) dimension to 2.42 on the Wanted Inclusion (WI) dimension. FIRO-B mean scores for all participants on each dimension are present in Table 9

According to Ryan (1971), FIRO-B scores can be classified in five categories. Extremely low scores are those of 0 to 1 while low scores are those of 2 to 3. Borderline scores are considered to be those of 4 to 5. High scores and extremely high scores are those of 6 to 7 and 8 to 9, respectively. Using Ryan's (1971) guide to scoring, the Tennessee sample means for the FIRO-B were low to borderline scores.

An explanation of the FIRO-B scores was performed using Ryan's diagnostic guidelines for interpretation. For interpretive purposes, Table 10 shows frequency distributions of the FIRO-B scores with emphasis on modal scores. With these guidelines in mind, the FIRO-B scores of the current study provide additional findings. In the dimension of wanted inclusion, the scores for two-thirds of the sample ranged

TABLE 9

FIRO-B Means of Total Sample and of Each
Technical Institute

Means

Institute	N	EI	WI	EC	WC	EA	WA
Total Sample	132	3.61	2.42	3.49	2.88	3.59	4.54
School A	37	3.62	3.27	3.10	2.59	3.48	3.94
School B	40	3.65	2.55	3.95	2.55	3.92	4.80
School C	15	3.66	2.40	4.20	3.33	3.33	4.66
School D	40	3.57	1.52	3.12	3.32	3.45	4.77

NOTE: Range of FIRO-B was 0-9 in all cases but EI which had a range for this sample of 0-8.

from 0 to 1. These extremely low scores are in contrast with the expressed inclusion scores for the group, since a majority of the sample scored in the borderline range (4 to 5). This indicates that as a group these instructors may have many acquaintances but that privately they prefer to associate with only few people. Also, these occupational-technical teachers prefer to initiate any invitations to be part of a group activity or affiliation. Motives supporting this behavior may be discovered by examining the control and affection scores.

The majority of scores for the control dimensions was in the extremely low and low score category. The mode for expressed control (EC) was 1 while the mode for wanted control (WC) was 3. These low scores seem to suggest that this group of instructors does not want others controlling them or making decisions for them. Combined with the low wanted and borderline expressed scores on inclusion, it is probable that autonomy is important to these professionals, although they relinquish some their autonomy needs to be with selected people.

Most scores in expressed and wanted affection were a bit higher than the prior scores. As shown in Figure 2, the EA scores ranged from extremely low to low. However, the mode for the EA dimensions was 3. On the WA dimensions the

Table 10

Frequency Distributions of FIRO-B Scores

Variable	Score	Absolute Frequency	Cumulative Frequency
EI	0	13	9.8
	1	14	20.5
	2	10	28.5
	3	22	44.7
	4	24	62.9
	5	26	82.6
	6	12	91.7
	7	8	97.7
	8	3	100.0
	Total	132	
WI	0	62	47.0
	1	18	60.6
	2	9	67.4
	3	6	72.0
	4	2	73.5
	5	6	78.0
	6	4	81.1
	7	6	85.6
	8	9	92.4
	9	10	100.0
	Total	132	

Table 10 continued.

Frequency Distributions of FIRO-B Scores

Variable	Score	Absolute Frequency	Cumulative Frequency
EC	0	14	10.6
	1	24	28.8
	2	15	40.2
	3	17	53.0
	4	15	64.4
	5	20	79.5
	6	12	88.6
	7	5	92.4
	8	1	93.2
	9	9	100.0
	Total	<u>132</u>	
WC	0	6	4.5
	1	24	22.7
	2	29	44.7
	3	34	70.5
	4	18	84.1
	5	10	91.7
	6	7	97.0
	7	1	97.7
	8	1	98.5
	9	2	100.0
	Total	<u>132</u>	

Table 10 continued.

Frequency Distributions of FIRO-B Scores

Variable	Score	Absolute Frequency	Cumulative Frequency
EA	0	4	3.0
	1	15	14.4
	2	19	28.8
	3	41	59.8
	4	21	75.8
	5	11	84.1
	6	4	87.1
	7	3	89.4
	8	12	98.5
	9	2	100.0
	Total	132	
WA	0	13	9.8
	1	7	15.2
	2	6	19.7
	3	10	27.3
	4	15	38.6
	5	47	74.2
	6	8	80.3
	7	10	87.9
	8	7	93.2
	9	9	100.0
	Total	132	

scores ranged from borderline to high. These moderate scores in the affection dimension do not explain interpersonal behaviors when analyzed in isolation. Nevertheless, when the affection dimension is examined with the control and inclusion scores, it may be indicated that the study participants tend to prefer controlling others and initiating relationships with selected people over the alternative of being well-liked by a variety of people.

Table 11 presents the FIRO-B profiles for each school based upon modal scores for each dimension of the interpersonal scale. The schools are identical in their modal scores for the expressed and wanted affection dimensions. Likewise, all four schools have the same scores for the wanted inclusion dimension. The difference between schools, though small, occurs in the scales of expressed inclusion, expressed and wanted control.

For School A there is considerable discrepancy between the expressed and wanted inclusion modal score dimensions. According to Ryan (1971), this may indicate the prevalence of conflict or frustration in social situations. This same characteristic is true for School C where a modal score of 4 for expressed inclusion and 0 for wanted inclusion is reported. However, it should be noted that none of the

	Inclusion	Control	Affection
Expressed (N=132)	Modal Range (4-5) Mode (5) Mean 3.61	Modal Range (0-3) Mode (1) Mean 3.49	Modal Range (0-3) Mode (3) Mean 3.59
Wanted (N=132)	Modal Range (0-1) Mode (0) Mean 2.42	Modal Range (0-3) Mode (3) Mean 2.88	Modal Range (0-3) Mode (5) Mean 4.54

Figure 2:
 FIRO-B Profile for Tennessee
 Occupational-Technical Educators

scores found in Table 10 are extremely high or high scores. Rather, the scores are predominantly classified as low and extremely low.

Table 11 suggests that occupational-technical instructors have inclusion scores which indicate a preference to be selective in choosing associates. The criteria occupational-technical educators used to determine with whom they will associate is defined by their control and affection needs. Extremely low scores in the inclusion dimension reflect a need to move away from people or to have people move away from them. These same extremely low scores suggest that these people are concerned about being rejected, and that they will try to avoid rejection at all costs.

In the dimensions of expressed and wanted control, participants in the four schools again had low to extremely low modal scores. Ryan (1971) interprets these scores as indicative of avoiding decision-making situations and roles of responsibility. Such people may give an image of self-reliance and adequacy but they have doubts about handling new realms of responsibility -- especially those innovative changes that are suggested by leaders or supervisors. Dealing with new methods and procedures may create anxiety and result in a preference to move at their own speed and not be

pushed. However, underneath all of the insecurity about change, is the potential for leadership if the person is confident that what he/she is doing is correct. High levels of maturity temper the low control scorer's predilection to rebel (Ryan, 1971).

