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ABSTRACT

Two studies focused on factors associated with attrition and satisfaction among two-year postsecondary technical college instructors. Results suggested differences in the needs and professional development activities of beginning and experienced instructors. A third study compared follow-up data from a group of beginning instructors 5 years after they entered teaching, with 5-year follow-up data gathered from experienced instructors with 8 to 13 years of experience. Usable data about needs related to job satisfaction and professional development activities and descriptive demographic data were gathered from 292 experienced and 250 beginning instructors, with return rates of 74 percent and 76 percent respectively. The study compared four groups of instructors: beginning instructors who stayed in technical education and those who left; experienced instructors who stayed in technical education and those who left. The experienced and beginning teachers who stayed in technical education differed significantly on 8 of 11 job needs. Shifts in needs seemed to support career development theory predictions of changes in needs with maturity in careers. Both beginning and experienced instructors participated in substantial amounts of professional development activity, but a shift was found in the types of activities involved. Significant differences were found between the ratings of experienced and beginning teachers on six reasons for leaving technical education. (62 references) (YLB)

Minnesota Research and Development Center for Vocational Education

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TABLE OF CONTENTS

List of Tables

CHAPTER 1

Introduction

Technical college instructors are a valuable resource. Their retention and continued growth and development are concerns for the profession. In order to maximize the effectiveness of these instructors and to minimize the likelihood that they will leave teaching, factors leading to their attrition and professional satisfaction should be better understood. Differences in the professional development activities of these instructors should also be understood in order to better meet their needs. This report is the product of the third in a series of studies focused on understanding factors associated with attrition and satisfaction of two-year postsecondary technical college instructors and possible implications for planning professional development activities.

The first study investigated job needs and professional development activities of beginning instructors (Pucel, Jensrud, & Persico, 1987). It concentrated on differences between the needs and professional development patterns of beginning adult extension vocational-technical educators and full-time vocational-technical educators who did not have degrees in education. The study was conducted at a time when the Department of Vocational and Technical Education at the University of Minnesota was considering the need for separate courses to meet the professional development needs of different groups of beginning instructors in Minnesota's Technical Colleges. The study found that the postsecondary and adult groups differed significantly in relation to a number of job needs which attracted them to vocational education. The differences were in the extent to which the groups were attracted by fringe benefits, the sharing of knowledge, wanting a job change, career advancement, work schedule, job security, and the need to control what they do. The study also found that both groups participated in substantial amounts of professional development activities which included pedagogical and technical updating. Significant differences were found in the actual numbers of professional development courses taken by the two groups in areas of instructional methodology and vocational education. The postsecondary instructors tended to take more courses than the adult instructors. Most of the differences in job needs and amount of professional development appeared to be based on whether persons considered teaching to be their primary career. For the full-time postsecondary instructors, teaching was their primary job. They perceived the job-related needs listed above as more important than did adult instructors who had full-time employment elsewhere and considered teaching to be a secondary occupation. The exception was that adult educators tended to be relatively more concerned about sharing their knowledge. The three factors most important to beginning instructors leaving vocational education were found to be (a) career advancement,

(b) elimination of position, and (c) work schedules. The three least important factors were (a) family reasons, (b) did not like vocational education, and (c) students.

The second study investigated changes in job needs of experienced instructors between the time they entered teaching and 13 to 17 years later, and differences between the job needs of instructors who stayed in teaching after a minimum of 8 years of experience and those who left teaching (Pucel & Kaynes, 1989). This study found that some of the needs of instructors who stayed in teaching changed significantly between the time they entered teaching and after they had extensive experience. Salary, fringe benefits, work schedule, job security, control of work, and co-workers became significantly more important while sharing knowledge became significantly less important. The results suggested a major shift from the intrinsic aspects of teaching found with the beginning instructors to the extrinsic aspects of employment. This study also found significant differences between technical college instructors who stayed in teaching compared to those who left. The group that stayed in vocational education rated both the work environment and the opportunity to work with students as significantly more important factors to their entering teaching. This study suggested that the needs of instructors change over time and that these differences might affect their professional development needs. The study also implied that the work environment of instructors became more important later in their careers. This suggests that a key factor to continued job satisfaction might be the quality of their work lives and that changes in work schedule, control of work, etc., might bring about improved instructor moral and professional satisfaction. The three factors most important to experienced instructors leaving vocational education were found to be (a) wanted a job change, (b) stress, and (c) co-workers. The three least important factors were (a) fringe benefits, (b) family reasons, and (c) did not like vocational education.

The results of the first two studies suggested that there were differences in the needs and professional development activities of beginning and experienced instructors. These differences were observed to be consistent with career development theories which suggest that people's professional needs change as they progress through various stages of their careers. Therefore, it was hypothesized that those factors important to beginning instructors may be significantly different from those of instructors who have had many years of experience. In addition, the differences in professional needs might affect the types of professional development activities in which they engage. This third study was designed to investigate those possible differences more thoroughly. This study was designed to:

1. Determine if the needs of beginning instructors who remain in teaching after five years differ from the needs of those who remain in teaching for an extended period of time (13 to 17 years).
2. Determine if the professional development activities of beginning instructors who remain in teaching after five years differ from the activities of those who remain in teaching for an extended period of time (13 to 17 years).
3. Determine if the factors important to beginning instructors leaving vocational education differ from those factors important to experienced instructors leaving vocational education.

Conceptual Rationale

Each of the three studies was conducted in the context of the same two theoretical models related to career development. The first is the Theory of Work Adjustment (TWA) developed by Dawis, Lofquist, and Weiss (1968) at the University of Minnesota. TWA suggests that people stay in jobs if those jobs are consistent with their abilities and needs. If their jobs are inconsistent with their abilities or needs, they have a high probability of leaving due to personal dissatisfaction or due to inadequate performance. Job tenure, therefore, is viewed as the result of a correspondence between the individual's abilities and needs on the one hand, and the ability requirements of the job and the extent to which the job can satisfy the individual's needs on the other. TWA considers needs to be dynamic and assumes that they change over time as individuals progress through their careers. "The continuous and dynamic process by which the individual seeks to achieve and maintain correspondence with his/her work environment is called work adjustment" (Dawis, Lofquist, and Weiss, 1968, p. 5).

The second contextual model is that proposed by McKenna (1982). That model suggests that individuals' career development activities progress through five stages and that their perspectives and dispositions concerning their jobs change as they progress through those stages. These changes in turn impact their views of their jobs and professional development needs. McKenna suggests that stage one occurs during the first three years of professional teaching. This stage is characterized by enthusiasm, idealism, and efforts to fit into existing patterns of operation. Stage two is primarily characterized by a sense of stress as teachers seek to acquire continuing employment status, recognition from peers, and a chance for further advancement. During stage three, the teachers face mid-career issues. In stage three, teachers may begin to feel dead-ended if they perceive themselves as having plateaued or as having become stagnant in terms of salary or career advancement. On the other hand, teachers in stage three who have continued to progress in terms of professional development may feel a greater sense of security and job satisfaction than teachers in stage two. Stage four may be called the pre-retirement stage. In this stage individuals may have reached the top of their profession or rank. Depending upon how far they have progressed toward retirement, they may feel either a lack of professional challenge and job satisfaction, or a sense of relaxation and career satisfaction. McKenna suggests that generally, when teachers are more than five years from retirement, there is a tendency to feel more dissatisfied if they are in stage four. Stage five is the retirement stage that can be characterized by either a sense of dissatisfaction or a sense of contentment, depending upon how well one has planned for retirement.

