

AN INVESTIGATION INTO THE RELATIONSHIPS BETWEEN
JOB SATISFACTION, TEMPERAMENT TYPE, AND SELECTED
DEMOGRAPHIC VARIABLES AMONG WEST VIRGINIA
VOCATIONAL AGRICULTURE TEACHERS

by

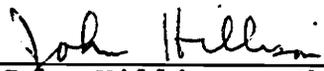
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Dissertation submitted to the Faculty of the
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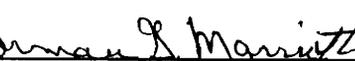
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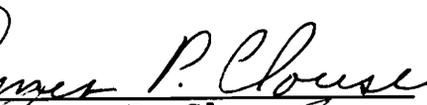
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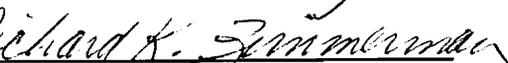

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(ABSTRACT)

The purposes of this study were to: (a) determine the distribution of personality temperament types of the study population of West Virginia vocational agriculture teachers, (b) determine the degree of job satisfaction expressed by West Virginia vocational agriculture teachers, (c) determine the distribution of job satisfaction among West Virginia vocational agriculture teachers by temperament type, (d) determine the distribution of West Virginia vocational agriculture teachers' temperament types by selected demographic variables, and (e) determine the relationship between West Virginia vocational agriculture teachers' satisfaction and selected demographic variables.

The study population of 63 vocational agriculture teachers who attended the 1988 West Virginia Vocational Conference were each provided with a packet of

questionnaires. Temperament types were determined using Form G of the Myers-Briggs Type Indicator (MBTI) and job satisfaction by the short form of the Minnesota Satisfaction Questionnaire (MSQ). Demographics were surveyed using an instrument developed for that purpose by the researcher.

The data were analyzed using the Statistical Package for the Social Sciences (SPSS-X). Frequencies, means, and correlation coefficients (Pearson Product Moment and Kendall Tau) were the procedures utilized to answer the research questions.

Major conclusions were as follows: (a) the majority of West Virginia vocational agriculture teachers were of the sensing-judging temperament type and the smallest group was the intuitive type, (b) West Virginia agriculture teachers were more satisfied with intrinsic than extrinsic job factors, (c) overall, West Virginia vocational agriculture teachers were satisfied with intrinsic job factors and moderately satisfied with their work in terms of general satisfaction, (d) West Virginia teachers were neither satisfied nor dissatisfied with extrinsic job factors, (e) teachers of the sensing-perceiving temperament type were the least satisfied on extrinsic and general job factors, (f) West Virginia teachers of the sensing-judging type were the oldest teachers and sensing-perceiving were the youngest, (g)

teachers with sensing personality styles were more likely to hold advanced degrees than those with intuitive temperament types, (h) there was little relationship between the variables of age, educational level, years of experience, or number of teachers in a department and job satisfaction of West Virginia vocational agriculture teachers, (i) married West Virginia vocational agriculture teachers were more satisfied with their jobs than single teachers, and (j) teachers with intuitive-thinking personality types had the least teaching experience of the four Keirsey temperament types.

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CHAPTER I

Introduction

Over the past several years numerous problems have emerged as central issues of educational policy in the entire Western world: the concern for the level of education, and the concern for job satisfaction, working conditions, and quality of teachers (Prick, 1986). In the United States, researchers concede that there is a national problem with teacher satisfaction. This disenchantment and the associated "burnout" are purported to have evolved from stress, low salaries, increased teacher loads, reduction in force, lack of involvement in program planning, and a myriad of other factors (Chapman & Green, 1986; Chase, 1986). The result has been an inability of school districts to attract and retain the best teachers, teacher shortages in some disciplines, and growing teacher militancy (Carnegie, 1987; Tombiewicz & Tombiewicz, 1986).

Kalker (1984) reported that much of the concern with teacher satisfaction can be attributed to a poor public image of teachers and education. He maintained that this problem has diminished the self-esteem of teachers and exacerbated feelings of insecurity. Concomitantly, Pine, Aronson, and Kafry (1981) noted that from 1972-81, classroom murders of teachers increased by 68%, rapes

increased by 40%, robberies increased by 37%, and physical assaults on teachers increased by 77%. Duke (1984), in his book Teaching--The Imperilled Profession, summed up the pressures on teachers by describing teaching as "being close to an impossible profession" (p. 22).

In West Virginia problems facing the teaching profession are taking on special significance. State teacher salaries have dropped in national ranking to 46th among the 50 states, and many highly qualified teachers have left the profession or transferred to other states (Pepper, 1988). Furthermore, declining student population and increased fiscal pressure at the local level, have made job security a major concern for those teachers who remain (Pepper, 1988).

The problem of retaining effective vocational agriculture teachers has become particularly acute. In addition to the sources of dissatisfaction common to all teachers, vocational agriculture teachers have experienced frustration stemming from the fear of having teaching contracts reduced from 12 to 10 months, lack of involvement in club activities, increased work load, and state requirements to increase minimum class size (Michael, 1988). Although teachers have increased verbalization of concerns as a result of these new

pressures, no attempt has been made to substantiate the level of satisfaction among West Virginia vocational agriculture teachers (Bennett, 1988). Moreover, no one has attempted to determine whether all types of teachers respond to job satisfaction variables in the same manner.

In the past, most teacher satisfaction studies have concentrated on teacher satisfiers/dissatisfiers (Boardman, 1986; Chapman, 1984; Furey & Lauroesch, 1986; Pellicer, 1984). Some studies have attempted to validate the impact of teacher satisfaction on specific aspects of student performance (Fish, 1984; Grady & Burnett 1985; Miner, 1987). Others have focused on the relationships among teacher salaries, burnout, stress, morale, and job satisfaction (Panzer, 1986; Wright, 1986).

Since teachers were found to respond differently to factors impinging on job satisfaction, researchers began investigating the relationship of personality to satisfaction variables (Allison, 1984; Grutchfield, 1982; McGowan, 1981; Morales, 1975; Porter, 1981). These studies generally documented a positive relationship between selected personality traits and job satisfaction.

During the past decade, the typological approach to ascertaining personality influences has produced a prodigious number of studies based on Jungian personality types. Dr. Carl G. Jung was a Swiss physician-

psychiatrist who developed a comprehensive theory to explain personality. Myers (1976) explained that the central tenet of Jung's theory was that what appears to be random human behavior is actually quite orderly and occurs in patterns.

In 1943, Katharine C. Briggs and Isabell Briggs Myers developed the Myers-Briggs Type Indicator (MBTI) for the purpose of implementing Jung's theory of type (Fish, 1984). The MBTI has proven to be a useful instrument for determining the relationship between selected personality characteristics and job satisfaction in such fields as medical technology, business administration, and computer science (French & Rezler, 1976; Morales, 1975; Rahim, 1981). It has been especially advantageous for studying occupational choice (Carlyn, 1977; Connor, 1980; Porter, 1981; Werner, 1984).

Statement of the Problem

A review of the literature revealed that teacher satisfaction is a concern in education. Since teacher disenchantment often results in the loss of effective, dedicated teachers to other vocations, it behooves policy makers to monitor satisfaction and find ways to enhance it.

Preliminary research by Kuhn (1980) and Plessman (1986) demonstrated that teacher satisfiers/dissatisfiers

occur in patterns and are associated with specific personality types. However, the problem remains to identify those patterns among vocational agriculture teachers. A personality profile of West Virginia vocational agriculture teachers does not exist. In addition, it is not known to what degree West Virginia vocational agriculture teachers are satisfied with their jobs or whether job satisfaction is related to personality temperament or demographic variables.

Purpose of the Study

The purposes of this study were to: (a) determine the distribution of personality temperament types of the study population of West Virginia vocational agriculture teachers, (b) determine the degree of job satisfaction expressed by West Virginia vocational agriculture teachers, (c) determine the distribution of job satisfaction among West Virginia vocational agriculture teachers by temperament type, (d) determine the distribution of West Virginia vocational agriculture teachers' temperament types by selected demographic variables, and (e) determine the relationship between West Virginia vocational agriculture teachers' satisfaction and selected demographic variables.

Research Questions

The following research questions were utilized concerning the study population to examine the problem of this study:

1. What is the distribution of personality temperament types among West Virginia vocational agriculture teachers?
2. What is the distribution of job satisfaction preferences of West Virginia vocational agriculture teachers?
3. What is the degree of job satisfaction (intrinsic, extrinsic, and general) of West Virginia vocational agriculture teachers?
4. What is the distribution of job satisfaction preferences (intrinsic, extrinsic, and general) by temperament type of West Virginia vocational agriculture teachers?
5. What is the distribution of West Virginia vocational agriculture teacher temperament types by age?
6. What is the distribution of West Virginia vocational agriculture teachers by temperament type and educational level?
7. What is the distribution of vocational agriculture teachers by temperament type and marital status?

8. What is the relationship between age and job satisfaction of West Virginia vocational agriculture teachers?

9. What is the relationship between educational level and job satisfaction of West Virginia vocational agriculture teachers?