In the affection dimensions, scores could be described as low (EA) and borderline (WA). Borderline scores yield to the power of the scores of the other dimensions of interpersonal behavior. The more powerful scores are extremely high or low scores in the control and inclusion dimensions. Nonetheless, judging from all of the preceding modal scores it appears that these teachers prefer to initiate close relationships with selected people. The low expressed affection scores seem to reinforce this idea.

Generally speaking, the six dimension scores were evenly distributed among the Tennessee sample within each separate dimension, except for the WI dimension on which 80% of the population had a score of zero or one. In the other five dimensions, the mean scores were borderline or low, and the distribution of the sample was evenly dispersed around the mean. Between school differences on the FIRO-B were not significant. Table 9 shows the FIRO-B mean scores for each school.

TABLE 11

FIRO-B Profiles by School Using the Modal Scores

Dimension	School A	School B	School C	School D
EI	5	0	4	3
WI	0	0	0	0
EC	1	0	3	1
WC	2	1	2	3
EA	3	3	3	3
WA	5	5	5	5

NOTE: The scores above are categorized by Ryan (1971) in the following manner:
 Extremely low (0-1), Low (2-3), Borderline (4-5), High (6-7), and Extremely high (8-9).

The Tennessee sample FIRO-B mean scores were lower than the mean scores for Holmes' sample (1977). Adult educators (N=167) in Holmes' study had mean scores that ranged from 3.13 on the EC dimension to 5.26 on the WA dimension.

In an analysis of the mean scores for Holmes' (1977) sample of 167 adult educators, the FIRO-B dimensions showed more variation and the means were higher than those found in the current study. The Tennessee sample FIRO-B mean scale scores range from 4.54 to 2.42. In contrast, the Holmes (1977) study reported FIRO-B mean scores ranging from 5.26 to 3.13. In both studies the Wanted Affection scale received the highest score. The current study showed its lowest scale score to be the Wanted Inclusion dimension, while the Holmes (1977) reported its lowest scale score to be the Expressed Control dimension (See Table 12).

Table 12

A Comparison of Means, and Standard Deviations of the FIRO-B Scales
for Tennessee Instructors and Holmes 1977 Sample Participants

Scales	Tennessee Instructors (N= 132)		Holmes' Adult Educators (N= 167)	
	Mean	Standard Deviation	Mean	Standard Deviation
Expressed Inclusion	3.61	2.08	4.73	2.37
Wanted Inclusion	2.42	3.19	3.59	3.32
Expressed Control	3.49	2.52	3.13	2.42
Wanted Control	2.88	1.77	3.58	1.85
Expressed Affection	3.59	2.12	4.22	2.48
Wanted Affection	4.54	2.43	5.26	2.55

Comparison of FIRO-B Mean Scores for Tennessee Educators and Schutz's Occupational Groups (1967)

Since the development of the FIRO-B instrument in 1958, several other groups have been studied (Schutz, 1967). In The FIRO-B Scale Manual by Schutz (1967), the author cites means, standard deviations, summed and difference scores for all interpersonal dimensions of several occupational groups. By combining expressed and wanted dimension scores, Schutz provides a total score which gives a measure of intensity for the characteristics of inclusion, control, and affection. In contrast, by subtracting E and W scale scores, Schutz presents a difference score which indicates a measure of variance in the E and W dimensions of inclusion, control, and affection.

Certain similarities and dissimilarities can be noted between occupational-technical educators and other occupational groups. As shown in Table 13, Tennessee vocational teachers have a lower overall within need (E + W) score when compared with salespersons, Harvard Business School graduate students, educational administrators, and teachers. However, Tennessee occupational educators have a slightly higher overall within need (E + W) score than architects and physics majors. Tennessee teachers have overall within need

Table 13

A Comparison of Pearson Intercorrelation Matrices for the Tennessee Sample and the Schutz 1968 Validation Sample on the FIRO-B Scales

Scale	Tennessee Educators	Salesmen ¹	Graduate ¹ Students	Educational ¹ Administrators	Teachers ¹	Physics ¹ Majors	Architects ¹
EI	3.6	6.4	5.6	5.9	5.2	3.8	2.7
WI	2.4	7.0	6.2	4.6	3.4	2.6	1.7
EC	3.5	5.6	5.5	4.7	3.1	2.9	5.4
WC	2.9	4.4	4.9	5.5	5.1	4.0	3.1
EA	3.6	6.1	4.1	4.4	3.7	3.2	2.6
WA	4.5	6.9	5.2	5.1	4.3	3.9	4.4
Standard Deviation							
EI	2.08	1.93	2.08	1.90	1.96	2.26	1.79
WI	3.19	2.08	3.10	3.41	3.42	3.30	2.21
EC	2.52	2.03	2.32	2.42	2.38	2.58	2.66
WC	1.77	2.17	2.12	1.72	1.93	2.08	1.91
EA	2.12	2.28	2.30	2.28	2.07	2.19	2.01
WA	2.43	1.86	2.24	2.54	2.35	2.33	2.48
Sums (Σ) Within Need Areas (E + W) and Overall							
I		13.4	11.8	10.5	8.6	6.4	4.4
C		10.0	10.4	10.2	8.2	6.9	8.5
A		<u>13.0</u>	<u>9.3</u>	<u>9.5</u>	<u>8.0</u>	<u>7.1</u>	<u>7.0</u>
Σ		36.4	31.5	30.2	24.8	20.4	19.9
Differences (d) Within Need Areas (E - W) and Overall							
I		-0.6	-0.6	1.3	1.8	1.2	1.0
C		1.2	0.6	-0.8	-2.0	-1.1	2.3
A		<u>-0.8</u>	<u>-1.1</u>	<u>-0.7</u>	<u>-0.6</u>	<u>-0.7</u>	<u>-1.8</u>
		-0.2	-1.1	-0.2	-0.8	-0.6	1.5

¹ Data in columns with occupational headings are taken from Schutz, 1967.

(E - W) scores that were greater than traveling salespeople, Harvard Business School graduate students, educational administrators, physics majors or teachers. Finally, Tennessee educators' scores on the overall within need (E - W) area were lower than the scores of architects.

Another difference identified in this study of occupational educators has to do with intercorrelation of the FIRO-B dimensions. According to Schutz (1967), the six dimensions of the FIRO-B intercorrelate as shown in Table 14. In the validation study (Schutz, 1967), three scales intercorrelate highly with one another: EI and WI; EI and EA; and the EA and WA. In Table 14 intercorrelations for the current study sample are presented. The Pearson R values shown here are similar to the values shown in Schutz's matrix in that the same three scales appear with high correlations. However, in the current study two additional pairs of scales show high correlations. The scales of WI and EA as well as the scales of WI and WA exhibit high correlations for the current study.