The two models suggest that factors affecting job satisfaction impact individuals' reflections on teaching as a profession and on continuing in that profession. They also suggest that factors affecting

satisfaction change as teachers mature in the profession. If the factors affecting individuals' satisfaction are perceived to remain compatible with the teaching profession, those persons are likely to remain in the profession. When those factors are not perceived as remaining compatible, such individuals are likely to leave.

McKenna's model suggests that the beginning instructors in this study who had five years of teaching when the data were gathered, theoretically, would have progressed through approximately stage three of the model. The experienced instructors with a minimum of between 8 and 12 years of experience included in this study, theoretically, would have been in stages three through five. Based on the results of the first two studies and career development theory, it was hypothesized that there could be significant differences between the needs of those instructors who were continuing in the early stages of their careers in comparison to those who were in advanced stages of their careers. It was further hypothesized that there would be a significant difference between those factors which differentiate beginning instructors who left teaching from experienced instructors who left teaching.

Assuming that people engage in optional professional development activities that are consistent with their needs, it was hypothesized that the professional development activities in which beginning instructors engage may be different from those in which experienced instructors engage. If differences in professional development exist, study results could provide insight into the design of professional development activities and satisfactory work environments.

A number of other models have been proposed to explain the stages of career development (Christianson, Burke, Fessler, & Hagstrom, 1983; Lowther, 1977; Newman, Dornburg, Dubois, & Kranz, 1980; Watts, 1980). Although these models differ somewhat in terms of specific career stages, the various models suggest that each career stage is characterized by unique career concerns, developmental tasks, personal challenges, and psychological needs. Levinson, Darrow, Klein, Levinson, and McKee (1978) suggested that these tasks, challenges, and concerns dominate and support a particular period of individuals' lives and, therefore, are considered to be fundamental to understanding individual behaviors and attitudes. Fimian and Blanton (1987) supported this by indicating that perceptions and attitudes are related to stress and burnout and are important factors in determining whether one stays in teaching. A more comprehensive review of the literature regarding the attrition and professional satisfaction of technical college instructors is discussed in the first two studies (Pucel, Jensrud, & Persico, 1987; Pucel & Kaynes, 1989). Those reviews are not repeated in this report.

Statement of the Problem

This study addressed the following specific questions:

1. Were the beginning instructors who stayed, the beginning instructors who left, the experienced instructors who stayed, and the experienced instructors who left similar when they entered teaching in terms of:

   a. demographic variables?
      (1) age at entry
      (2) gender
      (3) education prior to entry
      (4) vocational education field membership

   b. needs upon entry to vocational education?

2. Are there significant differences in current job needs between the beginning instructors who stayed in teaching and the experienced instructors who stayed in teaching?

3. Are there significant differences between the beginning and experienced instructors who stayed in teaching in:

   a. perceived value of a college degree?

   b. types of professional development activities in which they engaged?
      (1) participation in credit courses
      (2) courses applied to degrees
      (3) degrees sought and completed
      (4) non-college credit workshops

4. Are there significant differences in the needs reported by beginning and experienced instructors related to leaving vocational education?

CHAPTER 2

Methodology

This study was designed to compare beginning (non-education degreed) instructors with experienced instructors based on factors related to job satisfaction and professional development activities. The data were previously collected in two studies discussed in Chapter 1 (Pucel, Jensrud, & Persico, 1987; Pucel & Kaynes, 1989). It was not possible to conduct a longitudinal study which would have allowed the same group to be followed for 17 years. Therefore, a cross-sectional study was conducted with samples of beginning instructors and experienced instructors. This allowed for a comparison of the beginning instructors with a group of experienced instructors who remained in teaching for 8 to 17 years. The comparison of individuals' needs upon entry to vocational education with current needs also required people to reflect upon what they were thinking in the past.

Limitations

The extent to which reflections on the past may not be accurate could affect the results of this study. The study was further complicated by the fact that all of the beginning instructors did not have degrees in education when they started teaching while some of the experienced instructors did have degrees in education. The exact number who had degrees upon entering vocational education could not be determined since data could only be gathered from instructors who stayed in teaching at least eight years. Although these limitations were recognized, the data bases offered a rare opportunity to conduct such a study. Gathering data in ways that avoided these limitations would have been prohibitively expensive.

Data Gathering Instruments

Questionnaires for both of the previous studies were designed to gather comparable data. In addition, some items were included in each questionnaire that gathered data unique to each particular group. Items were designed to assess (a) perceived job needs; (b) career development history in vocational education (i.e., entry into, job changes within, and possible exit from vocational education); (c) professional development (i.e., formal and informal experiences designed to develop or upgrade competence in relation to job roles within vocational education); and (d) demographic characteristics of the samples. Data on 73 variables were gathered from both groups. Most of the questionnaire items were forced-choice in the form of checklists and rating scales. Open-ended items were used only in those cases where the responses were numeric (e.g., number of years of teaching experience) or where it was not possible to isolate the possible range of responses.

Information about job needs was obtained through 11 items designed to assess the importance of various job needs adapted from the Minnesota Satisfaction Questionnaire (MSQ) (Weiss, Dawis,

England, & Lofquist, 1967). The items were Likert-type items with a scale of 1 to 5, with 1 being low (not very important) and 5 being high (very important). The MSQ was designed to measure vocational needs. Vocational needs are defined as "...the individual's preferences for different types of reinforcers in the environment, i.e., preference for those stimulus conditions in the environment which he/she perceives as important to maintenance of her/his behavior in the work environment" (Weiss, Dawis, England, & Lofquist, 1967, p.11). Items pertaining to 6 of the original 20 MSQ needs categories (advancement, compensation, co-workers, independence, social service, and working conditions) were included in the instrument based on the advice of the project's advisory committee. In addition, items related to stress and "sharing what I know" were developed based on the review of the literature. Teacher stress and dissatisfaction with teaching have been associated with teacher turnover (Cichon & Koff, 1980; Louis Harris & Associates, 1985). The ability to share what a person knows has been found to be an important factor in people becoming vocational instructors. (Pucel, Jensrud, & Persico, 1987). The additional items were developed in the same format as those contained in the MSQ.

Validity

Each questionnaire was validated by an advisory committee. The advisory committees were composed of vocational instructor educators, technical college staff development coordinators, the State Board for Technical Colleges (SBTC) staff development specialist, and current and former technical college instructors. In addition, each instrument was pilot-tested using groups of graduate students in vocational education at the University of Minnesota who had previously been technical college instructors.

Population

The population consisted of Minnesota Technical College instructors who taught in the colleges located in the central region of Minnesota as identified through SBTC licensure records. Addresses were obtained for 394 experienced instructors and 329 non-education degreed beginning instructors. Usable data were gathered from 292 of the experienced instructors and 250 of the beginning instructors for return rates of 74% and 76% respectively. Of the 250 people who prepared to become instructors only 199 actually entered teaching.

Eighty-five percent of the experienced instructors (249) were found to be currently employed in vocational education while 15% (43) indicated they had left vocational education. An examination of the reasons why the experienced instructors left indicated that 12 left due to retirement. Since the study was to focus on the relationship between job needs and employment status, the retirees were eliminated from further study. It was likely that many of them left for reasons other than the correspondence between their job needs and their employment. Fifty-one percent of the beginning

instructors (102) indicated they were currently employed in vocational education while 49% (97) indicated they had left vocational education.