10. What is the distribution by marital status and job satisfaction of West Virginia vocational agriculture teachers?

11. What is the relationship between years spent teaching vocational agriculture and job satisfaction of vocational agriculture teachers?

12. What is the distribution by temperament type and years spent teaching vocational agriculture of West Virginia vocational agriculture teachers?

13. What is the relationship between number of teachers in the agriculture department and job satisfaction of West Virginia vocational agriculture teachers?

Context of the Problem

The studies by Kuhn (1980) and Plessman (1986) were unique in that they attempted to predict job satisfaction based upon patterns of similar personality characteristics rather than selected personality traits. This methodology represented a progressive attempt to

predict satisfaction within the teaching profession. However, this approach assumes Jung's "types" are the source of "action" molding one's decisions concerning job satisfaction. While this conventional method of predicting behavior is proving very useful, Keirsey and Bates (1978) maintained that temperament may have a wider range of convenience in explaining behavior. They asserted that while type may change over time, temperament remains constant and represents ". . . an inborn form of the living being" (p. 28).

The temperament theory proposed by Bates and Keirsey (1978) views Jungian Types as emerging out of temperament by differentiation instead of being built up by a combination of functions. In essence, temperament theory maintains that type arises out of need as defined by Maslow (1954).

Fortunately, the MBTI has been shown to be an effective instrument for determining both temperament and personality type. Can temperament (a broader category than type) be a useful method of predicting job satisfaction? Are vocational agriculture teachers of a specific temperament (i.e. SP--sensing-perceivers, SJ--sensing-judgers, NT--intuitive-thinkers, NF--intuitive-feelers) systematically different in terms of satisfaction and what affects satisfaction? The present

study seeks to determine the relationship between personality temperament and selected job satisfaction variables among West Virginia vocational agriculture teachers.

Significance of the Study

There is a need in vocational agriculture to understand the factors involved in teacher job satisfaction. Although previous studies of teacher satisfaction (Grady & Burnett, 1985) and personality (Barrett & Horner, 1985) have been conducted in vocational agriculture, a review of the literature revealed that none had utilized Jung's theory of psychological types and Keirsey and Bates' (1978) temperaments in attempting to explain individual teacher differences as they relate to job satisfaction variables.

Preliminary studies by Barrett and Horner (1985) indicated vocational agriculture teachers are significantly different from other secondary teachers and the general population in their personality characteristics. In view of these findings, the current research sought to expand our understanding of vocational agriculture teachers by determining: (a) the distribution of teacher satisfaction by Keirsey personality temperament type, (b) the personality temperament profile of West Virginia vocational

agriculture teachers, (c) the factors that affect overall job satisfaction, (d) whether there is a relationship between personality temperament and teacher satisfaction by demographic variables.

By examining work satisfiers among various personality categories and number of teachers in agriculture departments, the results of this study should be useful to: (a) teachers for improving interpersonal relations and developing coping strategies, (b) administrators attempting to augment faculty morale and retain qualified staff, and (c) teacher educators in counseling students of specific temperament types on adjustments necessary to enter and advance successfully in the profession.

This study expanded the knowledge base available on the relationship between personality and job satisfaction. The conventional categories of type were collapsed into four temperament groups and thereby provided a more useful way to view teachers. The works of Kuhn (1980) and Plessman (1986) were further substantiated. No attempt was made in this study to identify the "best" personality temperament for present or potential vocational agriculture teachers.

Delimitations

1. Personality measurement was limited to the four

Keirse and Bates temperament types as determined by the Myers-Briggs Type Indicator.

2. Teacher satisfaction measurement was limited to the 20 factors of the three scales (intrinsic, extrinsic, and general satisfaction) as determined by the Short Form of the Minnesota Satisfaction Questionnaire (MSQ).

Limitations

1. The population involved in this study was limited to vocational agriculture teachers who elected to attend the annual West Virginia Vocational Conference in 1988.

Definition of Terms

Age Categories. Grouping of teachers by ages for the purpose of analyzing data collected in this study.

Younger Teachers. Teachers from 22-30 years of age.

Middle Teachers. Teachers from 31-45 years of age.

Older Teachers. Teachers from 46-62 years of age.

Job Satisfaction. "This term refers to positive feelings toward work adjustment in terms of intrinsic, extrinsic, and general reinforcement dimensions as measured by the modified Minnesota Satisfaction Questionnaire" (Kuhn, 1980).

Minnesota Satisfaction Questionnaire (MSQ)-Short Form. A research instrument designed to measure 20 dimensions of job satisfaction on three scales including intrinsic, extrinsic, and overall satisfaction.

Myers-Briggs Type Indicator (MBTI). A psychometric device for measuring personality type and temperament based on Jungian theory.

Personality Characteristics. Factors of personality (type and temperament) operationally defined by the Myers-Briggs Type Indicator (Plessman, 1986).

Personality Indices or Scales. The four preferences derived from the MBTI to arrive at a person's "type."

E-I (Extroversion-Introversion) Preference. A scale representing choices between Extroversion (E), which focuses interest upon the external world of action, people and objects, and Introversion (I), which focuses interest upon the inner world of concepts and ideas (McCaulley, 1980).

S-N (Sensing-Intuition) Preference. A scale representing choices between Sensing (S), which is perception of the observable by way of the five senses; and Intuition (N) which is perception of meanings, relationships and possibilities of insight (McCaulley, 1980).

T-F (Thinking-Feeling) Preference. A scale representing choices between Thinking (T), which judges and comes to conclusions with impersonal analysis and logic; and Feeling (F), which judges or comes to conclusions in accord with values and standards based on

what is personally and subjectively important (McCaulley, 1980).

Personality Temperament Profile. A description of the Keirsey and Bates personality temperament types found among West Virginia vocational agriculture teachers.

Personality Traits. Eight preferences of personality measured by the MBTI: Extraversion (E)-Introversion (I); Sensing (S)- Intuition (N); Thinking (T)-Feeling (F); Judging (J)-Perception (P) (Plessman, 1986).

Temperament. The inborn form of the living being which gives rise to consistent actions long before events have had time to imprint the person (Keirsey & Bates, 1978). In this study, temperament is considered to derive from the following personality preference traits as described by (Keirsey & Bates, 1978):

S-P (Sensing-Perceivers). Persons of this temperament are impulsive and see action as an end in itself. They tend to avoid being obligated and have unusual powers of endurance.

S-J (Sensing-Judgers). Sensing-judgers are characterized by independence, pessimism, and duty orientation. They feel the need to be well prepared before acting. They have a need to be useful and are very service oriented.

N-T (Intuitive-Thinkers). Need to be able to

control, predict, and understand reality. They rely on self-criticism and intelligence and need to be competent.

N-F (Intuitive-Feelers). Constantly search for a purpose in life. They seek a unique identity and rely on integrity and truth.

Summary of the Chapter

Chapter I begins with an introduction to the problem and delineates its background by citing a brief historical review of pertinent literature and prior research strategies. The purpose of the study is presented as a logical corollary to the statement of the problem and is followed by the research questions and significance of the investigation. Limitations and delimitations of the investigation along with definitions of terms are included in Chapter I.

CHAPTER II

Literature Review

A review of literature was conducted to identify the theoretical constructs and research findings pertinent to the purpose of the current study. This review was used as a basis for formulating the study questions, methodology, and instruments utilized in this investigation. The major topics covered include job satisfaction, type and temperament theories of personality, and related demographic variables. A summary of the results and conclusions of the demographic literature review is presented. An overall summary is found at the end of the chapter.

Job Satisfaction

Over the past 50 years, there has been a vast array of studies concerning job satisfaction. The results have varied so widely in terms of conclusions and implications that Argyris (1964), and Davis and Cherns (1975), questioned the value of even considering such research. However, Gruneberg (1979) while acknowledging the limitations of job satisfaction research as an exact science, strongly supported its contributions to understanding worker well-being, management, and performance.

Traditionally, studies of job satisfaction evolved

around three basic issues (a) defining job satisfaction, (b) delineating job satisfiers/dissatisfiers, and (c) developing instruments for measuring the variables involved in job satisfaction. Lester (1987) purported that much of the limitation of job satisfaction research can be traced to the tendency to define job satisfaction differently, researchers injecting their own attitudes and values into what should be included in studies, and lack of sound, psychometric instruments for measuring job satisfaction. The recognition that job satisfaction is a multi-dimensional concept has done much to promulgate recent success and interest in specific job satisfaction studies.

Theories of Job Satisfaction

A review of the literature revealed that there is no universally accepted theory of job satisfaction. The trend in the literature to define job satisfaction in terms of need, motivation, extrinsic (work environment), intrinsic (substance of the job), personality, demographics, career stage, etc. evolved from elaborate psychological theories of satisfaction. Campbell, Mertens, Seitz, & Cox (1982) divided these theories into two categories--content and process. Content theories delineated the factors influencing satisfaction and process theories expounded upon the process by which

satisfaction variables interact with job characteristics to produce job satisfaction.