Comparing yet another intercorrelation matrix with the current study's matrix reveals some additional information. In a group with pedagogical tendencies similar to those of the current sample, Holmes (1977) found FIRO-B scores which

TABLE 14

A Comparison of Pearson Intercorrelation Matrices
for the Tennessee Sample and the Schutz 1968
Validation Sample on the FIRO-B Scales

	EI	WI	EC	WC	EA	WA
EI	1.00	.45 (.49)	.11 (.12)	.35 (.08)	.47 (.47)	.26 (.27)
WI		1.00	-.03 (.06)	.23 (.06)	.47 (.24)	.42 (.24)
EC			1.00	-.06 (.07)	0 (.19)	.05 (.31)
WC				1.00	.19 (.22)	.06 (.22)
EA					1.00	.58 (.42)
WA						1.00

NOTE: The numbers in parentheses are Schutz's
Pearson R values.

resulted in the correlation matrix present in Table 15. Intercorrelations were found in the same pairs of FIRO-B dimensions (i.e. the EI and WI, EI and EA, WI and EA, WI and WA, and EA and WA dimensions) but the correlations for the Holmes' sample were much stronger than those found in the current sample.

The Relationship Between EQQ and the Independent Variables

Multiple regression was the statistical method used to analyze the proposed relationship between the dependent variable EQQ and the independent variables interpersonal behavior, age, sex, class size, years of schooling and years of occupational experience. The use of regression as a descriptive measure was selected to assess the relative contribution of individual and combined independent variables to the variation in EQQ scores. Since the study by necessity includes voluntary participation, generalization of findings to occupational educators in other geographical regions or settings was not attempted.

In addition, the use of stepwise regression was employed to identify possible predictor variables that would result in a regression equation explaining the variance in the dependent variable, EQQ. Although previous studies (Hadley,

TABLE 15

A Comparison of Pearson Intercorrelation Matrices
for the Tennessee Sample and Holmes¹ Pedagogical
Group on the FIRO-B and EQQ

	EQQ	EI	WI	EC	WC	EA	WA
EQQ	1.00	0 (.03)	.07 (-.61)	-.13 (-.22)	.02 (.15)	.09 (.01)	.01 (-.05)
EI		1.00	.45 (.68)	.11 (.13)	.35 (.18)	.47 (.58)	.26 (.52)
WI			1.00	-.03 (.29)	.23 (.26)	.47 (.58)	.41 (.71)
EC				1.00	-.06 (.06)	0 (.15)	.05 (.21)
WC					1.00	.19 (.01)	.06 (.21)
EA						1.00	.58 (.70)
WA							1.00

Note: The numbers in parentheses are the correlations found in Holmes¹ pedagogical group of adult educators.

1975; Holmes, 1977; Peterson, 1980) have attempted to explain variance in EQQ scores with several variables, no previous study has dealt specifically with occupational-technical educators.

A description of occupational-technical instructors through the careful examination of educational orientations, interpersonal behaviors, and demographic characteristics, provided greater insight into the proposed relationship between these variables. Stepwise regression was preferred to the ordinary regression procedure because of its capacity '... to control for other confounding factors in order to evaluate the contribution of a specific variable or set of variables ...' (Nie et al., 1975, p. 321).

A curvilinear relationship between age and EQQ was evident. As presented in Table 6, EQQ mean scores were high for the oldest and youngest instructors, while the EQQ scores were low for instructors in the middle age bracket. To accommodate this curvilinear relationship, the age variables were transformed (Nie et al., 1975). This process reordered the age variables by magnitude of their EQQ mean scores. Then a multiple regression was performed on the new transformations. Table 16 shows the results of the stepwise multiple regression of all EQQ scores. For 132 cases, the

independent variables entered into the regression equation in the following order: age, expressed control, years of schooling, sex, years of occupational experience, expressed affection, class size, wanted inclusion, expressed inclusion, wanted control, and wanted affection. The R square values indicated that all variables except for wanted affection and wanted control explain 15 percent of the total variance in EQQ scores. In addition, R square values of all variables except for wanted affection and wanted control were significant at the .01 to .05 level.

In stepwise multiple regression analyses by school, R square values show a marked increase. Also, by school, the leading variables differ. School A results are presented in Table 17. For 37 cases in School A, the independent variables entered the regression equation in the following order: age, years of schooling, expressed control, expressed inclusion, expressed affection, class size, years of occupational experience, sex, wanted control, and wanted inclusion. The variable of wanted affection did not enter into the equation. The overall R square value of this group was .458 meaning that almost 46 percent of the variance can be explained by the above cited variables. In addition, all variables except for wanted inclusion and wanted affection had R square values that were significant at the .01 and .05 level.

TABLE 16

Stepwise Regression Analysis of Educational
Orientation Scores for Tennessee
Occupational-Technical Educators

Variables (N = 132)	b	Beta	R Square	R Square Increment
Age	.195	.350	.102	.102
EC	-.385	-.135	.117	.014
Years of Schooling	.898	.127	.129	.011
Sex	-.201	-.100	.136	.007
Years of Occupational Experience	.373	.080	.139	.003
EA	.117	.034	.142	.002
Class Size	.489	.051	.144	.001
WI	.110	.048	.145	.001
EI	-.184	-.053	.147	.001
WC	.965	.023	.147	.000
WA	.689	.023	.147	.000

TABLE 17

Stepwise Regression Analysis of Education
Orientation in School A

Variables (N = 37)	b	Beta	R Square	R Square Increment
Age	.279	.479	.276	.176
Years of Schooling	.357	.374	.274	.098
EC	-.944	-.284	.404	.129
EI	-.747	-.185	.422	.018
EA	.505	.133	.435	.012
Class Size	-.153	-.097	.446	.010
Years of Occupational Experience	-.454	-.090	.451	.004
Sex	.150	.059	.456	.005
WC	-.303	-.053	.458	.001
WI	-.480	-.022	.458	.000
(Constant)	-3.234671			

Note: WA did not meet the criteria for inclusion.

TABLE 18

Stepwise Regression Analysis of Educational
Orientation in School B

Variables N=40	b	Beta	R Square	R Square Increment
Age	.310	.544	.186	.186
Sex	-.585	-.354	.253	.066
EI	.142	.468	.293	.040
Class Size	.337	.288	.339	.045
WI	-.687	-.293	.380	.041
EC	-.602	-.227	.409	.029
Years of Occupational Experience	.788	-.150	.424	.014
EA	-.824	-.240	.429	.004
WA	.685	.202	.433	.004
WC	.460	.106	.439	.005
Years of Schooling	.428	.059	.442	.002
(Constant)	-3.194077			

TABLE 19

Stepwise Regression Analysis of Education
Orientation in School C

Variables N=15	b	Beat	R Square	R Square Increment
WC	.745	.020	.177	.177
Age	-.608	-1.03	.269	.091
WA	-.345	-1.03	.318	.048
EI	.351	.822	.385	.067
Years of Schooling	-.390	-.609	.482	.097
Class size	-.380	-.413	.562	.079
WI	-.499	-.220	.589	.013
EA	.344	.084	.591	.002
EC	-.261	-.089	.593	.001
Sex	.108	.052	.595	.001
(Constant)	-3.626185			

For School B, the regression analysis provided an overall R square value of .422. Different variables from those of School A emerged to explain the variance in EQQ. Order of the variables was: age, sex, expressed inclusion, class size, wanted inclusion, expressed control, years of occupational experience, expressed affection, wanted affection, wanted control, and years of schooling. Beta weights were sufficient for all of these variables, since the R square values were significant at the .01 and .05 level. (See Table 18).