The beginning instructor group did not have a four-year college degree in education (non-education degreed), and had completed the first course required for instructor licensure offered by the University of Minnesota between September 1980 and December 1981. This group was followed-up approximately five years later during 1985-86.

Members of the experienced instructor group were employed in Minnesota postsecondary technical colleges for 8 to 12 years as of 1981-82. They were followed-up during 1986-87 and asked to describe their activities during the last five years. Individuals who stayed in teaching would have had between 13 and 17 years of experience when followed-up. People who left teaching during the previous five years would have had at least eight years of experience. Therefore, both groups provided data regarding what they did during essentially the same years (1985 - 1987).

Table 1 presents the primary comparison groups for this study. Actual numbers reported for selected data analyses vary slightly because some respondents did not complete all items.

Table 1

Primary Comparison Groups

	Stayed	Left
Experienced	n=249	n=31
Beginning	n=102	n=97

Data Gathering and Reliability

Data from both groups were gathered using the same procedures. Each person was sent a first-class pre-survey letter that explained the study and indicated that they would be receiving a questionnaire. In addition to verifying the addresses of subjects, the letter invited people to call if they had any questions or reservations about participating in the study. The actual instrument and a letter explaining the study was then sent through first-class mail. After three weeks, a second questionnaire was sent to people who had not responded. The second mailing included a packet of instant coffee as an incentive and the suggestion that they "have a cup of coffee on us" while completing the questionnaire. Those who still did not respond were contacted by phone. No attempt was made to determine whether there was a difference between respondents and non-respondents due to the

exhaustive measures that were used to obtain data from all subjects. Therefore, the results of this study are limited by the extent that the respondents and non-respondents may be different.

The test-retest reliability of the instruments used in each of the previous studies was determined by selecting a random sample of respondents and sending a second identical questionnaire to each of them. Of the 20 beginning instructors selected for the second mailing, 15 (75%) returned the second questionnaire. Reliability coefficients were calculated on 113 items in the beginning instructor study. Thirty-two of the beginning instructor item reliabilities ranged from +1.00 to .90, 41 items from .89 to .80, 26 items from .79 to .70, 9 items from .69 to .60, and 5 items from .59 to .50.

Of the 30 experienced instructors selected for the second mailing, 21 (70%) returned the second questionnaire. Reliability coefficients were calculated on the 37 items to which at least 15 people responded in the experienced instructor study. Twenty-one of the experienced instructor item reliabilities ranged from +1.00 to .71, 12 items from .70 to .41, and 4 items between .40 and .11. These coefficients suggested that the responses obtained to the questionnaire which required a reflection back on the past were not as stable as items that were factual.

Data Analysis

Data analysis was performed using the StatPac statistical program (Walonick, 1986) on an IBM personal computer. Chi-square and analysis of variance (ANOVA) procedures were used to test for significant differences between groups. In the case of two-way ANOVA analyses, sources of significant differences were further analyzed using t-tests. Throughout the analyses, a probability level of .05 was used to identify significant differences. This means that the differences identified as significant would be expected to occur by chance only 5 times or less out of 100.

The job needs of various groups were analyzed throughout this study using ANOVA. The importance of the job needs was rated on a Likert-type scale of 1 to 5 by each individual, with 1 being low (not very important) and 5 being high (very important). An average importance rating was then calculated for a group by adding all of the ratings for an item by members of a group and dividing by the number of group members. Only those items which received average ratings of 3 or more by at least one group in the particular analysis are discussed in detail. An average rating of 3 or more indicates that the group felt the need was at least moderately important. Needs which received average ratings below 3 were considered to be unimportant.

CHAPTER 3

Results and Discussion

Demographic Variable Comparisons Among Groups

Demographic data were gathered to describe the samples used in this study and to determine the extent to which the comparison groups might have been different before entering vocational education. Because the sample of experienced instructors did not include all instructors who started teaching with the experienced group (it only included those instructors who survived for at least eight years) it is not possible to generalize results to differences between the beginning instructor group and the total group with which the experienced instructors started to teach. Differences found upon entry to teaching are confounded by attrition within the experienced group during the first eight years of teaching.

Demographic variables studied were found in the review of the literature to affect instructor turnover rates. The variables included age at entry to teaching, gender, education prior to entry, and the vocational field in which the person initially taught. In addition, the groups were compared on their self-reported job needs at entry to teaching. Primary comparisons were between the experienced instructors who stayed and the beginning instructors who stayed, and between the experienced instructors who left and the beginning instructors who left. These groups were the central focus of this study. Tables 2, 3, and 4 present the analyses of the demographic variables.

Table 2

Comparison of Ages of Instructors Upon Entry to Vocational Education[a]

	Group Means and Std. Dev.		Sig. Level
	Stayed	Left	
Experienced	31.85 (7.27)	34.29 (7.50)	Col. .71
Beginning	37.67 (10.48)	35.86 (8.69)	Row .00* Int. .04*

[a]Experienced groups: stayed n=232, left n=28
Beginning groups: stayed n=100, left n=94

*$p \leq .05$ (df=1, 1, 1, 450)

Table 3

Comparison of Gender Distribution and Education Prior to Entering Vocational Education for Groups That Stayed and Groups That Left (percentages and significances of Chi-squares)

Variable	Stayed Exp.	Stayed Beg.	Left Exp.	Left Beg.
Gender	n=247	n=102	n=29	n=97
Male	75.3	64.7	69.0	59.8
Female	24.7	35.3	31.0	40.2
	sig.=.06	df=1	sig.=.50	df=1
College education	n=219	n=102	n=26	n=97
No college	7.8	26.5	0.0	30.9
Some	42.5	38.2	23.1	48.5
4-yr. degree or higher	49.7	35.3	76.9	20.6
	sig.=.00*	df=2	sig.=.00*	df=2
High school education	n=201	n=102	n=23	n=97
No diploma	2.0	4.9	8.7	5.2
H.S. diploma	98.0	95.1	91.3	94.8
	sig.=.29	df=1	sig.=.87	df=1
Vocational school education	n=165	n=102	n=20	n=97
No vocational education	34.5	52.0	45.0	45.4
Some vocational education	17.0	9.8	20.0	12.4
Vocational diploma	48.5	38.2	35.0	42.3
	sig.=.02*	df=2	sig.=.63	df=2

Table 4

Comparison of Vocational Teaching Fields of Instructors in Groups That Stayed and Groups That Left (percentages and significances of Chi-squares)

Teaching Field	Stayed		Left	
	Exp. n=233	Beg. n=88	Exp. n=31	Beg. n=83
Trade & industrial/Technical	33.5	52.3	9.7	54.2
Business/Office	39.1	8.0	32.3	12.0
Marketing	3.4	3.4	0.0	0.0
Health occupations	12.4	26.1	35.5	16.9
Home economics/Service occupations	9.9	9.1	12.9	13.3
Agriculture/Environment	1.7	1.1	9.7	3.6
	sig.=.00* df=5		sig.=.00* df=4	

No significant differences were found among any of the groups in distributions of high school diplomas and gender. Significant differences were found between the beginning group and experienced group that stayed upon entry into vocational education. Results are presented in Table 2 and Table 3). Those groups differed on age, numbers with four-year college degrees, amount of vocational education, and vocational field membership. The mean age of the beginning group at entry was 37.67, as compared with 31.85 for the experienced group. More of the experience group (49.8%) that stayed had four-year college degrees upon entering vocational education than the beginning group (35.3%). More of the experienced group that stayed had vocational school diplomas (48.5%) than the beginning group (38.2%). More of the beginning people who stayed were from trade and industrial/technical (52.3%) and health occupations (26.1%), while more of the experienced people who stayed were from business and office education (39.1%).