Five theories concerning satisfaction as described by Campbell et al. (1982) are as follows:

Fulfillment theory--most frequently associated with Schaffer (1953): a relationship between need satisfaction and job satisfaction . . . the degree to which a job provides the worker with outcomes that are valued by that worker. The adherents ask their subjects how much of a given outcome they receive. Other research indicates that satisfaction is not only a function of how much fulfillment people receive, but also of how much they feel they should and/or want to receive; [this theory] fails to take into account personality variables that differentially influence people (p.6).

Discrepancy theory--(Katzell (1964); Locke (1969)): advocates taking personality differences into account. The outcome may be one desired, expected, or perceived by workers to be justly due to them. [The theory] does not provide a clear definition of the ideal outcome (pp. 6-7).

A) Katzell's approach: the more a worker wants of an outcome, the more dissatisfied; getting more than the desired amount produces less

satisfaction than getting the desired amount (p. 7).

B) Locke: differentiated between perceived discrepancy and actual discrepancy of what people want from their jobs and what they perceive their jobs to be offering (p. 7).

C) Porter (1961) represented satisfaction as the difference between how much of an outcome there should be for a job and how much of that outcome is actually received. What a worker feels that the outcome should be is, therefore, given consideration. The theory has yet to provide answers to questions relating to whether or not both types of dissatisfaction are produced in the same way, have the same results, or contribute to overall job satisfaction (p. 7).

Equity theory--Adams (1963) indicated that workers perceive that there is equity in the ratio of what they put into a job and what is received from the job; and "over-reward" leads to feelings of guilt and "under-reward" to feelings of unfair treatment. Its strength lies in its explicit emphasis on the role of "others" in the development of workers' feelings about what their outcomes or rewards should be (p. 7).

Two-factor theory--Herzberg (1966) known as the

Critical Incident Technique; job satisfaction and dissatisfaction are not the extremes of a continuum. Rather, two independent continuums exist--one running from satisfaction to neutral, and the other from dissatisfaction to neutral. "Intrinsic" factors or motivators lead to job satisfaction, and "extrinsic" or "hygiene" factors to job dissatisfaction. This theory has been criticized primarily because its adherents are viewed as being tied to a single methodology. Both extrinsic and intrinsic factors have shown to cause satisfaction and dissatisfaction (p. 8).

Equity/discrepancy integration theory--Lawler (1973) provides an outline of the conditions that lead to worker satisfaction. The theory assumes that the same psychological processes operate to determine satisfaction; the outcome level that employees think they should receive from their job, rather than what they want, is the appropriate measure to be used when the satisfaction of workers is considered. Factors such as job outcome, job inputs, and job demands are included (p. 9).

A review of the theories of job satisfaction revealed that no single theory explains all aspects of human needs, values, and expectations relating to the work

environment. Davis and Cherns (1975) noted that we must overcome the traditional concept of job satisfaction as being "static." He maintained that job satisfaction involves a dynamic interaction between individuals and their environment.

The instrument selected to measure job satisfaction in this study, the Minnesota Satisfaction Questionnaire, was originally based on Herzberg's Two-Factor Theory (Weiss, Dawis, England, & Lofquist, 1967). However, Weiss, et al. (1967) expanded Herzberg's (1966) concept to include the correspondence (or lack of it) between the work environment and work personality to explain observed work outcomes (satisfactoriness, satisfaction, and tenure). Weiss, et al. (1967) termed their concept the Theory of Work Adjustment.

Job Satisfaction Among Vocational Agriculture Teachers

Vocational agriculture teaching appears to be a satisfying career. Thompson (1986) conducted a profile study in California in which he concluded that 90% of the teachers were satisfied with their career choice. In addition, 80% reported that, if making a similar choice, they would enter the same profession again. Grady (1985) found that Louisiana vocational agriculture teachers were moderately satisfied with their jobs, and Kittrell (1978) found a high level of morale for teachers in Mississippi

who were planning to remain in the profession.

Several studies have focused on identifying those job enrichment factors which persuade vocational agriculture teachers to remain in the profession. Reilly and Welton (1980) identified factors which encouraged 80 Kansas vocational agriculture teachers to remain in teaching. The five factors teachers most enjoyed were working with rural people, being associated with the farm, working with young people, the chance to work outdoors, and working with other vocational agriculture teachers. Davis and Williams (1980), in a study of Iowa teachers, reported that a high level of job satisfaction may be due to extrinsic factors such as pay or security, or such intrinsic factors as the job itself or the opportunity for personal improvement. Grady (1985) found that overall job satisfaction was influenced by both intrinsic and extrinsic factors. However, he noted that satisfaction was higher with intrinsic than extrinsic job factors. Teachers seemed to be most satisfied with the job facets of social service, moral values, and creativity. They were least satisfied with advancement, company policies, and compensation.

Agricultural educators have conducted a panoply of studies designed to augment the retention of qualified vocational agriculture teachers. Mattox (1974) conducted

a study in which he attempted to identify and classify role stresses and their relationship to sociological, environmental, and professional factors which influenced 58 Arizona teachers to leave the profession. He discovered that a combination of environmental and sociological factors (such as personality conflicts with administration, long hours, and lack of advancement opportunities) could result in dissatisfaction and turnover.

Knight and Bender (1978) requested 134 former teachers to rank 46 factors on the extent each factor had on their decision to leave teaching. The five factors ranked as most influential were: (a) teacher long-range occupational goals were other than teaching, (b) there were students in the class who should not have been in vocational agriculture, (c) inadequate advancement opportunities, (d) long hours, and (e) inadequate salary. Moore and Camp (1979) conducted a similar study in Indiana but included current teachers, principals, and former teachers in the sample. All three groups concurred with earlier findings that long hours and inadequate salaries led to turnover.

Grady and Burnett (1985) examined the relationship between job satisfaction and performance utilizing 45 Louisiana vocational agriculture teachers who taught the

first year of vocational agriculture. They measured performance by administering a self-developed instrument designed to test student knowledge of basic vocational agriculture. In addition, they assessed teacher performance by using a 21-item principal rating scale developed by Moore, Yoder, and Armstrong (1980). Teacher behavioral characteristics investigated included teaching skills, knowledge of subject matter, and involvement in the total program. Job satisfaction was measured using the long form of the Minnesota Satisfaction Questionnaire (MSQ). They found no significant relationship between student achievement (as measured by gain score on the achievement test) and teacher job satisfaction. However, they did report that overall satisfaction was significantly related to "teaching skills." They concluded that ". . . previous arguments as to whether satisfaction causes performance or performance causes satisfaction could better be viewed in terms of an interdependent relationship between satisfaction and performance" (p. 67). In their view, both relationships fall in the range of job experiences which influence job satisfaction.

Job Satisfaction Among Vocational Teachers

Plessman (1986) conducted a study using 475 marketing teachers. She attempted to replicate the work of Kuhn

(1980) who related teacher personality to job satisfaction. Plessman (1986) administered Form G of the Myers-Briggs Type Indicator (MBTI) and the short form of the Minnesota Satisfaction Questionnaire (MSQ). The results of her study indicated that the three personality types ESTP (extroverted, sensing, thinking, perceiving), ESTJ (extroverted, sensing, thinking, judging), and ENTJ (extroverted, intuitive, thinking, judging) were much more common in the secondary marketing teacher population than in the normal high school teacher population.

In terms of job satisfaction, Plessman (1986) found that NT (intuitive-thinking) types scored significantly lower than NF (intuitive-feeling), SF (sensing-feeling), or ST (sensing-thinking) types on the general satisfaction scale. Moreover, when using Keirsey's temperament combinations, the NT types scored significantly lower mean values on the extrinsic and general satisfaction scales than did SJ types. Plessman (1986) further substantiated the findings of Dowell (1985) who found positive correlations between length of teaching and satisfaction levels (intrinsic and general). Of special significance to teacher retention is her conclusion that sensing teachers have more longevity in teaching than intuitive types.

Graham (1983) investigated the relationships between

personality types and job satisfaction among 290 Arkansas cooperative extension service faculty. He administered the Myers-Briggs Type Indicator (MBTI) and Cornell Job Descriptive Index (JDI). He concluded that extension faculty were primarily sensing, thinking, and judging types with slightly more introverts than extroverts. Moreover, he noted that the factors of work, supervision, and working with people had the highest correlations with overall job satisfaction while pay and promotional opportunities contributed the least.

Job Satisfaction Among General Teachers

Kuhn (1980) surveyed 483 Florida teachers from elementary, middle/junior high, and high schools. She focused on ascertaining whether job satisfaction differed by personality and what intrinsic and extrinsic satisfiers, if any, existed for teachers of a designated personality type. The Myers-Briggs Type Indicator (MBTI), a modified short form of the MSQ, and an open-response questionnaire were used for measuring variables. Kuhn found that extroverted-sensing (ES) and extroverted-judging (EJ) personality types had the highest satisfaction means on all three scales (intrinsic, extrinsic, and general satisfaction). Lowest total and intrinsic satisfaction means were reported for the thinking-perceiving (TP) and introverted-perceiving (IP)

types, and lowest extrinsic satisfaction means were among the intuitive-thinking (NT), introverted-perceiving (IP), and introverted-intuitive (IN) types. Kuhn (1980) made the following observation indicative of the trend in teacher typology:

With the exception of the ESTP personality types, all type groups indicated higher means for intrinsic than for extrinsic satisfaction. There tended to be higher mean satisfaction indicated by teachers who preferred extraverted, sensing, and judging qualities than for those who preferred introverted, intuitive, and perceptive qualities (p. 91).