The results of the regression analysis in School C should be treated cautiously, since the sample size for this group is small (N=15). The ratio of variables to number of participants was such that in all probability the derived correlations are unreliable. Nonetheless, an R square of .595 was reported at School C. The variables entered into the regression equation in the following manner: wanted control, age, wanted affection, expressed inclusion, years of schooling, class size, wanted inclusion, expressed affection, expressed control, and sex. Because of the low group size, F values were insufficient for clarifying the lead variables (Table 19).

The overall R square value for School D was .426. The variables in the regression equation ranked accordingly: age, sex, expressed affection, years of schooling, years of occupational experience, wanted affection, wanted inclusion, expressed inclusion, class size, wanted control and expressed control. All variables in the regression equation had R square values significant at the .01 and .05 level with the exception of expressed control and wanted control. Table 20 reviews this information in detail.

In summary, the relationship between FIRO-B scores, demographic data, and EQQ scores was not greatly supported by the regression analysis of the entire sample as the R square value for the whole group was .149. However, the R squares for the individual schools were greater. School A, B, C, and D had R square values of .458, .442, .595, and .426, respectively. According to Table 21, stepwise multiple regression analysis of the entire sample versus individual school samples produced different lead variables in an explanation of the variance in educational orientation. Demographic variables seem to 'compete' with interpersonal variables in the explanation of variance in educational orientation, thereby lessening the effect of a person's interpersonal needs upon teaching style and increasing the effects of age, sex, and years of schooling.

TABLE 20

Stepwise Regression Analysis of Educational
Orientation in School D

Variables N=40	b	Beta	R Square	R Square Increment
Age	.233	.420	.176	.176
Sex	.678	.246	.247	.071
EA	.850	.303	.293	.045
Years of Schooling	.616	.085	.326	.032
Years of Occupational Experience	-.405	-.161	.351	.025
WA	-.405	-.161	.363	.012
WI	.614	.242	.375	.011
EI	-.791	-.246	.392	.017
Class size	.899	.013	.411	.018
WC	.457	.144	.423	.012
EC	.169	.061	.426	.022
(Constant)	-4.919638			

TABLE 21

Comparison of the R Square Values and Lead Variables for the Entire Sample and Four Subsamples

Sample	R Square Value	Variable	Percent of Variance
Entire sample (N=132)	.147	Age	10.0
		EC	1.5
		Years of Schooling	1.1
School A (N=37)	.458	Age	18.0
		Years of Schooling	10.0
		EC	13.0
		EI	2.0
		EA	1.3
School B (N=40)	.442	Age	18.0
		Sex	7.0
		EI	4.0
		Class size	4.5
		WI	4.1
		EC	3.0
School C (N=15)	.595	WC	18.0
		Age	9.0
		WA	5.0
		EI	7.0
		Years of Schooling	10.0
		Class size	8.0
School D (N=40)	.426	Age	17.6
		Sex	7.0
		EA	4.5
		Years of Schooling	3.0
		Occupational Experience	2.0
		Class size	1.8

Summary

This chapter was concerned with the presentation of the findings and the review of statistical procedures used in the data analyses. Findings were reported in relation to each research question. Generally, the majority of occupational-technical educators in the Tennessee study were male, from 31 to 50 years of age, predominantly teaching classes of 21 to 30 students, recipients of baccalaureate or masters degrees, and had at least fifteen or more years of occupational experience.

The EOQ mean score for the entire group was 165.91. EOQ scores varied according to age, sex, and years of schooling. The EOQ scores of the current study were much lower than the EOQ scores in studies by Hadley (1975) and Holmes (1977). As a whole, the Tennessee group had scores that were more pedagogical in nature than the EOQ scores found in the Hadley and Holmes studies.

The FIRO-B scores in the current study were also lower than those found in other studies (Holmes, 1977; Schutz, 1967). The FIRO-B mean scores for Tennessee occupational educators could be classified as borderline or low on all but one dimension of the scale. The wanted inclusion scores

for the current study were extremely low scores, as 80% of the total sample had a score of zero or one. The mean score was lower than the one found by Holmes (1977) in his study of adult educators in Alabama. In addition, the mean scores of the current study were lower than the mean scores of Schutz's occupational categories (1967) of salespersons, graduate students, educational administrators, and teachers. In contrast, Tennessee occupational-technical educators scored higher on the FIRO-B than physics majors and architects in studies reviewed by Schutz (1967). Also, the intercorrelation matrix of the FIRO-B scales for the current study were different from the intercorrelation matrices in the validation sample of Schutz (1967) and the adult educator sample of Holmes (1977). The current study had five scales showing intercorrelations whereas the validation sample had three high scale correlations and the adult educator sample had six high scale correlations.

Finally, the proposed relationship between EQQ and interpersonal behavior as measured by the FIRO-B was found to be different according to the sample or subsample being examined. For the total sample, expressed control was found to be the FIRO-B variable explaining the greatest amount of variance in the dependent variable, EQQ. By school, the FIRO-B scale varied in their effect on EQQ scores. Overall,

FIRO-B scores effect was less than that of the demographic variables age, sex, class size, years of schooling and years of occupational experience. Age, sex, and years of schooling were repeatedly found to affect the variance in EQQ regardless of the number of participants involved.

Chapter V

SUMMARY, CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

Initially, this chapter reviews the participants, methodology, and cumulative findings. The second part of the chapter contains a discussion of the conclusions and recommendations.

Restatement of the Problem

The purpose of this study was threefold: (1) to identify the variation in educational orientation of occupational-technical faculty in selected two-year schools; (2) to identify the interpersonal behaviors of these faculty members, as well as selected demographic features, and (3) to determine whether the demographic variables and interpersonal behaviors are related to the educational orientations of occupational-technical educators. The demographic variables were age, sex, class size, years of schooling, and occupational experience.

Description of the Sample

This study was concerned with the educational orientations of occupational-technical instructors located in four Tennessee technical institutes. Professionals from the career divisions of business science, computer science,

engineering science, health science and other technical sciences were represented in the sample.