The groups that left also differed significantly on two variables: (a) in numbers with four-year college degrees and (b) vocational field membership. More of the experienced group (76.9%) that left had four-year college degrees upon entering vocational education than the beginning group (20.6%). More of the beginning people who left were from trade and industrial/technical occupations (54.2%) while more of the experienced people who left were from business and office (32.3%) and health occupations (35.5%).

Job Needs at Entry to Vocational Education

The experienced and beginning instructor groups were both asked to rate 11 job needs that may have attracted them to vocational education using a Likert-type scale of 1 to 5, with 1 being low (not very important) and 5 being high (very important). The needs of beginning and experienced instructors who stayed and the groups that left were compared using two-way ANOVA. Table 5 presents the group means and the significance levels associated with differences between groups. Significant differences among groups were also assessed using t-tests.

Upon entry to vocational education there were no differences between the groups on salary or stress. Both the experienced groups that stayed and left rated fringe benefits, work environment, working with students, sharing knowledge, work schedule, job security, and control of work significantly higher than the beginning groups that stayed and left. The experienced and beginning groups that stayed rated work environment, working with students, sharing knowledge, career advancement, and co-workers significantly higher than the groups that left. Three of the analyses yielded significant two-way interactions which were caused primarily by the beginning group that left having a significantly lower mean rating than any of the other groups. It is interesting to note that the beginning group that left rated 10 of the 11 needs lower than the other three groups. All four of the groups rated three needs among their highest needs upon entering vocational education: (a) sharing knowledge, (b) working with students, and (c) work environment.

Demographic and Entry Needs Summary

Analyses of differences among the comparison groups on the demographic variables indicated that some of the groups were significantly different in age, amounts of education, and vocational field membership. The groups also varied on job needs which attracted them to vocational education. These differences must be considered when examining further study findings regarding what happened to these groups later in their careers. These differences must also be viewed with the realization that the experienced instructor group included only those who survived in teaching for at least eight years. It was not possible to examine differences between the total cohorts of beginning instructors who started teaching with the experienced instructors.

Comparisons of the Beginning and Experienced Groups That Stayed in Vocational Education

Differences Between Beginning Instructor Needs at Entry and Experienced Instructor Needs After 13 to 17 Years

The vocational education job needs reported by beginning instructors at entry were compared with the current job needs of experienced instructors who stayed between 13 and 17 years. This was done to determine the differences between a group of beginning instructors who were sufficiently

Table 5

Comparison of Factors Which Attracted Experienced and Beginning Instructors to Enter Vocational Education[a]

Job Need	Group Means, Ranks and Standard Deviations Stayed		Left		Sig. Level	
Salary	Exp. 3.17 (1.16)	9	3.14 (1.16)	7.5	Col.	.92
	Beg. 3.09 (1.18)	8	3.09 (1.28)	4.5	Row	.67
					Int.	.90
Fringe benefits	Exp. 3.37 (1.15)	7	3.14 (1.06)	7.5	Col.	.73
	Beg. 2.27 (1.21)	11	2.40 (1.32)	9	Row	.00*
					Int.	.21
Work environment	Exp. 3.89 (0.96)	3	3.64 (1.06)	5	Col.	.00*
	Beg. 3.82 (1.14)	3	3.13 (1.34)	3	Row	.03*
					Int.	.10
Working with students	Exp. 4.56 (0.70)	1.5	4.32 (0.82)	2	Col.	.00*
	Beg. 4.45 (0.82)	2	3.89 (1.30)	2	Row	.01*
					Int.	.13
Sharing knowledge	Exp. 4.56 (0.67)	1.5	4.52 (0.63)	1	Col.	.02*
	Beg. 4.57 (0.78)	1	4.10 (1.29)	1	Row	.05
					Int.	.04*
Less stress	Exp. 2.26 (1.13)	11	2.31 (1.26)	11	Col.	.51
	Beg. 2.37 (1.20)	10	2.12 (1.29)	11	Row	.80
					Int.	.30
Career advancement	Exp. 3.09 (1.22)	10	3.03 (1.43)	10	Col.	.05*
	Beg. 3.24 (1.42)	7	2.67 (1.54)	8	Row	.52
					Int.	.11

Table 5 (continued)

Job Need	Group Means, Ranks and Standard Deviations Stayed		Left		Sig. Level	
Work schedule	Exp. 3.45 (1.28)	6	3.64 (1.23)	5	Col.	.31
	Beg. 3.29 (1.46)	6	2.76 (1.58)	7	Row	.00*
					Int.	.03*
Job security	Exp. 3.28 (1.25)	8	3.07 (1.36)	9	Col.	.32
	Beg. 2.42 (1.27)	9	2.30 (1.41)	10	Row	.00*
					Int.	.80
Control of work	Exp. 3.49 (1.18)	5	3.64 (1.03)	5	Col.	.14
	Beg. 3.56 (1.29)	5	2.95 (1.51)	6	Row	.05*
					Int.	.01*
Co-workers	Exp. 3.63 (1.13)	4	3.35 (1.29)	6	Col.	.01*
	Beg. 3.65 (1.23)	4	3.09 (1.46)	4.5	Row	.55
					Int.	.64

[a]Experienced groups: stayed n= 243, left n=29
Beginning groups: stayed n= 100, left n=97

*p≤ (df = 1, 1, 1, 465)

committed to vocational education early in their careers to stay and a group of experienced instructors who were committed enough to stay. Table 6 presents the results of those comparisons.

At least one of the two groups felt 10 of the 11 job needs were at least moderately important to their staying in vocational education. Less stress was not considered even moderately important by either group. The experienced group and the beginning group that stayed in vocational education differed significantly on 8 of the 11 job needs. The experienced group rated salary, fringe benefits, work environment, less stress, work schedule, and job security as more important than the beginning group. The beginning group rated sharing knowledge and career advancement significantly higher.

Table 6

Comparison of Initial Job Needs of Beginning Instructors and the Current Job Needs of Experienced Instructors Who Stayed in Vocational Education

Job Need	Group Means, Ranks and Standard Deviations Exp. n=243		Beg. n=100		Sig. Level
Salary	4.21 (0.91	4	3.09 (1.18)	8	.00*
Fringe benefits	4.26 (0.92)	2	2.27 (1.21)	11	.00*
Work environment	4.24 (0.83)	3	3.82 (1.14)	3	.00*
Working with students	4.52 (0.80)	1	4.45 (0.82)	2	.50
Sharing knowledge	1.74 (1.09)	11	4.57 (0.78)	1	.00*
Less stress	2.75 (1.32)	10	2.37 (1.20)	10	.01*
Career advancement	2.83 (1.29)	9	3.24 (1.42)	7	.01*
Work schedule	3.90 (1.07)	5	3.29 (1.46)	6	.00*
Job security	3.79 (1.27)	8	2.42 (1.27)	9	.00*
Control of work	3.83 (1.13)	7	3.56 (1.29)	5	.06
Co-workers	3.88 (1.08)	6	3.65 (1.23)	4	.08

*$p \leq .05$ (df = 1, 341)

The three most important current needs of experienced instructors who stayed were (a) working with students, (b) fringe benefits, and (c) work environment. The three most important needs of the beginning instructors when they started teaching were (a) sharing knowledge, (b) working with students, and (c) work environment.