When Kuhn (1980) conducted a content analysis on questions appended to the modified MSQ, she discovered that only about one-half (49.5%) of the teachers said they would recommend teaching as a satisfying career. The teachers frequently mentioned "working with students" and "personally fulfilling" as reasons to be positive about the profession. However, Kuhn made the following observation with regard to reasons why respondents would not recommend teaching as a career: ". . . in order of frequency, salary, workload or paper work, lack of status or respect, frustration, student attitudes or discipline problems, no future assured, and not rewarding" (p. 93). Although a majority of teachers (60.9%) said they would

enter teaching if they had it to do over again, only about one-half of the teachers (57.6%) planned to remain in teaching until retirement.

Researchers have placed much emphasis on identifying satisfiers/dissatisfiers among teachers. Sergiovanni (1967) tested Herzberg's (1966) theory that job factors which satisfy or dissatisfy teachers are not arranged on a conceptual continuum but are mutually exclusive. Using a random sample of 127 Monroe County, New York, elementary and middle school teachers, Sergiovanni found that "Achievement, recognition and responsibility were factors which contributed predominantly to teacher job satisfaction. Interpersonal relations (students), interpersonal relations (peers), 'supervision technical,' school policy and administration, unfairness, status, and personal life were factors which contributed predominantly to teacher dissatisfaction" (p. 66). His results concurred with studies by Halpern (1966) who found that satisfaction factors for teachers tended to be related to work itself and that dissatisfaction factors tended to focus on the conditions of work.

Chissom, Chukabarah, Buttery, and Henson (1986) conducted a qualitative analysis of categories of variables associated with professional satisfaction and dissatisfaction among middle school teachers. They

administered the "Status of The U.S. Middle School Teacher Questionnaire" to 540 Middle School teachers. Responses to two open-ended questions revealed nine categories of variables that contributed to professional satisfaction and 12 categories that contributed to professional dissatisfaction. Chissom et al. (1986) noted:

The encouraging categories were faculty cooperation; desire to help youth; student attitude and enthusiasm; community support; family support; working conditions; curriculum features; personal directions; and moral obligation and religious support. The discouraging categories were working conditions; collective bargaining; administration; student behavior; materials and equipment; communication; classroom administration; scheduling and curriculum; job stress; new certification; professional prestige; and miscellaneous (p. 13).

The results of this study by Chissom et al. (1986) and those by Ronan (1970) and Sergiovanni (1967) demonstrate both the congruence of common satisfaction variables and the complexity of isolating common denominators of job satisfaction among teachers. Ronan (1970) pointed out that factorial studies show that satisfiers and dissatisfiers do not reveal themselves as

operationally separate but often "load" on certain factors as both satisfiers and dissatisfiers. It appears to be a general consensus in the literature that job satisfaction is composed of many interrelated variables and that to yield consistent results, rather complicated multivariate studies are required.

A review of the literature revealed a documented significant relationship between teacher turnover and satisfaction. Litt and Turk (1985) developed a multidimensional construct of teacher stress which included the dependent variables of job satisfaction, negative well-being, absenteeism, and intention to quit teaching. The independent variables were perceived role, school climate, coping resources, and work problems. They sought to identify those variables in the work environment with the best predictive value for the concept of stress. Based on an 81% response rate from 360 Connecticut public high school teachers with from five to 15 years' experience, some major conclusions were as follows: (a) inadequate salary, low status of the teaching profession, and too much paper work are sources of stress; (b) intention to quit teaching was significantly associated with job satisfaction; (c) role conflict and relationship with supervisors were significantly related to job stress; (d) discipline

problems were not seen as a major source of dissatisfaction; (e) teachers' coping resources (i.e. such as "seeking more information about the problem") were unrelated to job satisfaction but related to intention to quit teaching; and (f) teachers who had higher amounts of job dissatisfaction and greater feelings of negative well-being also reported greater number of absences.

Croft (1983) sampled 3,389 urban teachers to examine the relationships between administrators' opinions and teachers' quitting behavior. He found little support for the view that principals' attitudes are the most decisive factor in teachers' quitting behavior. This finding was replicated by Chapman (1984). Croft noted that teachers with more years invested in teaching and those with specialized training quit less than those without such investments. In addition, the study revealed that actual quitting behavior was strongly associated with investment options among teachers and that alienated teachers were more likely to quit than those not alienated. He concluded that of teachers who did quit, younger, ethnic minorities, and women quit more often than men.

A few studies have attempted to investigate the relationship between teacher personality type and preference for a school environment. Shain (1972)

conducted a study of teacher personality preferences in relationship to teacher satisfaction and competency ratings in the open-space elementary school. He administered the Myers-Briggs Type Indicator (MBTI), Teacher Satisfaction Index, and Principal's Rating Continuum (PRC) to 50 teachers in the Kansas City school area. All teachers had at least two years prior experience in the open-space classroom. He reported that the personality preference most preferred by teachers in the study was extraversion, sensing, thinking, and judging (ESTJ). Based on these results, he postulated that when seeking teachers who would be successful in the open-space schools, one might look for individuals who possess a preference for feeling in their style of behavior.

Morales (1975) expanded upon the work of Shain (1972) by employing the MBTI and The Purdue Teacher Opinionnaire to measure the relationship between morale and personality types of 150 Florida teachers. He randomly selected five open-space and 10 self-contained schools as research sites. Although his research failed to yield significant relationships between morale and personality type, some trends were discovered propitious to understanding teachers of different personality types. For example, when teaching in the open-environment,

highest levels of morale were obtained by introverted-feeling types. In contrast, when teaching in the self-contained classroom, highest levels of morale were obtained by the extroverted-judging types. These studies by Shain (1972) and Morales (1975) established a probable relationship between personality temperament and preference for a particular teaching environment. This finding lends credence for the need to discover whether vocational agriculture teachers are more satisfied within varying departmental organizations.

Many efforts have been made to predict job performance from job satisfaction. Campbell et al. (1982), in summarizing a review of job satisfaction literature, noted: "No consistent relationship has been reported with performance, accidents, tardiness, or grievance rates" (p. 18). Brumback (1986) studied 99 teachers and 1,916 second and fourth grade students in the metro-Atlanta area. She administered the Minnesota Satisfaction Questionnaire (MSQ) to teachers and controlled for student ability level. The results of the study failed to support the hypothesis that general teacher job satisfaction is significantly related to academic performance. This position concurred with Gruneberg (1979) who cited evidence from over 50 studies showing little overall relationship between satisfaction

and productivity. Lawler and Porter (1969) suggested that an inverse relationship is true. They maintained that rather than increased satisfaction leading to performance, it is performance, resulting in rewards, which leads to satisfaction. Studies by Hackman and Lawler (1971), Katzell and Yankelovich (1975) supported this view.

Measurement of Job Satisfaction

The instrument chosen to measure the job satisfaction of teachers in this study was the short form of the Minnesota Satisfaction Questionnaire. The Minnesota Satisfaction Questionnaire grew out of studies begun in 1957 which sought to assess the work adjustment potential and outcomes of individuals. Its conceptual framework is the Theory of Work Adjustment. Weiss, Dawis, England, and Lofquist (1967) described the Theory of Work Adjustment as follows:

This theory uses the correspondence (or lack of it) between the work personality and the work environment as the principal reason or explanation for observed work outcomes (satisfactoriness, satisfaction, and tenure). The theory states further that vocational abilities and vocational needs are the significant aspects of the work personality, while ability requirements and reinforcer systems are the

significant aspects of the work environment. Work adjustment is predicted by matching an individual's work personality and work environment. In other words, work adjustment depends on how well an individual's abilities correspond to the ability requirements in work, and how well his or her needs correspond to the reinforcers available in the work environment (p. v).

In an attempt to obtain an individualized measurement of job satisfaction, the researchers developed a questionnaire including both a long and short form. The long form of the MSQ consists of 100 items (reinforcers in the work environment). Five levels of satisfaction are presented to the respondent on a Likert-type scale. The response alternatives include "Very Dissatisfied; Dissatisfied; Neither; Satisfied; and Very Satisfied." Long form MSQ scales consist of five items arranged in blocks of 20. The short form of the MSQ is composed of the 20 items most highly correlated with the 20 scales making up the longer form. The short form consists of three scales: Intrinsic Satisfaction, Extrinsic Satisfaction, and General Satisfaction.

Weiss, et al. (1967) provided the following methodology for scoring both forms of the instrument:

Response choices for both forms of the MSQ are

weighted in the following manner:

<u>Response Choice</u>	<u>Scoring Weight</u>
Very Dissatisfied (VDS)	1
Dissatisfied (DS)	2
Neither (N)	3
Satisfied (S)	4
Very Satisfied (VS)	5

Thus, responses are scored one through five proceeding from left to right in the answer spaces. Scale scores are determined by summing the weights for the responses chosen for the items in each scale (p. 3).