All participants volunteered for inclusion in the study and thus did not constitute a random sample. The study did, however, include 75 to 95 percent of the occupational-technical faculties in all four technical institutes in Tennessee. Generalization of the findings to other post-secondary occupational faculty in other geographic regions or settings is speculative, especially in view of variation in the relationships of study variables from school to school in the Tennessee sample.

Methodology

Data collection at each institute included the use of two standardized instruments. The Educational Orientation Questionnaire (EOQ) was administered to investigate the andragogical-pedagogical orientations of the participants. The Fundamental Interpersonal Relations Orientation - Behavior Schedule (FIRO-B) was used to examine the interpersonal behaviors of the participants. In addition, demographic data were collected concerning age, sex, class size, years of schooling and occupational experience.

The data were analyzed by inspection of means, standard deviations, and frequency distributions. A stepwise multiple regression analysis was conducted, and the study results were compared with the results of previous studies (Hadley, 1975; Holmes, 1977; Schutz, 1968).

Summary of Findings

The educational orientation of Tennessee occupational-technical educators was very pedagogical compared to professional groups previously studied. The EOQ mean score of 165.91 for the entire group was lower than any means reported for educators in previous studies (Hadley, 1975; Holmes, 1977). The range of scores was also low in comparison with ranges found in previous studies (Hadley, 1975; Holmes, 1977). A comparison of means among the four technical institutes showed little variation with the lowest mean being 162.90 and the highest mean being 168.07. Of the 132 instructors in the present study, 130 instructors had scores more pedagogically-oriented than the mean scores for Hadley's validation sample (1975).

There were some noticeable differences when EOQ scores were compared by groups formed by demographic variables. For example, age was related to EOQ scores in a curvilinear fashion. In a comparison of the mean EOQ scores for the two

sexes, the mean scores for males was lower than the mean score for females. In a previous study, males had higher mean scores than females (Hadley, 1975).

Years of schooling for the total example had a positive relationship with EQQ scores. As the years of schooling increased, the EQQ mean scores increased for occupational educators, with one exception, the doctoral level. With only six participants reporting completion of their doctoral degrees, the mean score of EQQ for this small group was 152.50. Although the scores increased as schooling increased, these same mean scores did not differ greatly from the overall EQQ group mean.

An examination of the FIRO-B mean scores revealed that occupational instructors had relatively low or borderline scores on five of the six FIRO-B dimensions. Low mean scores were found in the EI, EC, WC, and EA dimensions while the only borderline score was the WA dimension. The remaining dimension of WI was the lowest mean score. These scores were lower than the scores found by Holmes in his study of Alabama adult educators. However, as in the immediate study, the highest mean score in the Alabama study was on the dimension of WA.

A stepwise multiple regression analysis of educational orientation (measured by EQQ) with interpersonal behavior (measured by the FIRO-B) and the demographic variables produced an R square of .149. For the entire sample of 132 instructors, almost 15 percent of the variance in EQQ scores could be accounted for by a combination of FIRO-B scores and demographic variables. Age accounted for approximately 10 percent of the total variance followed by EC with 1.5 percent and years of experience with one percent.

In a stepwise regression analysis by individual school, more of the variance in educational orientation could be explained. Also, as shown in Table 21, the order of leading independent variables was different for each school. School A had the highest R square value (.458) followed by School B with an R square value of .442 and School D with an R square of .426. It should be noted that School C had an R square value higher than Schools A, B, and D, but the small sample size in School C indicates that the findings may be unreliable. The fact that variance explained by individual school comparisons is higher than the overall explanation of variance may be attributable to the different interaction effects of the variables in each school. This was reflected in the different slopes of regression lines from school to school and the difficulty in obtaining a good fit in the overall analysis.

Consequently, there is a relationship between selected interpersonal and demographic variables and educational orientation for some occupational instructors. The dimensions of expressed control, expressed inclusion, wanted control, and wanted affection explained varying proportions of EOQ variance for each school. Age, years of schooling, class size, and sex, however, generally accounted for a greater proportion of variance in educational orientation than did the interpersonal behavior dimensions.

Conclusions

Based upon the findings in Chapter 4, certain conclusions can be drawn regarding the primary research questions. First, it can be said that occupational-technical instructors in Tennessee who participated in this study are systematically different from people studied in the past. In relation to the educational orientations of occupational-technical faculty in Tennessee, the findings show that the group was very pedagogical in their teaching beliefs and practices. Only two participants had scores that could be labeled as andragogical in comparison with scores in other studies (Hadley, 1975; Holmes, 1977).

Tennessee occupational educators were more pedagogical than Alabama cooperative extension professionals and univer-

sity professors of continuing education (Holmes, 1977). Also, in comparison to adult vocational educators and trainers in business and industry (Hadley, 1975), occupational instructors in the current study were more pedagogical in educational orientation.

In regard to interpersonal characteristics, Tennessee occupational instructors' scores on the FIRO-B were predominantly low to extremely low which suggests that these instructors exhibit somewhat 'compulsive or noticeably characteristic behaviors' (Ryan, 1971). Specifically, these instructors tend to prefer select, small group affiliation. Also, they favor little control over others and likewise, little control by others. Nonetheless, in social situations providing opportunities for close relationships with others, occupational instructors choose to be the initiators in the promotion of interpersonal relationships.

The interpersonal behaviors exemplified by occupational-technical faculty are unlike those of other professionals cited in previous studies using the FIRO-B instrument. These other professionals, with the exception of architects and physics majors, have much higher inclusion, control, and affection needs as reflected by their high to extremely high scores. In short, occupational instructors tend to be more

introverted when compared to others (Schutz, 1967). Therefore, Tennessee occupational instructors in this study are systematically different from other previously studied groups (Schutz, 1967; Holmes, 1977), as shown by an analysis of their educational orientations and interpersonal needs.

A second conclusion concerns the explanation of the relationship between interpersonal behaviors, demographic data, and educational orientation. Although a somewhat weak relationship was identified among the interpersonal and demographic variables and educational orientation for 132 occupational instructors, a much stronger relationship was found among these same variables when the sample was sub-divided by school. In addition, in each institute, different variables accounted for differing amounts of variance in the EQO scores. These findings support the conclusions that an unknown moderating variable or variables may be present in each of the different settings.

Discussion

It appears that both educational orientations and interpersonal behaviors of occupational-technical educators in these four settings reflect the following possibilities: As a group, occupational instructors have a traditional view of how the student should be involved in the learning process.

This limitation in perspective may inhibit the occupational instructor in his/her use of instructional techniques. By examining these teachers' pedagogical tendencies with their proposed interpersonal behaviors, there seems to be a suggestion that adapting to change and opening up to the non-traditional student may be a bit difficult for these post-secondary instructors. Their educational beliefs (as measured by EOQ) imply that they need to be the source of knowledge and the director of learning activities with the student as the recipient of the knowledge and learning schemes. Occupational instructors' FIRO-B scores imply that they may be inclined to want the students' affection if they (the teachers) can initiate the relationship. However, they do not appear to want to be controlled by the student or, for that matter, to really have a great deal of control over the student. This seems to contradict the pedagogical belief system which endorses controlling the student.