The three least important current needs of experienced instructors who stayed were (a) sharing knowledge, (b) less stress, and (c) career advancement. The three least important needs of beginning instructors were (a) fringe benefits, (b) less stress, and (c) job security.

Professional Development Activities

Information on the professional development activities of the experienced and beginning instructors were compared along with the perceived value of college degrees. It was hypothesized that the professional development activities of instructors would change depending upon their stage of career development.

Perceived Value of a College Degree

The groups that stayed were asked to express the extent to which they felt having a degree in vocational education was an advantage. Results are presented in Table 7. The majority of both groups saw a degree as potentially increasing their opportunity to advance and to increase their salary. Significant differences between the experienced and beginning instructor groups were found in perceptions of only two advantages presented: (a) acceptance by other staff and (b) teaching competence. In both cases the beginning groups saw these to be potentially more of an advantage.

Participation in College Credit Course

The experienced and beginning instructors who stayed in vocational education were asked to indicate the type and number of professional development college courses they took during their last five years of employment. Table 8 presents the results. There was a significant difference in the number of instructional methodology courses taken by the two groups. Whereas 82% of the beginning instructors took one or more instructional methods courses during the last five years, only 62% of the experienced instructors did.

More than 65% of both groups took one or more technical updating courses and about 54% took one or more other credit courses in education.

Courses Applied to a Degree and Type of Degree Sought

There was no significant difference among the numbers of experienced and beginning instructors who applied their courses toward a degree. Table 9 presents the results. Twenty-five percent of each group reported applying course credits towards a degree. However, there was a significant difference

Table 7

Percentages of the Experienced and Beginning Instructors Who Viewed a College of Degree as Providing Various Advantages

Advantage	Percentages and Ranks Exp. n=239		Beg. n=95		Sig. Level
Salary	50.2	2	55.8	2	.42
Fringe benefits	13.5	8	21.1	8	.12
Type of work I can do	33.3	3	42.1	5	.17
Career advancement	75.8	1	68.4	1	.22
Job security	31.1	5	41.1	6	.11
Type of co-workers	14.8	7	23.2	7	.10
Acceptance by staff	19.7	6	38.9	3	.00*
Teaching competence	31.8	4	45.3	4	.03*

*$p \leq .05$ (df = 1)

Table 8

Percentages of the Experienced and Beginning Instructors Who Participated in Various Types of College Credit Courses

Type of Course	Exp. n=249	Beg. n=102	Sig. Level
Instructional methods	62.2	82.4	.00*
Technical updating	65.1	69.6	.49
Other education courses	53.0	54.9	.84

*$p \leq .05$ (df = 1)

Table 9

Percentages of the Experienced and Beginning Instructors Who Worked Toward Degrees

Question	Exp.	Beg.	Sig. Level
Were credit courses applied to a degree?	n=236	n=98	
Yes	25.0	25.5	.97
No	75.0	74.5	
Degree sought?	n=55	n=25	.02*
Associate/Bachelors	41.8	72.0	
Graduate degree	58.2	28.0	

*$p \leq .05$ (df = 1)

in the types of degrees toward which these groups applied the courses. Fifty-eight percent of the experienced group applied the courses toward a graduate degree while 72% of the beginning group applied them toward an associate or bachelor's degree. Again, one should keep in mind that none of the beginning group entered teaching with a degree in education while a number of the experienced group had education degrees upon entry. Also, some of the experienced instructors may have completed associate or bachelor's degrees between the time they entered teaching and when this study was conducted. Therefore, one might expect more of the experienced instructors to be working toward graduate degrees.

Non-Credit Workshop Participation and Source

The numbers of the experienced and beginning instructors who stayed were compared on the number of non-credit workshops in which they participated. The sources of those workshops were also investigated. The results are presented in Table 10. More of the experienced instructors participated in each type of workshop than the beginning instructors and significantly more participated in business/industry, state/government, and school district workshops. Both groups participated in more workshops by business/industry than any other type of workshop. The next largest number of workshops for both groups was from school districts. More than 40% of both groups participated in non-credit workshops offered by colleges or universities.

Table 10

Percentages of the Experienced and Beginning Instructors Who Participated in Non-Credit Workshops Sponsored by Various Sources

Workshop Sponsor	Exp. n=249	Beg. n=102	Sig. Level
Business/Industry	80.3	61.8	.00*
State/Government	51.0	27.5	.00*
School district	75.5	52.0	.00*
Private consultants	36.5	33.3	.65
College or university	47.0	40.2	.30

*$p \leq .05$ (df = 1)

Summary

The majority of both the experienced instructors and the beginning instructors who stayed in vocational education believed that having a degree would increase their opportunity to advance and to improve their salaries. The beginning group felt that having a degree also was significantly more important in increasing their acceptance by other staff and increasing their teaching competence.

The majority of both groups of instructors took credit courses in instructional methodology, technical updating, and other education courses. The experienced and beginning instructors differed significantly in the amount of instructional methodology courses taken. This could be expected because the beginning instructors were required to take such courses to obtain five-year teaching licenses, while experienced instructors would have had to work toward licensure renewal which allows more options beyond college credit courses.

About 25% of both groups were working toward degrees. The majority of the experienced group was applying the courses toward graduate degrees, while the majority of the beginning group was applying them toward associate and bachelor's degrees.

The experienced instructor group took part in more non-credit workshops of all types. They took part in significantly more business/industry, state/government, and school district workshops than the

beginning instructors. The largest number of non-credit workshops taken by both groups was from business/industry.

Comparison of Reasons Why Beginning and Experienced Instructors Left Vocational Education

Respondents who left vocational education were asked to use a Likert-type scale of 1 to 5, with 1 being not very important and 5 being very important, to rate reasons they left. Results are presented in Table 11. Only one of 13 possible reasons for leaving vocational education received an average group rating above 3, indicating it was at least moderately important. The experienced group rated "wanted a change" above 3. However, there were significant differences between the ratings of experienced and beginning instructor groups on six of the possible reasons for leaving vocational education: (a) work environment, (b) students, (c) less stress, (d) type of co-workers, (e) maintain competence, and (f) wanted a job change. In each case, the experienced group that left rated them as more important than the beginning group that left.

An analysis of the standard deviations associated with the group ratings indicated that they were quite large as compared with the ratings of needs upon entry to vocational education and after instructors had years of experience. This suggests that the members of the groups varied greatly in how important a given reason was for leaving. Some members rated some reasons high and others rated the same reasons low. There seems to have been little agreement within the groups.

The three most important reasons for experienced instructors leaving were (a) wanted a change, (b) type of co-workers, and (c) less stress. The three most important reasons for beginning instructors leaving were (a) salary, (b) career advancement, and (c) position eliminated.

The three least important reasons for experienced instructors leaving were (a) dislike of vocational education, (b) family reasons, and (c) fringe benefits. The three least important reasons for beginning instructors leaving were (a) students, (b) dislike of vocational education, and (c) family reasons. Even though there was a significant difference between the two groups on students, it appears that students or a dislike for vocational education are not among the most important reasons for leaving.