The MSQ Manual notes that raw scores for each MSQ can also include a General Satisfaction scale. This procedure involves selecting 20 items (one from each of the 20 scales) and computing a score ranging from 20 to 100.

The developers of the MSQ purport the following as advantages: (a) it is self-administering, (b) item rating instructions are repeated at the top of each page, (c) it requires only about 15 to 20 minutes for administration of the long form and from 5 to 10 minutes for the short version, (d) it requires a fifth-grade reading level, (e) has been administered to many occupational groups and has norm data for comparison, (f)

meets acceptable standards for reliability and validity, and (g) is easy to score.

Although the problem of non-replicated measures of job satisfaction continues to exist, the MSQ has been utilized extensively in a number of recent job satisfaction studies (Allison, 1984; Cheloha & Farr, 1980; Grady & Burnett, 1985; Kuhn, 1980; Lair, 1985; Plessman, 1986). In addition, the instrument has the advantage of being administered over a relatively long period of time (Kuhn, 1980).

Summary of Job Satisfaction Literature

There is no universally agreed upon theory of job satisfaction. Campbell et al. (1982) divided the major theories into content (factors influencing satisfaction) and process (interactive). Since no single theory explains all aspects of human needs and expectations relating to the work environment, Davis and Cherns (1975) surmised that the most sensible approach is to consider job satisfaction as a dynamic interaction between individuals and their environment.

Preliminary studies have generally documented that vocational agriculture teaching is a satisfying career (Kittrell, 1978; Thompson, 1986). Although both intrinsic and extrinsic job factors play a role in teacher satisfaction, vocational agriculture teachers

have been found to be more satisfied with intrinsic than extrinsic aspects of their work (Davis & Williams, 1980; Grady, 1985). Job retention studies have documented that dissatisfaction variables such as long hours and inadequate salary can contribute to teacher turnover (Knight & Bender, 1978; Moore & Camp, 1979). Little relationship has been established between student achievement and vocational agriculture teacher satisfaction (Grady & Burnett, 1985).

In a study of job satisfaction among cooperative extension faculty, Graham (1983) found that the factors of work, supervision, and working with people had the highest correlations with overall job satisfaction while pay and promotional opportunities contributed the least. Plessman (1986) investigated the relationship between personality type and job satisfaction of marketing teachers. Using Keirsey's temperament combinations, she found that NT (intuitive-thinking) types scored significantly lower scores on the extrinsic and general satisfaction scales than SJ (sensing-judging) types. She also concluded that sensing teachers have more longevity in teaching than intuitive types.

Kuhn (1980) conducted a study among general education teachers in which she related personality types to job satisfaction. She found that ES (extroverted-sensing)

and EJ (extroverted-judging) personality types had the highest mean satisfaction scores on all three scales of the Minnesota Satisfaction Questionnaire (MSQ). Lowest total and intrinsic satisfaction scores were reported for TP (thinking-perceiving) and IP (introverted-perceiving) types, and lowest extrinsic satisfaction means were among the NT (intuitive-thinking), IP (introverted-perceiving) and IN (introverted-intuitive) types. In studies designed to isolate satisfiers/dissatisfiers among teachers, Sergiovanni (1967) and Chissom et al. (1986) established that satisfiers/dissatisfiers do not reveal themselves operationally but often load on certain factors as both satisfiers and dissatisfiers.

A review of the literature revealed a significant relationship between teacher turnover and satisfaction (Croft, 1983; Litt & Turk, 1985). In addition, preliminary investigations by Morales (1975) and Shain (1972) established a probable relationship between personality temperament and preference for a particular teaching environment. However, no consistent relationship has been established between teacher performance, accidents, tardiness, or grievance rates and job satisfaction (Brumback, 1986; Campbell, 1982; Gruneberg, 1979; Lawler & Porter, 1969).

This review noted a gradual evolution or maturation

of job satisfaction theory and an improved sophistication in the psychometric devices designed to measure satisfaction variables. Based on its ease of administration, validity, and reliability, the short form of the Minnesota Satisfaction Questionnaire (MSQ) was deemed the most appropriate instrument for measuring job satisfaction in this study.

Type and Temperament Theories of Personality

Fish (1984) noted that personality theory exists " . . . to explain the differences in the ways people think, learn and act" (p. 26). In recent years, studies have been conducted to investigate the hypothesis that the level of satisfaction teachers experience will depend upon the degree to which individuals are able to utilize their personality preferences in their chosen career (Kuhn, 1980; Plessman, 1986). Currently, much attention has been placed on utilizing the Jungian theory of personality types to explain variations in human behavior.

Jungian Theory

Carl G. Jung was a Swiss physician-psychiatrist who developed a very comprehensive theory to explain human behavior. The central tenet of his theory was that much of " . . . what appeared to others to be a random variation in human behavior actually occurs in patterns

and is consistent" (Plessman, 1986, p. 3). According to Jung's theory of psychological types, there are four basic mental processes (sensing, intuition, thinking, and feeling) used by every individual, but not equally preferred and developed. In fact, his theory holds that every person uses all four processes but can be differentiated by their relative preferences for each of the four and the attitudes in which they utilize them (McCaulley, 1981).

Jung is well known for his categorization of persons into two attitude types--extroverts and introverts--according to their basic orientation to life. Jung's (1921) classification of extroverts as individuals who prefer to think, feel, and act in relation to the outer world and introverts as persons who expend energy toward the inner world of ideas and thoughts, has done much toward understanding the human decision-making process.

In addition to the "attitude" orientation concept, Jung (1921) postulated four "function-types" under two dimensions--the perceptive function and the judgment function which result in behavioral modification. The perceptual preference (sensing-intuition) entails one's method of becoming aware of environmental stimuli (things, people, ideas); the judging preference (thinking-feeling) involves the process of synthesizing

information and coming to conclusions about what has been perceived.

Plessman (1986) described the perceptive function as consisting of "two bipolar extremes of sensing and intuition (S-N)" (p. 18). Sensing types harness their five senses in collecting observable details and facts about the environment. They prefer "learning by doing" over theory. McCaulley (1976) emphasized: "With good type development, the expertise in sensing can lead to differentiated awareness of present experience, acute powers of observation, a memory for facts and detail, and a capacity for realism, for seeing the world as it is" (p. 15). McCaulley (1976) reasoned that since sensing types are more interested in applying conventional wisdom than making bold new breakthroughs, they would be expected to be found working with tasks requiring high technical skill and living in smaller communities. On the other hand, intuitive types function by grasping complexities, seeing symbolic and theoretical relationships, and being creative. Consequently, intuitive types are expected to be found in research and larger communities. Intuitive types are more interested in creating new knowledge than applying conventional methodology. Jung (1921) considered the sensation and intuition functions as "irrational" because they operated most broadly when not limited by rational direction.

The two extremes of the judging function are thinking and feeling (T-F). Jung considered thinking and feeling as the two basic methods of decision making and labeled them as "rational" functions. McCaulley (1981) explained: "Thinking is the function that links ideas together by means of concepts, making logical connections. Feeling is the function that arranges the contents of consciousness according to their value" (p. 300). Individuals who have thinking as their orientation to life tend to look at things in a non-personal manner and may come across as cold and skeptical. Persons of the feeling persuasion exhibit sensitivity to issues, a need for affiliation, capacity for warmth, and a desire to preserve values of the past (McCaulley, 1981).

An essential feature of Jung's theory is that one of the four functions (S, N, T, or F) always becomes dominant in an individual. In discussing his theory, researchers are careful to point out that type is a dynamic rather than a static concept (Fish, 1984; McCaulley, 1981; Myers, 1976; Plessman, 1986). This implies that as a person develops, they utilize the function which becomes most rewarding and effective. In fact, as success is reinforced, the characteristic attitudes, habits of mind, and traits associated with that dominant function become so ingrained as to make

behavior more predictable (McCaulley, 1981).

Jung (1921) theorized that at the later stages of personality development, an auxiliary function develops to balance the dominant function. For example, if the dominant function provides mature judgment (T or F), the auxiliary will provide mature perception (S or N).

McCaulley (1981) observed: "When both the dominant and the auxiliary functions have become differentiated, the individual achieves a balance. He thereby avoids aimless drifting, which can come from total reliance on a dominant perceptive process, or a rigid reliance on a dominant judgment process" (p. 301).

Interfacing the complexity of the dominant-auxiliary process is the notion, advanced by Jung, that a person's type is a combination of unique preferences. A summary of the four preferences, as provided by McCaulley, (1981) is as follows:

<u>EI Preference</u>	
Extroversion	Introversion
<u>SN Preference</u>	
Sensing	Intuition
<u>TF Preference</u>	
Thinking	Feeling
<u>JP Preference</u>	
Judgment	Perception

As noted earlier, everyone uses all four processes, but individuals of each type are determined by their relative

preferences and by the attitudes in which they use them. Thus, preferences in the four dimensions form a pattern or type and are identified by the letters designated for each preference: E or I, S or N, T or F, J or P (Kuhn, 1980). As can be seen above, there are 16 possibilities among the combinations which yield 16 people types (i.e. ENTP, INFJ, etc.). Since each individual uses the dominant function in the preferred attitude (extrovert or introvert), one must be careful not to misrepresent personality types. For example, the extrovert uses the dominant function for the outer world and the auxiliary function for inner thoughts and ideas. The introvert would be using his auxiliary function for outer world activities and reserving his dominant function of thoughts and ideas. This may lead one to under-estimate an introvert while over-estimating an extrovert (Plessman, 1986).