However, the faculty member's need to dominate the interpersonal relationship does appear in the low scores in the inclusion dimensions. Whereas the EOQ score of Hadley's (1975) sample increased as did the wanted inclusion and wanted affection scores on the FIRO-B, the opposite occurred in the current study. As EOQ scores decreased so did wanted inclusion and wanted affection scores. Here low scores

reinforce the pedagogical belief system, resulting in the manifestation of the instructor's need to choose with whom he/she will closely associate. This sort of 'exclusive or selective' behavior in belonging to a collection of people can be associated with the definite line drawn between teacher and student in the pedagogical belief system.

In comparison with other studies involving the FIRO-B (Holmes, 1977; Schutz, 1967), Tennessee occupational instructors exhibited much lower scores on the six dimensions. Although the FIRO-B means of Hadley's (1977) Alabama cooperative extension professionals and university professors of continuing education were similar to the means of the Tennessee group, this was not the case for the occupational groups examined by Schutz (1967). As mentioned earlier, the two occupational groups with FIRO-B means resembling those of occupational educators were the architect group and the physics major group.

Perhaps, this similarity is attributable to the common backgrounds of occupational educators, architects, and physics majors. Generally speaking, much of their training and subject matter is structured, scientific, and unrelated to working with large groups of people. In addition, as reported in Schutz's FIRO-B analyses of people in various

occupational groups, those in engineering, computer science, business science, as well as the pure sciences, appear more introverted than people in sales and education. Since the majority of occupational-technical instructors enter education from business and industrial worlds of scientific, production-oriented settings, they may share the occupational and interpersonal similarities of people in science fields.

This study reinforced the researcher's previous observations of occupational-technical instructors in regard to career choice and decision-making. Occupational-technical instructors are typically recruited from scientific fields of engineering, medicine, and construction, just to name a few. These instructors are rarely selected from the field of education or colleges or teacher education; therefore, they have interpersonal needs and characteristics as revealed by the FIRO-B which differ from those needs and characteristics of non-technical teachers (Schutz, 1967).

The researcher has witnessed behaviors which parallel the FIRO-B and EQQ study results when conducting staff development activities and career advisement for occupational-technical instructors. For example, faculty participation was enhanced when the group members had some control over the direction of the learning activity. In addition, it also

was noted that classroom activities were highly structured and controlled by these instructors. Also, many occupational teachers preferred evening students to day students because of the former group's seriousness and goal orientation in class. Socially, group orientation among occupational instructors usually departmentalized. For example, engineering faculty tended to socialize with each other at mealtime and school extracurricular activities. These observations seemed to confirm the results of the current study.

Recommendations

The findings of the current study add to the body of knowledge on career division faculty at the two-year post-secondary school level. As stated earlier in the review of literature, little is known about two-year school occupational faculty, in particular their educational orientations or interpersonal behaviors. It is recommended that the findings of this study be shared with educators to indicate the importance of knowing more about the educational beliefs of post-secondary occupational instructors.

Realizing that the results of this study are only one aspect in the analysis of staff development needs at the two-year school level, it is recommended that more self-exa-

mination occur on the part of occupational-technical faculty, specifically, in the four schools involved in this study. The process of self-examination from time to time for the faculty member is important in the renewal processes for faculties and institutions as a whole. If this were a longitudinal study, the next phase would include further study and later the reporting of results to each group of faculty members. The effects of feedback might be examined in a series of staff development exercises. But more importantly, by personalizing the staff development process, a resultant change in teacher behavior could occur. (Gaff, 1975)

Another recommendation is that the study results should also be shared with staff development coordinators, department chairpersons, and deans of instruction in the schools of Tennessee. By sharing this information with policy makers and developers of professional improvement operations, discussion of any institutional restrictions on teaching style or educational orientation might be initiated. In addition, by combining the information that each of these administrators has on their respective faculties with the current study's findings, more relevant, personalized staff development contracts and procedures could be created.

For future research consideration, an investigation of additional variables and educational orientation should be undertaken. During the data collection phase of the study, several instructors suggested that the variable of subject matter be considered in relation to educational orientation. It was also mentioned that if a course could be described as 'abstract and theoretical' in nature, then teaching style would probably result in a more pedagogical style. On the other hand, if the course being taught could be described as 'applied or practical' in nature, the dictated teaching style might be considered andragogical or more flexible.

Although occupational-technical instructors in the present study were found to be pedagogical, the effectiveness of this approach in the post-secondary setting is not known. Future research should examine the actual effectiveness of the pedagogical teaching styles in the occupational-technical classroom.

Other additional variables worth examining in future studies are institutional climate and administrative support for staff development or for student-oriented practices in the classroom. These additional variables may have contributed to the variance in educational orientation. They may have been the moderating variables which produced differ-

ences in the regression analysis of the relationship between interpersonal and demographic variable and educational orientation. Future investigations of the four schools in Tennessee in regard to these new variables might better explain the effects of particular elements on occupational educators' educational beliefs.

Finally, a close-up examination of the individual EQQ responses might produce additional information on the occupational instructor's actual beliefs concerning the student/instructor relationship in the learning process. By conducting an item analysis of the individual responses on the EQQ, specific statements could be made regarding agreement or disagreement with particular pedagogical and andragogical principles (Hadley, 1979). The examination of responses to particular EQQ items may offer insight into specific educational beliefs and practices thereby providing greater input and clarification for the personalization of one's professional development. In this manner potential barriers to the improvement of certain teaching methods might be identified.

The current study examined a small part of the teaching process of occupational-technical educators. By describing for the first time the educational orientations of occupa-

tional-technical instructors in one location in the country, a glimpse can be seen of the possibilities for self-examination in relation to teaching effectiveness of the two-year school. While the current study presents a profile of occupational technical educators using designated variables, this new information must be transformed into personalized feedback to be maximally useful. Such findings need to be implemented into a formal staff development system. In that way this study forms the basis for another means of faculty renewal.

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APPENDIX A

INSTRUCTIONS: Using the answer sheet provided, fill in the following information:

NAME: Write the name of the institution where you are employed.
COURSE NUMBER: Omit
DATE: Enter the current month, day and year.
ID NUMBER: Enter the last four digits of your social security number by writing the numbers in the boxes provided and by darkening the appropriate circle beneath each letter.
TEST FORM: Omit
SEAT NO.: Omit
GROUP NUMBER: Omit

BIOGRAPHIC DATA

Biographic data is entered on the first five items. Darken the circle that is appropriate for you.