Table 11

Differences in Why Experienced and Beginning Instructors Left Vocational Education

Reasons	Means, Ranks and Standard Deviations Exp. n=22		Beg. n=92		Sig. Level
Salary	2.73 (1.61)	7	2.73 (1.59)	1	.23
Fringe benefits	2.05 (1.33)	11	2.00 (1.28)	7	.89
Work environment	2.75 (1.65)	5	2.01 (1.39)	6	.03*
Students	2.18 (1.33)	10	1.65 (1.11)	13	.05*
Less stress	2.83 (1.61)	3	1.99 (1.13)	8	.02*
Career advancement	2.82 (1.79)	4	2.67 (1.71)	2	.73
Work schedule	2.73 (1.66)	7	2.34 (1.61)	4	.68
Type of co-workers	2.96 (1.70)	2	2.08 (1.35)	5	.01*
Position eliminated	2.48 (1.93)	9	2.47 (1.83)	3	.99
Dislike vocational education	1.59 (1.10)	13	1.70 (1.32)	12	.73
Maintain competence	2.73 (1.88)	7	1.84 (1.35)	10	.01*

Table 11 (continued)

Reasons	Means, Ranks and Standard Deviations Exp. n=22		Beg. n=92		Sig. Level
Wanted a change	3.18 (1.65)	1	1.85 (1.41)	9	.00*
Family reasons	1.62 (1.32)	12	1.76 (1.37)	11	.67

*p≤.05 (df = 1, 112)

CHAPTER 4

Summary, Conclusions, and Implications

This study was designed to investigate differences in the needs and professional development activities of beginning instructors who remained in teaching after five years and experienced instructors who remained in teaching for an extended period of time (13 to 17 years). It was also designed to determine if the needs differed between beginning instructors who left vocational education and experienced instructors who left vocational education.

This study was limited by a number of constraints which are discussed in detail in the methodology section of this report. First, the beginning instructors only included instructors without degrees in education while some of the experienced group had degrees in education when they started teaching. This very likely affected the types of degrees the two groups were seeking later in their careers. Second, this was a cross-sectional versus a longitudinal study. This meant that beginning and experienced instructor groups may have been affected by different employment opportunities and conditions during their careers. It also required people to reflect back upon the past to indicate what they were thinking. These reflections may or may not have been accurate. These limitations should be considered when reviewing the conclusions.

Similarities Between Groups Upon Entering Teaching

The experienced group that stayed, the beginning group that stayed, the experienced group that left, and the beginning group that left, were found to be different on a number of demographic variables when they entered teaching. It was not possible to determine whether those differences reflected actual disparities in the cohorts of beginning and experienced instructors who entered teaching, or whether it was due to one group being assessed at entry and the other group containing people who survived in teaching for at least eight years. The experienced group of instructors that stayed entered teaching at a younger age than the beginning group that stayed. The experienced groups that stayed and left had significantly more college education than the beginning groups. The experienced group that stayed also had significantly more vocational school education than the beginning group.

The job needs that attracted instructor groups to vocational education varied significantly in importance both between the groups that stayed and the groups that left. All four groups rated working with students and sharing knowledge as their most important needs upon entry to teaching. They also rated these needs as being very important. All groups also indicated that "less stress" was not an important factor in their decision to enter teaching. The experienced teacher group that stayed in teaching rated (a) salary, (b) fringe benefits, (c) work environment, (d) working with students, and

(e) job security as more important than any of the other groups. The experienced group that stayed appeared to be more concerned than the other groups with needs that pertained to the extrinsic aspects of teaching that would improve their economic security and their job environments. The beginning group that stayed rated (a) sharing knowledge, (b) career advancement, and (c) co-workers as more important than any of the other groups. The beginning group that stayed appeared to be more concerned than the other groups with sharing their knowledge and career advancement, in addition to the people and conditions surrounding their work.

The experienced group that left teaching rated work schedule and control of work as being more important than any of the other groups. The beginning group that left rated 9 of the 11 job needs lower than any of the other groups: (a) fringe benefits, (b) work environment, (c) working with students, (d) sharing knowledge, (e) less stress, (f) career advancement, (g) work schedule, (h) job security, (i) control of work, and (j) co-workers. This suggests that the beginning group that left did not share the same needs upon entering vocational education that were important to those who continued as a teacher. Therefore, they left teaching relatively soon. The fact that the beginning instructors who left seemed to systematically rate many of the needs lower than any of the other groups who persisted in teaching suggests that it may be possible to develop a procedure for advising potential instructors about their possible success in teaching based on similarity of their needs to those of successful instructors.

The analyses of differences among the comparison groups on demographic variables related to job entry needs indicated that the groups were not the same. These differences should be considered when examining differences in what happened to them later in their careers which are presented below.

Changes in Job Needs With Experience in Teaching

The job needs reported at entry by beginning instructors who stayed in teaching were compared with the job needs of experienced instructors who stayed between 13 and 17 years. This was done to determine the differences between a group of beginning instructors who were committed enough to vocational education early in their careers to stay and a group of experienced instructors who were committed enough to stay. At least one of the two groups felt 10 of the 11 job needs were at least moderately important to their staying in vocational education. This was indicated by a rating of at least three on a five-point scale. This finding suggests that the needs included in the questionnaires were relevant to vocational instructors. Less stress was not considered even moderately important by either group. The experienced group and the beginning group that stayed in vocational education differed significantly on 8 of the 11 job needs. The experienced group rated (a) salary, (b) fringe benefits, (c) work environment, (d) less stress, (e) work schedule, and (f) job security as more important

than the beginning group. The beginning group rated sharing knowledge and career advancement significantly higher.

The most dramatic difference between the groups was in their ratings of sharing knowledge. The experienced instructors' mean rating of sharing knowledge was 1.74 while the beginning instructors' rating was 4.57. This is especially interesting when one realizes that the experienced instructors rated this item as one of the most important needs they had upon entering teaching. These results support those of the second study of the series which analyzed differences in the needs of experienced instructors at entry and after 13 to 17 years of experience.

The findings of both studies indicate that the relative needs of instructors do shift after they enter teaching. Such shifts seem to support what career development theory would suggest to be typical characteristics associated with maturity in careers. The beginning instructors seemed more concerned with establishing themselves in their careers, less concerned with security, and were more enthusiastic about sharing knowledge. The experienced instructors seemed to have lost their concern for sharing knowledge, even though they were still interested in working with students and were more concerned about the extrinsic aspects of their current employment. They were more concerned with job security, work environment, and salary and less concerned about career advancement.

Changes in Professional Development Activities

Information on the professional development activities of experienced and beginning instructors were compared along with the perceived value of a college degree. It was hypothesized that the professional development activities of instructors would change depending upon their stage of career development. Both groups of instructors participated in substantial amounts of professional development experiences. However, there was a shift in the types of professional development activities of the instructors, as hypothesized. The majority of both groups took part in college credit courses. However, more of the beginning group took courses in instructional methodology. This could be expected because the beginning instructors were required to take such courses to obtain five-year teaching licenses, while experienced instructors would have had more options to meet licensure requirements beyond college credit courses. Experienced instructors might also feel that their more extensive teaching experiences reduced their needs for methods courses. The majority of both groups felt that having a degree in vocational education facilitated career advancement and enhanced salaries. However, significantly more of the beginning instructors viewed degrees as also helping them increase their teaching competence and improving their acceptance among other staff. As expected, more of the experienced instructors were applying college credit courses to graduate degrees. Experienced instructors also took significantly more non-credit workshops than beginning instructors.

Changes in Reasons for Leaving Vocational Education

Only one of the 13 possible reasons presented for leaving vocational education received an average group rating above three, indicating it was at least moderately important. The experienced group rated "wanted a change" above three. An examination of the standard deviations associated with the group ratings indicated that they were quite large as compared with the ratings of needs upon entry to vocational education and after instructors had years of experience. This suggests that members of the groups varied greatly in terms of how important a given reason was for leaving. Some members of a group rated some reasons high and others rated the same reasons low.