Keirsey and Bates Temperament Types

The antecedents for the Keirsey and Bates (1978) temperament types can be found in their belief that people are different in fundamental ways and the observation that the 16 Myers-Briggs types fell neatly into the four temperaments postulated by such theorists as Adickes (1907), Kretschmer (1925), Spranger (1928), and Adler (1956). The Keirsey and Bates temperament

theory sees Jungian types as emerging out of temperament by differentiation instead of being built up by a combination of types which was the view held by Myers (1962).

One problem inherent in measuring the theoretical constructs of temperament has been the difficulty of explaining it. Keirsey and Bates (1978) offered the following definition:

Temperament can denote a moderation or unification of otherwise disparate forces, a tempering or concession of opposing influences, an overall coloration or tuning, a kind of thematization of the whole, a uniformity of the diverse. One's temperament is that which places a signature or thumbprint on each of one's actions, making it recognizably one's own (p. 27).

They asserted that while type may change over time, temperament remains constant and represents " . . . an inborn form of the living being" (p. 28). Thus, the concept of temperament may have a much wider range of convenience as an explainer of behavior.

Keirsey and Bates (1978) metaphorically harnessed the four Greek gods of Apollo, (sense of spirit), Dionysus (joy), Prometheus (science), and Epimetheus (sense of duty) to delineate their temperaments. They described

each of the temperaments as follows:

Epimethean (S-J--Sensing-Judgers). Sensing-judgers are characterized by independence, pessimism, and duty orientation. They believe that they need to be well prepared before acting. They have a need to be useful and are very service oriented.

Dionysian (S-P--Sensing Perceivers). Persons of this temperament are impulsive and see action as an end in itself. They tend to avoid being obligated and have unusual powers of endurance.

Promethean (N-T--Intuitive-Thinkers). These people need to be able to control, predict, and understand reality. They rely on self-criticism and intelligence and need to be competent.

Apollonian (N-F--Intuitive-Feelers). They constantly search for a purpose in life. They seek a unique identity and rely on integrity and truth.

In their book Please Understand Me, Keirseey and Bates, (1984) indicated that about 38% of the general population are Dionysian, 38% Epimethean, 12% Promethean, and 12% Apollonian. In order to facilitate understanding the temperaments, the authors have compiled a detailed portrait of each temperament type. In addition, they have described temperament types among mates, children, and leaders.

Of special significance to this study are observations regarding Keirsey and Bates' temperaments among teachers. A study in California reported by McCaulley (1987) revealed that the percentage of school personnel comprising each temperament type were SJ = 56%, NF = 36%, NT = 6%, and SP = 2%. A resume of the characteristics of each teacher temperament, as provided by Keirsey and Bates (1984), is as follows:

SJ--Sensing-Judgers. Sensing-judgers are so common in the school system, they feel no need to defend their views on instruction. They are concerned with developing the usefulness and place of students in society. These teachers have orderly classrooms, are responsible, dependable, and contribute to the needs of others. Since they are concerned with passing on the cultural heritage, they expect students to obey the rules of the classroom and institution.

SJ teachers prefer the obedient student and are less patient with non-conforming students. SJ teachers tend to teach by the question method and encourage student-to-teacher interaction rather than student-to-student. Although SJ teachers are thorough in providing criticism of performances, they are somewhat reluctant to point out the ways and degrees in which student performances are correct

(pp. 159-161).

SP--Sensing-Perceivers. SP teachers are concerned with developing freedom and spontaneity in their students. They thrive on performance and tend to teach in an entertaining manner. They are not likely to follow lesson plans. SP teachers often teach through construction play and abandon formal education in greater numbers than any other type (pp. 157-159).

NT--Intuitive-Thinkers. These teachers are interested in the development of intelligence. They tend to be impersonal in their approach to students and may continue a planned lesson at the expense of students. NT teachers are easily bored and most end up in higher education. Since NT teachers establish high academic standards, they often establish tasks designed to fit the intellectual needs of the more able students. They are interested in improving their professional skills (pp. 161-163).

NF--Intuitive Feelers. NF teachers are marked by personal charisma and commitment to the students they teach. They relate to students well and are often instrumental in helping students recognize "hidden" talents. They maintain a democratic classroom and often allow students to fail while providing

encouragement. Belief by NF teachers that they must be caring and cared about by those they lead and teach may harm the effectiveness of the NF teacher. They may suffer if they dislike a student and may tend to make remarks about administrators when they are not present. These teachers tend to be enthusiastic about their careers and invest in classroom materials which enhance instruction (pp. 163-165).

The characteristics detailed by Keirse and Bates (1984) concur with results reported on type differences in teaching by other researchers (Carlyn, 1977; DeNovellis & Lawrence, 1983). The desirability of better understanding teacher temperament types was summarized by McCaulley (1987) as follows:

Much needs to be learned about the ways individual types prefer to teach, and the extent to which each type can adopt teaching strategies that do not come naturally, so as to communicate with students of different preferences. It is reasonable to assume that at some stages of learning students do better with a teacher who is a kindred spirit, and at other stages students do better if stretched to understand a mind very different from their own. The models for understanding these relationships remain to be

developed and tested (p. 133).

A review of the literature tends to support the contention that teachers who understand their temperament types have a renewed sense of power in their teaching and report less guilt when they cannot reach their students. Thus, they better understand reasons for sources of frustrations such as discipline problems and misunderstandings with colleagues (Keirsey & Bates, 1984; McCaulley, 1987).

Studies of temperament types among pre-service and in-service teachers have yielded results with important implications for teacher retention. Plessman (1986) pointed out that since more intuitive teachers have been found in pre-service samples than in-service (Carlyn, 1976; von Frange, 1961), it would appear the innovative intuitives are not entering the profession. However, McCaulley (1987) noted: "MBTI users in colleges of education have made similar comments, but no systematic follow-up of type differences in attrition has yet been carried out" (p. 135). McCaulley (1987) postulated that a better understanding of type could result in the development of "retention strategies" for individuals of potential "vulnerable" types.

Lawrence (1979) observed that different temperaments of teachers are attracted to different levels of

education and subject matter. He reported that there are more sensing than intuitive types in elementary schools but that they are about even in high school. He noted that teachers of the thinking type prefer math; intuitive type teachers like theoretical courses; sensing types prefer practical courses; and feeling types enjoy art and guidance. This analysis would lead one to postulate that vocational agriculture teachers would tend to be of the "sensing temperament."

Studies of Personality Within Vocational Agriculture

Only a few researchers have attempted personality studies in areas related to vocational agriculture. Foster and Horner (1985) compiled a national profile of agricultural teacher educators and state supervisors by MBTI preference type (N=367). They reported SJs comprised 65.4% of the population, NTs 21.8%, NFs 8.45%, and SPs 4.36%. When compared to a base population provided by the Center for Application of Psychological Type (CAPT), the participants were more extroverted, sensing, thinking, and judging than the general population.

Horner and Barrett (1986) used Form G of the Myers-Briggs Type Indicator (MBTI) to determine the personality types of 500 farm couples. The results indicated that 55.2% of the farm couples were SJs, 17.6% SPs, 13.8% NFs,

and 13.4% NTs. These findings substantiated earlier studies of agriculturalists (Barrett & Horner, 1985; Foster & Horner, 1985).

Barrett (1985) investigated personality type differences of students and faculty and their effect on student achievement. He administered Form G of the MBTI to 413 students in the College of Agriculture at the University of Nebraska. When grouped by Keirsey temperament types, students were found to be 51% SJ, 32% SP, 9% NT, and 8% NF. This compared to 42% SJ, 6% SP, 25% NT, and 27% NF for faculty members. Thus, Barrett surmised that there was a significant personality difference between students and faculty in the College of Agriculture. He also determined that personality type was related to GPA (Grade Point Average). Judging students tended to have higher GPA's than perceiving students.

Instruments Utilized to Measure Temperament

In an attempt to determine the most efficient instrument for measuring Keirsey Temperaments for this investigation, several instruments were considered. One possibility was the "Keirsey Temperament Sorter." This is a 70-question, forced-choice instrument contained in the book Please Understand Me by Keirsey and Bates (1984). It is self-scoring and can yield the desired

four pairs of temperaments. However, it has not been thoroughly tested for validity and reliability and was not recommended for research.

Cohen, Cohen, and Cross (1981) made the following statement regarding attempts to measure Jung's typology:

Some inventories such as the MMPI have included introvert-extrovert scales, e.g. but few instruments have attempted to assess the whole of Jung's typology. In fact, only two significant attempts have been made: The Gray-Wheelwright Questionnaire (Wheelwright and Buehler, 1964) and the Myers-Briggs Type Indicator (MBTI) (p. 884).

Both the Jungian Type Survey (JTS) or Gray-Wheelwright and MBTI were developed to identify Jungian Personality Types independently of one another. The JTS contains the scales I-E, U-S, and T-F. It does not contain a scale comparable to the JP of the MBTI (McCaulley, 1987).