ITEM Number

1. What is your age?
 - (1) 21-30 years
 - (2) 31-40 years
 - (3) 41-50 years
 - (4) 51-60 years
 - (5) 61-70 years

2. What is your sex?
 - (1) Female
 - (2) Male

3. What is the average class size of the courses that you teach?
 - (1) 0-10 students
 - (2) 11-20 students
 - (3) 21-30 students
 - (4) 31-40 students
 - (5) 41-50 students

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4. Identify the number of years of schooling that you have completed.
- (1) 1-8 years of schooling (or Junior High)
 - (2) 9-12 years of schooling (or High School)
 - (3) 13-14 years of schooling (or Two-year degree)
 - (4) 15-16 years of schooling (or Four year degree)
 - (5) 17-18 years of schooling (or Master's degree)
 - (6) 19-20 years of schooling (or Educational Specialist's degree)
 - (7) 19-20 years of schooling (or Doctoral degree)
5. Identify how many years of occupational experience you have in your area of teaching expertise.
- (1) No actual occupational experience
 - (2) 1-3 years of occupational experience
 - (3) 4-6 years of occupational experience
 - (4) 7-10 years of occupational experience
 - (5) 11-15 years of occupational experience
 - (6) Greater than 15 years of occupational experience

STOP! Now you are ready to begin the FIRO-B section of this study. Begin answering the FIRO-B on item 26 of your answer sheet. Your last entry for the FIRO-B will be item number 79 on the answer sheet.

INSTRUCTIONS FOR THE FIRO-B:

This questionnaire explores the typical ways you interact with people. There are no right or wrong answers. Sometimes people are tempted to answer questions like these in terms of what they think a person should do. This is not what is wanted here. We would like to know how you actually behave. Some items may seem similar to others. However, each item is different so please answer each one without regard to the others. There is no time limit, but do not debate long over any item.

Remember to think of how you would behave in everyday life situations at home, at work, in civic organization, during a coffee break, in a store, etc. Now begin the FIRO-B.

FOR EACH STATEMENT BELOW, DECIDE WHICH OF THE FOLLOWING ANSWERS BEST APPLIES TO YOU. DARKEN THE NUMBER OF THE ANSWER MOST APPROPRIATE FOR YOU. PLEASE BE AS HONEST AS YOU CAN.

- (1) NEVER (2) RARELY (3) OCCASIONALLY (4) SOMETIMES
 (5) OFTEN (6) USUALLY

- | | |
|---|--|
| 26. I try to be with people. | 34. I try to include other people in my plans. |
| 27. I let other people decide what to do. | 35. I let other people control my actions. |
| 28. I join social groups. | 36. I try to have people around me. |
| 29. I try to have close relationships with people. | 37. I try to get close and personal with people. |
| 30. I tend to join social organizations when I have an opportunity. | 38. When people are doing things together I tend to join them. |
| 31. I let other people strongly influence my actions. | 39. I am easily led by people. |
| 32. I try to be included in information social activities. | 40. I try to avoid being along. |

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33. I try to have close personal relationships with people. 41. I try to participate in group activities.

FOR EACH OF THE NEXT GROUP OF STATEMENTS, CHOOSE ONE OF THE FOLLOWING ANSWERS:

(1) *NOBODY* (2) *ONE OR TWO PEOPLE* (3) *A FEW PEOPLE*

(4) *SOME PEOPLE* (5) *MANY PEOPLE* (6) *MOST PEOPLE*

42. I try to be friendly to people. 48. I try to get close and personal with people.
43. I let other people decide what to do. 49. I let other people control my actions.
44. My personal relations with people are cool and distant. 50. I act cool and distant with people.
45. I let other people take charge of things. 51. I am easily led by people.
46. I try to have close relationships with people. 52. I try to have close, personal relationships with people.
47. I let other people strongly influence my actions.

FOR EACH OF THE NEXT GROUP STATEMENTS, CHOOSE ONE OF THE FOLLOWING ANSWERS:

(1) *NOBODY* (2) *ONE OR TWO PEOPLE* (3) *A FEW PEOPLE*

(4) *SOME PEOPLE* (5) *MANY PEOPLE* (6) *MOST PEOPLE*

53. I like people to invite me to things. 60. I like people to act cool and distant toward me.
54. I like people to act close and personal with me 61. I try to have other people do things the way I want them done.

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55. I try to influence strongly other people's actions.
56. I like people to invite me to join in their activities.
57. I like people to act close toward me.
58. I try to take charge of things when I am with people.
59. I like people to include me in their activities.
62. I like people to ask me to participate in their discussions.
63. I like people to act friendly toward me.
64. I like people to invite me to participate in their activities.
65. I like people to act distant toward me.

FOR EACH OF THE NEXT GROUP OF STATEMENTS, CHOOSE ONE OF THE FOLLOWING ANSWERS:

- (1) NEVER (2) RARELY (3) OCCASIONALLY (4) SOMETIMES
 (5) OFTEN (6) USUALLY

66. I try to be the dominant person when I am with people.
67. I like people to invite me to things.
68. I like people to act close toward me.
69. I try to have other people do things I want done.
70. I like people to invite me to join their activities.
71. I like people to act cool and distant toward me.
73. I like people to include me in their activities.
74. I like people to act close and personal with me.
75. I try to take charge of things when I'm with people.
76. I like people to invite me to participate in their activities.
77. I like people to act distant toward me.
78. I try to have other people do things the way I want them done.

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72. I try to influence strongly other people's actions.
79. I take charge of things when I'm with people.

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STOP! Now you are ready to begin the Educational Orientation Questionnaire. Start answering this questionnaire on item number 81 of the answer sheet. Your last entry for this questionnaire will be item number 140 on the answer sheet.

EDUCATIONAL ORIENTATION QUESTIONNAIRE

Below are statements about education, teaching, and learning. These have been chosen to express several different viewpoints.

PLEASE NOTE: In completing this questionnaire keep in mind that the other word "student" means adult student, and the word "teacher" means yourself--the person filling out the questionnaire. In other words, your answer indicate your educational orientation in working with adults.

For each of the statements below, darken the circle of the number that best describes your answer. Select the circle that indicates your attitude or position best--how much you agree or disagree with that statement. The five positions from which to choose are:

- (1) I agree with this statement.
 - (2) I tend to agree with this statement.
 - (3) I'm too uncertain about this statement to agree or disagree.
 - (4) I tend to disagree with this statement.
 - (5) I disagree with this statement.
81. Education should focus on what is sure, reliable and lasting.
 82. Teaching effectiveness should be measured by students' increase in examination of their own feelings, attitudes, and behaviors.
 83. Students' need a strong teacher who can direct their learning.
 84. It's hard to keep people from learning.
 85. Learning is an intellectual process of understanding ideas (concepts) and acquiring skills.
 86. Effective learning occurs most often when students actively participate in deciding what is to be learned and how.
 87. Giving examinations regularly motivates students to learn.