However, there were significant differences between the ratings of experienced and beginning instructor groups on six of the possible reasons for leaving vocational education: (a) work environment, (b) students, (c) less stress, (d) type of co-workers, (e) maintain competence, and (f) wanted a job change. In each case the experienced group that left rated them as more important than the beginning group that left. It appears that the reasons people left vocational education were not related to the students, dislike for vocational education, or family reasons. Experienced instructors seem to have left for reasons related to dissatisfaction (e.g., change, co-workers, stress), while beginning instructors appear to have left for reasons related to promoting their careers (e.g., salary, career advancement).

Conclusions

The findings of this study support the theoretical predictions of both the Theory of Work Adjustment (Dawis, Lofquist, & Weiss,1968) and McKenna's (1982) model of teacher career development. Both models suggest that factors affecting job satisfaction impact individuals' reflections on teaching as a profession and on continuing in that profession. They also suggest that factors affecting satisfaction change as teachers mature professionally. If the factors affecting individual satisfaction are perceived to remain compatible with the teaching profession, a person would be expected to remain in the profession. If those factors are not perceived to remain compatible, a person would be expected to leave.

The job needs of beginning and experienced instructors who stayed in teaching were found to be significantly different. Those differences appeared to be related to the career development stage of the instructors. Beginning instructors were more enthusiastic about sharing their knowledge and career advancement, while established instructors were more concerned about their work environments and job security. Instructors who left teaching the earliest (beginning group that left) rated 10 of the 11 needs they had upon entering teaching lower than the other groups of instructors. This suggests that this group that left the earliest may have left because their needs were less compatible with the field of teaching than the needs of the other groups.

The professional development activities of the instructors also shifted somewhat from the time they entered teaching. Beginning instructors took more courses in instructional methodology while more experienced instructors took part in none credit workshops. Both groups of instructors saw advantages in degrees, but more beginning instructors were working toward associate or bachelor's degrees while more experienced instructors were working on graduate degrees.

Implications

This study has a number of implications for improving the retention and professional development of technical college instructors.

- The fact that the beginning instructors who left tended to rate the needs they had upon entry into teaching differently from other instructors who continued in teaching suggests that it may be possible to develop an instrument to obtain data useful in advising potential instructors about their likelihood of success in the field. Improving the initial procedures for recruiting instructors could reduce attrition.
- The fact that instructor needs and professional development activities changed over time could give direction to colleges in trying to design activities that could better meet the needs of the various instructor groups.
- The fact that instructor needs tended to move toward the extrinsic aspects of work as instructors became more experienced suggests that the technical colleges might consider adopting quality of work life programs with the participation of the instructors. This could improve instructor satisfaction and reduce attrition.
- The fact that experienced instructors seemed to leave teaching due to dissatisfaction with the work environment again suggests the need for quality of work life programs in the technical colleges.
- The fact that beginning instructors seemed to leave to improve their career opportunities suggests that the technical colleges might consider adopting a personnel system that allows instructors to have opportunities for upward mobility within the system.

BIBLIOGRAPHY

Adams, R. D. (1982). Teacher development: A look at changes in teacher perceptions across time. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

Anderson, L. (1986). The status of vocational trade and technical teacher education. Paper presented at the American Vocational Association, Dallas, TX.

Armstrong, W. H. (1970). How do we keep 'em after we get 'em? Journal of Industrial Teacher Education, 7(4), 47-50.

Baker, G. E., Clark, F. E., & Miller, F. M. (1975). A study of attitudes of vocational teachers concerning college preparation. Journal of Industrial Teacher Education, 12(2), 5-17.

Bender, L. W., & Hammons, J. O. (1972). Adjunct faculty: Forgotten and neglected. Community and Junior College Journal, 43, 20-22.

Bergsma, H. M., & Chu, L. (1981, April). What motivates introductory and senior education students to become teachers? Paper presented at the annual meeting of the American Educational Research Association, Los Angeles, CA.

Bogad, C. M. (1983, April). The process of deciding "not" to become a teacher. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

Brod, R. L., Wiedmer, R. O., & Wiedmer, T. L. (1986). Insights from vocational teachers of the year. Vocational Education Journal, 61(2), 29-31.

Bryant, C. D. (1980). Career progression patterns of agricultural education majors at North Carolina State University. Journal of the American Association of Teacher Educators in Agriculture, 21(3), 24-66.

Buchler, C. & Massarik (Eds.). (1968). The Course of Human Life. New York: Springer.

Burden, P. R. (1982, August). Implications of teacher career development new roles for teachers, administrators, and professors. Paper presented at the National Summer Workshop of the Association of Teacher Educators, Slippery Rock, PA.

Cheek, J. G., McGhee, M. B., & West, G. (1983, Fall). Predicting whether or not agricultural education graduates will teach. Journal of Vocational Education Research, 8(4), 49-60.

Christianson, J., Burke, P., Fessler, R., & Hagstrom, D. (1983, February). Stages of teachers' careers: Implications for professional development. (Report No. SP 021 495). Washington, DC: National Institute of Education. (ERIC Document Reproduction Service No. ED 227 054)

Cichon, D. J., & Koff, R. H. (1980). Stress and teaching. NASSP Bulletin, 64, 91-104.

Cole, L. (1983, December). Oregon vocational agriculture teacher placement and retention factors. (Report No. CE 039 164). Paper presented at the American Vocational Association Convention, Anaheim, CA. (ERIC Document Reproduction Service No. ED 245 123)

Dawis, R. V., Lofquist, L. H., & Weiss, D. J. (1968). A theory of work adjustment (a revision) (Minnesota Studies in Vocational Rehabilitation: xxiii). Minneapolis, MN: University of Minnesota, Industrial Relations Center.

Farrington, W. S. (1980). Problems of beginning vocational agriculture teachers in the southern region: A project of the Southern Research Conference in Agriculture Education. Gainesville, FL: Florida University, Institute of Food and Agriculture Sciences.

Fimian, M. J. & Blanton, L. P. (1987). Stress, burnout, and role problems amoung teacher trainees and first-year teachers. Journal of Occupational Behavior, 8, pp. 158-165.

Finch, C. R. (1969). The trade and industrial education teacher's background, values, and attitude toward teaching. Journal of Industrial Teacher Education, 6(2), 55-64.

Frataccia, E. V., & Hennington, I. (1982). Satisfaction of hygiene and paper, motivation needs of teachers who resigned from teaching. Paper presented at the annual meeting of the Southwest Educational Research Association, Austin, TX.

Gallup, A. M., & Elam, S. M. (1988). The 20th annual Gallup Poll of the public's attitudes toward the public schools. Princeton, NJ: Gallop Organization.

Georgia Professional Standards Commission. (1980). Teacher satisfaction in Georgia and the nation: Status and trends. Teacher burnout: Causes and possible cures. (Issues for Education Series). Atlanta, GA.

Hawkins, L. S., Prosser, C. A., & Wright, J. C. (1951). Development of Vocational Education. Chicago, IL: American Technical Society.

Howey, K. R., & Bents, R. H. (Eds.) (1979). Toward meeting the needs of the beginning teacher. (Report No. SP 018 622). Lansing, MI: Midwest Teachers Corps Network, St. Paul, MN: Minnesota University. (ERIC Document Reproduction Service No. ED 206 581)

Jarvis, B., & Stevenson, W. (1972). The effects of the 1971 vo-tech new teacher training program on the teaching activities of nineteen beginning vocational teachers in Oklahoma. Stillwater, OK: Oklahoma State Department of Vo-Tech Ed., Division of Research.