Although the JTS scales appear to measure the same constructs as the MBTI (Myers, 1962), it was not selected for this study because it lacked the JP scale. The JP scale is needed to determine the Dionysian (SPs) and Epimethean (SJs) temperaments of Keirsey. The instrument which was selected was the Myers-Briggs Type Indicator.

The Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator is a questionnaire

developed by Katherine C. Briggs and Isabel Briggs Myers for the purpose of implementing Jung's theory of type into pragmatic settings. This instrument was scrutinized over 20 years by research before its publication by Educational Testing Service in 1962. As a result of the growing demand for the instrument in research studies, in 1975 the Consulting Psychologists Press announced that the accumulated research on the MBTI justified its distribution for professional applications. In addition, in 1975 a research laboratory at the University of Florida was converted to the Center for Applications of Psychological Type (CAPT) to provide education, research, and services to MBTI users (McCaulley, 1981).

Devito (1985), in a critical review, noted that "The MBTI is probably the most widely used instrument for non-psychiatric populations in the areas of clinical, counseling, and personality testing" (p. 739). In 1988, the Center for Applications of Psychological Type reported that over 800 studies have been completed utilizing the MBTI. Carskadon (1979), editor of the Bulletin of Research in Psychological Type, praised the instrument with the following statement:

We personally believe that there is no better example of genius made useful than the Myers-Briggs Type Indicator, nor is there any psychological test with

as wide a range of uses that can compare to the unique understanding the MBTI often brings to both counselors and clients (p. 24).

In keeping with Jung's theory, the instrument attempts to determine from self-report people's basic preferences on four separate dichotomies or indices: Extroversion-Introversion, Sensing-Intuition, Thinking-Feeling, and Judgment-Perception. Plessman (1986) explained that when developing the MBTI, Myers and Briggs added the Judging-Perception index to facilitate determination of the dominant and auxiliary function (Js having a more orderly pattern of life and Ps being more spontaneous).

Currently, the MBTI consists of three forms. Form F (the original form containing 166 items), Form G (now the standard form which simplified Form F and gives essentially the same results), and Form AV (self-scoring, 50 items, but not recommended for research). Form G of the MBTI (the one selected for this investigation) consists of 126 forced-choice items. The items take the form of word pairs, behavior reports, and value judgments across the four indices: EI, SN, TF, and JP.

In scoring the MBTI, item responses are congruent with indices and are weighted accordingly. Points are obtained by summing the weighted values. McCaulley (1981) explained that "The points are then transformed

into preference scores, which are composed of a letter showing the direction of preference (for example, E 15 or P 23)" (p. 314). The number represents the strength of the preference. For each index, both preferences are considered positive with positive numbers running in both directions from a zero breakpoint. McCaulley (1980) explained that for research purposes, the profile scores are not generally used. Instead, they are converted into continuous scores using the following procedures: for I, N, F, and P scores, the continuous score is the preference score plus 100; for E, S, T, and J scores, the continuous score is 100 minus the preference score. The authors point out that if deemed necessary, the validity of continuous scores can be verified by post hoc analysis. The reliability and validity of the MBTI are discussed in detail in Chapter III of this investigation.

Several factors made the MBTI especially propitious for this study. Fish (1984) listed the following practical aspects of the MBTI which has aggrandized its popularity:

- (a) the MBTI is easy to administer;
- (b) the item content is comparatively free of value-laden questions, ambiguity, and threatening questions;
- (c) the Indicator is easily scored by hand, and computer scoring and analytical services are available from

CAPT; (d) the individual interpretation available for responders is attractive; (e) the cost of using the MBTI is not prohibitive (p. 35).

In addition, the time required to administer Form G of the Indicator is only from 15 to 30 minutes.

Summary of Type and Temperament Literature

In recent years, much emphasis has been placed on utilizing Jungian personality theory to explain teacher satisfaction. A central tenet of Jung's (1921) theory was that what appears to be random human behavior is actually quite orderly and occurs in patterns (Myers, 1976). Researchers have hypothesized that satisfaction depends on how much individuals were able to utilize personality preferences in their career choice. This approach assumes that Jung's 16 "types" are the sources of "action" molding one's decisions concerning job satisfaction.

Keirsey and Bates (1978) maintained that temperament may have a much wider range of convenience in explaining behavior than type. They asserted that while type may change over time, temperament remains constant and represents " . . . an inborn form of the living being" (p. 28). Thus, temperament theory maintains that type arises out of need as defined by Maslow (1954). It is our instrument for getting what we must have.

Few studies have been conducted on personality within agricultural disciplines. Foster and Horner (1985) found agricultural teacher educators to be more extroverted, sensing, thinking and judging than the general population. Barrett and Horner (1985), in a profile of rural leadership involving 540 4-H, FFA, agricultural teachers, and other agricultural leaders, found that vocational agriculture teachers were different from the general population. Vocational agriculture teachers were 62% sensing-judging compared to 38% in the general population, 21% sensing-perceiving compared to 38% in the general population, 3.2% intuitive-feeling compared to 15% in the general population, and 14.8% intuitive-thinking compared to 17% in the general population.

Horner and Barrett (1986) found "typical" farm men to be introverted, sensing, thinking, and judging in temperament. Women were found to be introverted, sensing, feeling, and judging. Barrett (1985) determined the personality types of faculty and students at the College of Agriculture, University of Nebraska and found that there were more sensing types among both college students and faculty than expected from studies of similar populations.

The Myers-Briggs Type Indicator (MBTI) has been shown to be an effective instrument for determining both

temperament and personality "type." Based on its extensive use, reliability, and validity, the MBTI was selected in this study as the instrument to group West Virginia vocational agriculture teachers into temperament types (i.e. SJs, SPs, NTs, and NFs).

Demographic Variables Pertinent to This Study

There seems to be little agreement in the literature concerning a causal relationship between job satisfaction and demographic correlates of job satisfaction. In a comprehensive review of job satisfaction literature, Campbell et al. (1982) summarized the general trend as follows:

Research concerning demographic influences on job satisfaction has yielded mixed results. Generally, whites express greater satisfaction than blacks, and females express greater satisfaction than males. The age and job satisfaction relationship appears to be a U-shaped function, with high initial satisfaction followed by a decline, with a subsequent increase as workers reach middle age. A consistent relationship has not been reported between educational level and job satisfaction. Generally, white-collar workers tend to be more satisfied than blue-collar workers. For all of the demographic variables, differential results are reported when other variables are

controlled or when specific job situations are studied (p. 18).

Holdaway (1978) investigated the relationship between satisfaction levels and demographic variables among a group of teachers in Alberta, Canada, and reported inconclusive results. Lee (1972) reported that demographic variables contributed little to variance in job satisfaction among industrial arts teachers. Etuk and McCracken (1987) studied a random sample of Ohio vocational agriculture teachers and surmised that none of the demographic variables demonstrated a substantial relationship to commitment to teaching as a profession (dependent variable).

Although there has been an overall failure to substantiate demographic variables as reliable predictors of job satisfaction, enough positive results have been obtained with specific variables to merit their continued investigation. Findings regarding the demographic characteristics which follow were deemed advantageous for explaining the results of the current study.

Influence of Gender

There appears to be no neat cogent statement about the relationship between gender and job satisfaction. Campbell (1982), after reviewing 11 studies which sought to differentiate the contributions of gender to job

satisfaction, concluded that females normally experience higher levels of job satisfaction than males. Thompson and Burrello (1986) found that job satisfaction among female vocational agriculture teachers was equal to or higher than males. This trend was further supported by Chapman and Lowther (1982).

Hulin and Smith (1964) found females to be less satisfied with their jobs than male workers. Other researchers such as Sweeney (1981) have reported no differences for job factors by gender. Keith, Warren, and Dilts (1983) noted that men emphasize long-term career benefits and intrinsic factors such as achievement, recognition, and advancement while women consider coworkers and interpersonal relationships most significant.

Several explanations have been presented to address the conflicting evidence on gender and job satisfaction variables. Keith et al. (1983) suggested that the differences result from early sex-role socialization. Since boys learn the role of being a good provider from their fathers, they emphasize aggressiveness, competitiveness, and independence as adults. Conversely, females learn expressive and communal values and continue to exhibit these characteristics as adults. Campbell (1982) reported: ". . . females may settle for jobs

that do not fully utilize their skills in order to keep outside work from interfering with their family responsibilities. Thus, their expectations of their jobs are relatively low and, in that sense, are more easily met" (p. 10). An alternative explanation espoused by Keith et al. (1983) suggested that the sex stereotypes prevalent decades ago have been largely replaced by the feminist movement, emergence of single-parent families, and other socio-cultural forces. In summary, it would seem that male-female distinctions with regard to job satisfaction are so tied to specific contextual situations that no generalization from one occupation to another or even among levels of teaching can be made. However, it does merit investigation within different occupational groupings.