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- (1) I agree with this statement.
 - (2) I tend to agree with this statement.
 - (3) I'm too uncertain about this statement to agree or disagree.
 - (4) I tend to disagree with this statement.
 - (5) I disagree with this statement.
88. Organization of the content and sequence of learning activities should grow out of students' needs, with their participation.
 89. It should be the teacher's responsibility to evaluate students' achievements and assign grades.
 90. The best sources of ideas for improving teaching and education are the students.
 91. Competition among students encourages keen learning.
 92. A teacher by his behavior should show each student that his abilities and experiences are respected and valued.
 93. A teacher should help students accept values of our society.
 94. To see education as transmittal of knowledge is obsolete.
 95. Students tend to be much alike.
 96. It is a teacher's responsibility to motivate students to learn what they ought to learn.
 97. Clear explanation by the teacher is essential for effective learning.
 98. A teacher's primary responsibility is helping students choose and develop their own directions for learning.
 99. A good teacher makes the decision about what should be taught, when, and how.
 100. A teacher seldom needs to know the average students as separate individuals.

- (1) I agree with this statement.
 - (2) I tend to agree with this statement.
 - (3) I'm too uncertain about this statement to agree or disagree.
 - (4) I tend to disagree with this statement.
 - (5) I disagree with this statement.
101. A teacher should not change his expressed decisions without unusually good reasons.
 102. Emphasizing efficiency in teaching often blocks development of an effective learning climate.
 103. An adult education program should be evaluated by the same standards as other accredited programs of education.
 104. Evaluating his achievement should be primarily a responsibility of the student since he has the necessary data.
 105. Competition among students develops conceit, selfishness, and envy.
 106. A teacher should discuss his blunders and learnings with students.
 107. A teacher should be sure his questions steer students toward truth.
 108. Educational objectives should define changes in behavior which the student desires and the teacher helps him undertake.
 109. Most students are able to keep their emotions under good control.
 110. Students are quite competent to choose and carry out their own projects for learning.
 111. A teacher should help students free themselves of fixed habits and patterns of thought that block their growth.
 112. The major qualifications of a teacher are grasp of subject matter and ability to explain (demonstrate) it clearly and interestingly.

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- (1) I agree with this statement.
 - (2) I tend to agree with this statement.
 - (3) I'm too uncertain about this statement to agree or disagree.
 - (4) I tend to disagree with this statement.
 - (5) I disagree with this statement.
113. It is better for students to create their own learning activities and materials than for the teacher to provide them.
 114. A teacher should require assignments and grade them.
 115. Use of a topical outline course plan often blocks a teacher's perception of students' needs.
 116. An adult education program should be evaluated only in terms of its own objectives.
 117. Competition among students develops courage, determination, and industry.
 118. A teacher should provide opportunities for warm relationships with students and among students.
 119. Education should lead people to goals that result in orderly, reasonable lives.
 120. Education should increase students' critical evaluation of our society and courage to try new, creative, satisfying behavior.
 121. Often students don't know what is best for them.
 122. When a teacher makes a mistake, he is likely to lose student's respect.
 123. Maturity depends more on continuing growth in self-understanding than on growth in knowledge.
 124. Students frequently "get off the subject" either intentionally or unintentionally.

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- (1) I agree with this statement.
 - (2) I tend to agree with this statement.
 - (3) I'm too uncertain about this statement to agree or disagree.
 - (4) I tend to disagree with this statement.
 - (5) I disagree with this statement.
125. Education programs which tell what should be learned and how, rarely help students learn.
 126. Letting students determine learning objectives wastes too much time in irrelevant discussion.
 127. The primary concern of a teacher should be the immediate needs of the student.
 128. Grades should reflect a student's grasp of the subject or skill taught.
 129. Assignments by a teacher tend to restrict students' significant learnings.
 130. Tests prepared by students are usually just as effective as those prepared by a teacher.
 131. The goals a student sets for himself are the basis of effective learning not the teacher's goals.
 132. A teacher's mission is to help each student learn what he decides will aid him in achieving his personal goals.
 133. If a teacher isn't careful, students take advantage.
 134. Considering the possible effects on students, a teacher should usually play it safe rather than take chances.
 135. Without a cooperative climate encouraging students to risk and experiment, significant learning is unlikely.
 136. A teacher who does not plan to work for a class carefully is taking advantage of the students' ignorance.

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- (1) I agree with this statement.
 - (2) I tend to agree with this statement.
 - (3) I'm too uncertain about this statement to agree or disagree.
 - (4) I tend to disagree with this statement.
 - (5) I disagree with this statement.
137. To use students' experiences and resources for learning requires group activities rather than such methods as lectures.
138. It is a good rule in teaching to keep relationships with students impersonal.
139. Planning units of work should be done by students and teacher together.
140. Good teaching is systematic - set up a clear plan and schedule and stick to it.

STOP! You have now completed the instruments required for this research on occupational-technical educators. Please check your answer sheet to make sure that you have answered all of the questions. After doing so, please bring your completed tests to the researcher.

Thank you very much for your help in this endeavor. If you are interested in the results of your test, please tell the researcher so that she can make a list of the people who are interested in meeting again to have the test scores interpreted. Such a session would be considered a staff development activity for occupational-technical educators.

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THE EDUCATIONAL ORIENTATIONS
OF
OCCUPATIONAL-TECHNICAL EDUCATORS

by

Deborah Lynne Dickerson

(ABSTRACT)

The purpose of this study was threefold: (1) To determine the educational orientations of post-secondary occupational-technical instructors; (2) To determine the interpersonal behaviors of post-secondary occupational-technical instructors; and (3) To examine the proposed relationship between interpersonal behaviors, demographic variables, and educational orientations of occupational-technical educators.

The study sample consisted of 132 occupational-technical educators located in the four technical institutes of Tennessee. Career divisions represented in the sample were: business science, computer science, engineering science, and health science.

Instrumentation included the Educational Orientation Questionnaire ([EQQ], Hadley, 1975) which measured andragog-

ical-pedagogical beliefs and practices. The Fundamental Interpersonal Relations Orientation - Behavior Science ([FIRO-B], Schutz, 1967) identified teachers' interpersonal interaction behaviors. In addition to the primary instruments, a survey form was used to collect demographic data concerning the sex, age, average class size, years of schooling, and years of occupational information. The primary data analysis used were descriptive and multiple regression. The findings were:

1. Occupational-technical instructors in Tennessee technical institutes are more pedagogical in educational orientation than similar occupational groups studied.
2. Occupational-technical instructors in Tennessee technical institutes exhibit interpersonal scores which suggest that as a group they are selective about the persons with whom they associate; they prefer not being controlled and not exercising control over others; and they have a moderate need to be liked by others.
3. The relationship between interpersonal behaviors, demographic variables, and educational orientation is dominated by one's age, expressed control, sex,

and years of schooling. The relationship between interpersonal behavior and demographic variables and educational orientation varies from school to school.

4. While the proposed relationship between variables of interpersonal behavior, demographic variables, and education orientation was found, the study's demographic variables tended to account for more variance in educational orientation.