Kazanas, H. C., & Gregor, T. G. (1975). Relationships of the meaning of work, value of work, job satisfaction, and selected demographic variables of vocational and non-vocational teachers. Journal of Industrial Teacher Education, 12(3), 12-20.

King, F. J., & Scott, J. L. (1970). The effect of an in-service institute on the attitude of vocational teachers toward the teacher-learning process. Journal of Industrial TeacherEducation, 7(5), 25-31.

Knight, J. A., & Bender, R. E. (1978). Why vocational agriculture teachers in Ohio leave teaching. Columbus, OH: Ohio State University, Department of Agricultural Education.

Levinson, D. J., Darrow, C. N., Klein, E. B., Levinson, M. H., & McKee, B. (1978). Seasons of a man's life. New York: Knopf.

Long, T. E. (1975). Role perceptions of female faculty and their administrators in postsecondary proprietary schools. (Vocational-Technical Education Research Report 13). State College, PA: Pennsylvania State University, Department of Vocational Education.

Louis Harris and Associates, Inc. (1985). The Metropolitan Life survey of former teachers in America. New York, NY: Metropolitan Life.

Lowther, M. A. (1977). Mid-life transitions and education. Opinion paper. (Report No. CE 021 496). (ERIC Document Reproduction Service No. ED 176 033)

Magisos, J. (1984). Excellence in vocational education: Four levels, four perspectives. (Contract No. NIE-C-400-81-0035). ERIC Clearinghouse on Adult, Career, and Vocational Education. Columbus, OH.

McKenna, C. (1982). Getting a grip on your own career. Vocational Education, 57(2), 30-31.

Michigan State Department of Education. (1980). A report on follow-up of graduates who completed preparation for initial entry into classroom teaching. (Graduate Placement Report 1978-1979). Lansing, MI: Teacher Preparation and Certification Services.

Miller, D. C. (1951). Industrial sociology. New York: Harper and Row.

Miller, L. E. (1974). A five-year follow-up study of the non-teaching agricultural education graduates--1968-73. Blacksburg, VA: Virginia Polytechnic Institute and State University, Agricultural Education Program.

Murnane, R. J., Singer, J. D., & Willett, J. B. (1988, August-September). The career paths of teachers: Implications for teacher supply and methodological lessons for research. Educational Researcher, pp. 22-24.

Newman, K. K., Dornburg, B., Dubois, D., & Kranz, E. (1980). Stress in teachers' midcareer transitions: A role for teacher education. (Report No. SP 017 233). (ERIC Document Reproduction Service No. ED 196 868)

Olson, R. (1974). Vocational stability and job satisfaction characteristics of postsecondary technology instructors. Journal of Industrial Teacher Education, 2(3), 5-15.

Page, J. A., & Page, F. M., Jr. (1981). Pre-service and in-service teachers' perceptions of the teaching profession. Statesboro, GA: Georgia Southern College.

Penner, W. B., & Price, R. R. (1972). Perceptions of the nature and scope of effective adult vocational teacher characteristics as held by adult students, teachers, and coordinators of adult education in Oklahoma area vocational technical centers. (Report No. VT 017 612). Stillwater, OK: Oklahoma State Department of Vocational and Technical Education, Division on Research, Planning, and Evaluation. (ERIC Document Reproduction Service No. ED 069 894)

Persico, J. (1986, July). [Interview with Roger Delgehausen, Assistant Manager of Personnel in the Licensing and Placements Section.] St. Paul, MN: Minnesota Department of Education.

Preparation and Development of Vocational Educators. (1983, March). A survey of Wisconsin vocational educators. (Bulletin No. 3400). Wisconsin Association of Secondary Vocational Administrators.

Probert, D. K. (1981). The establishment of a vocational education personnel system to assist in the instructional staffing of vocational-technical programs. (Executive Summary and Final Report). Philadelphia, PA: Laventhol and Horwath.

Pucel, D. J., Jensrud, Q., & Persico, J. (1987). A career follow-up of non-education degreed postsecondary and adult vocational teachers. Minneapolis, MN: University of Minnesota, Minnesota Research and Development Center for Vocational Education.

Pucel, D. J. & Kaynes, H. (1989). A career and professional development follow-up of experienced postsecondary vocational teachers. Minneapolis, MN: University of Minnesota, Minnesota Research and Development Center for Vocational Education.

Pucel, D. J., Walsh, M. H. M., & Ross, D. B. (1978). A study of the need for a teacher education program for part-time adult vocational instructors in Minnesota. St. Paul, MN: Department Vocational and Technical Education.

Ryan, K. (1979, April). Some feedback is better than others: Implications of a study of first year teachers for the follow up of teacher education graduates. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Rules for Licensure of Vocational Education Personnel, Minnesota State Board of Education, 5 MCAR 39-1.0780-1.0799(1980).

Saunders, R., & Watkins, J. F. (1980). Teacher burnout/stress management research: Implications for teacher preparation personnel selection/staff development. (Report No. 021 310). Paper presented at the National Conference of the National Council of States on Inservice Education. Huntsville, AL: Huntsville City School System. (ERIC Document Reproduction Service No. Ed 225 940)

Schafer, M. I. (1976). The forgotten faculty staff development for part-time occupational instructors in post-secondary education. In C. R. Doty, & R. Gepner (Eds.), Proceedings of the National Conference on Personnel Development of Less Than Baccalaureate Degree (pp. 194-208). St. Louis, MO: Northeast Network for Curriculum Coordination.

Schill, W. J., & Plavins, M. (1980). Vocational instructors' perceptions of the value of teacher training. Journal of Industrial Teacher Education, 17(2), 46-52.

Super, D. (1957). The psychology of careers. New York: Harper.

Walonick, D. S. (1986). STATPAC-STATISTICAL analysis package [Computer program]. Minneapolis, MN: Walonick Associates. (6500 Nicollet Avenue South, 55423)

Watts, H. (1980, November). Starting out, moving on, running ahead or how teachers' centers can attend to stages in teachers' development. Occasional Paper #8. Teacher's Center Exchange. San Francisco, CA: Far West Laboratory for Educational Research and Development.

Weaver, T. & Richmond, B. M. (1981). Supply/demand of vocational educators. Washington, D.C.: National Institute of Education (ED) Washington D.C., Educational Policy and Organization Program.

Weiss, D. J., Dawis, R. V., England, G. W., & Lofquist, L. H. (1967). Manual for the Minnesota Satisfaction Questionnaire (Minnesota Studies in Vocational Rehabilitation: xxii). Minneapolis, MN: University of Minnesota, Industrial Relations Center.

Whitcombe, J. E. (1979). Teacher, career and promotion patterns of men and women teachers. Wellington, New Zealand: New Zealand Department of Education.

White, J. D. (1979). Identification and comparison of factors influencing Oklahoma vocational agriculture instructors to remain in profession. Stillwater, OK: Oklahoma State University, Oklahoma Agricultural Education.

Wisconsin Association of Secondary Vocational Administrators. (1983, March). Preparation and development of vocational educators: A survey of Wisconsin vocational educators. Abstract Bulletin #3400.

Zellner, R. D., & Parrish, L. H. (1986, March). Critical issues in vocational teacher education. Paper presented to the American Vocational Association, Dallas, TX.