Marital Status

Cochran (1988) surveyed 283 married vocational agriculture teachers within the 13 states comprising the Northeast region of the National Vocational Agriculture Teachers Association (NVATA). He sought to determine the relationships between demographic characteristics and job satisfaction among vocational agriculture teachers. He found that the marital satisfaction of the spouse was a factor influencing teacher job satisfaction. Carroll (1973) reviewed several studies which concluded that

married workers were more satisfied with their jobs than single people. She noted that more settled workers tended to be more satisfied.

Educational Level

Quinn and Baldi de Mandilovitch (1977) performed secondary analysis on data obtained in nine national surveys of the American work force between 1962-1973.

They surmised:

Sixteen previous studies were identified that dealt directly with the relationship between education and job satisfaction. Five of these found a positive association between the two variables, three found a negative association, and the remaining eight reported the relationship to be either nonexistent or equivocal (p. V).

In their study, Quinn and Baldi de Mandilovitch (1977) found no relationship between educational level and job satisfaction among workers who had gone to college.

However, individuals who had obtained college degrees were consistently more satisfied with their occupations than others.

In general, previous research has concluded that as educational level increases, job satisfaction increases as a function of individuals moving to a more prestigious job level (Parnes, Nestel & Andrisani, 1966; Sheppard &

Herrick, 1972). However, an often reported reason for teacher dissatisfaction has been that teachers do not have an opportunity to advance in rank with increased education. Quinn and Baldi de Mandilovitch (1977) warned about the dangers of over education and indicated that the inability of workers with advanced degrees to fulfill self-actualizing needs may lead to dissatisfaction and turnover.

Within specific disciplines, little attempt has been made to correlate educational level with intrinsic and extrinsic levels of job satisfaction. Grady (1985) in a study of Louisiana vocational agriculture teachers, found no relationship between highest degree held and teacher satisfaction as measured by the Minnesota Satisfaction Questionnaire. Plessman (1986), in a random sample survey of 475 marketing education teachers, found no significant differences with regard to intrinsic, extrinsic, or general satisfaction when compared to educational level. This confirmed an earlier study by Kuhn (1980) who investigated 483 Florida elementary and secondary teachers and reported: "No appreciable difference was found when satisfaction means were compared across levels of the variables sex, race, education, teaching position by grade level, or years of teaching experience" (p. 92).

Age

Lowther, Coppard, Gill, and Tank (1982) noted that since 1970, the mean age of teachers has continued to rise. Many positive associations have been reported between age and job satisfaction. Hoppock (1935), who is widely respected for conducting one of the first comprehensive studies of teacher job satisfaction, reported that older people were more satisfied with their jobs. Carroll (1973), in reviewing the relationship between age and job satisfaction prior to 1960, found that a U-shaped curve emerged. These studies revealed that people who are generally satisfied when they first begin working enter a period of less satisfaction, then become more satisfied once again. Lowther et al. (1982) observed that as teachers age, they become less dissatisfied with the extrinsic aspects of work and more dissatisfied with the intrinsic factors.

Sweeney (1981) surveyed 1,295 secondary teachers in three schools with student populations of 1,000 or more. He found that older teachers were more satisfied in their positions than colleagues and that teachers in the 25 to 34 age group were least satisfied. These results were further supported by Morrow and McElroy (1987) who related age to four measures of work commitment (i.e., job involvement, organizational commitment, work ethic

endorsement, and intention to remain) among 2,200 public agency employees in Iowa. They concluded: ". . . the results of this study clearly point toward workers in the last career stage as being the most committed. They are also, in general, the most satisfied with their work and co-workers, and the least satisfied group in terms of their perceived chances for promotion" (p. 342).

Studies related to the issue of burnout (of importance in teacher dissatisfaction) have established that older teachers experience a significantly greater sense of personal accomplishment than younger teachers and that younger teachers have more intense feelings than their older counterparts (Brightwell, 1986). Brightwell (1986) postulated that older teachers exhibited more frequent feelings of personal accomplishment because they had more successful coping strategies or because dissatisfied younger teachers had already left the profession. Carroll (1973) reported that as workers get older, they begin to accept their lot in life and become more satisfied.

Years Experience

Since the issue of tenure is closely related to age, researchers have reported similar results with regard to worker satisfaction with increased years of service (Carroll, 1973; Form & Geschwender, 1962; Rachman &

Kempt, 1964). Grady (1985) found that vocational agriculture teachers become more satisfied with experience. It is probable that age and tenure interrelate with other adult socialization variables which tend to augment job satisfaction (Form & Geschwender, 1962). Recently, emphasis has been placed on career stage and professional growth of teachers as more reliable indicators of job satisfaction than tenure (Cowie, 1988).

Number of Teachers in a Department

Few studies have addressed the issue of job satisfaction in single or multi-teacher departments. Grady (1985) found that teachers teaching in smaller schools were more satisfied with teaching vocational agriculture. Boggess (1985), in a study of problems perceived by female vocational agriculture teachers, noted that female teachers working in single-teacher departments reported more severe problems than teachers from multiple-teacher departments. Bennett (1983) reported that teachers in multiple-teacher departments tended to spend less time on job related activities than teachers from single teacher departments.

Summary of Demographic Literature

Research concerning demographic influences on job satisfaction has been inconclusive. Generally, females

express greater satisfaction than males (Thompson, 1986) while married teachers are more satisfied than single teachers (Carroll, 1973). In addition, marital satisfaction has been tied to job satisfaction (Cochran, 1988). The age and job satisfaction relationship appears to be a U-shaped function with high initial satisfaction followed by a decline and then another increase in satisfaction as workers reach middle age (Campbell, 1982).

For the most part, previous research has concluded that as educational level increases, job satisfaction increases as a function of individual moving to a more prestigious job level (Parnes, 1966). However, little direct relationship has been established between attaining higher degrees and job satisfaction. Although Grady (1985) established that vocational agriculture teachers seem to be more satisfied teaching in smaller schools, no significant relationship between the number of teachers in a department and job satisfaction was found in this review.

Chapter Summary

There has been a gradual evolution of job satisfaction theory and an improved sophistication in the psychometric devices designed to measure job satisfaction. Studies of job satisfaction among

vocational agriculture teachers have concluded that they are more satisfied with intrinsic than extrinsic aspects of their work. Recent studies showing a relationship between job satisfaction and teacher personality have not been duplicated in vocational agriculture. Furthermore, research concerning demographic influences on job satisfaction of teachers has been inconclusive.

CHAPTER III

Methodology and Procedures

The purpose of this study was to investigate the relationships between personality temperament type, job satisfaction, and selected demographic variables among vocational agriculture teachers in West Virginia. To augment this study, a detailed description of the methodology and procedures which were used in determining this relationship is presented in Chapter III. The format selected for the investigation includes the design of the study, a description of the population, instrumentation, data collection procedures, and data analysis.

Design of the Study

The study was designed to investigate the relationship between the job satisfaction and personality types of vocational agriculture teachers. A descriptive research approach was utilized to examine the relationships between satisfaction, temperament types, and demographic variables. The short form of the Minnesota Satisfaction Questionnaire (MSQ) was used to assess the job satisfaction of vocational agriculture teachers. Form G of the Myers-Briggs Type Indicator (MBTI) was administered to determine Keirsey and Bates temperament types. In addition, a survey form developed

by the researcher was used to accumulate demographic data.

Population

The population for this study consisted of 63 vocational agriculture teachers who attended the annual West Virginia Vocational Conference in August 1988. This population was composed of teachers having decision-making authority in areas such as curriculum design, in-service training, youth group activities, and professional teacher organizations. All teachers who registered for the conference were in attendance at the data-gathering session.

Instrumentation

A packet containing three questionnaires was developed for use in this study. The first was a demographic data form developed by the researcher to collect basic information about the subjects. In the second instrument job satisfaction data were obtained using the short form of the Minnesota Satisfaction Questionnaire. Finally, Form G of the Myers-Briggs Type Indicator was employed to determine temperament types of the vocational agriculture teachers. In order to comply with restrictions on both the MSQ and MBTI, all forms were ordered and administered under the supervision of a committee member qualified in psychometric analysis.

The Minnesota Satisfaction Questionnaire

The Minnesota Satisfaction Questionnaire (MSQ) emerged from Minnesota studies in Vocational Education (Work Adjustment Project). Weiss, Dawis, England, and Lofquist (1967) summarized the Theory of Work Adjustment as follows: ". . . work adjustment depends on how well an individual's abilities correspond to the ability requirements in work, and how well his needs correspond to the reinforcers available in the work environment" (p. v). As a result of extensive diagnostic work seeking more efficient ways to assess the work "potential" of applicants for vocational rehabilitation, two long form versions (1976 & 1977) and a short form of the MSQ were developed.

The short form consists of 20 items which represent each of the 20 scales from the long form. The short form was selected for this study because it takes little time to administer (about five minutes), and can yield scores on intrinsic, extrinsic, and general satisfaction. Norm group percentile scores for numerous occupations have been established for the MSQ. Job satisfaction score comparisons can be made with a selected norm group that is similar to the one under investigation in order to determine the relative satisfaction to a general population of workers. Weiss et al. (1967) suggested

that if there is not an occupational group similar to the one under study, comparisons should be made to the group entitled "Employed Non-disabled." This group includes skilled and unskilled blue-collar workers, skilled and unskilled white-collar workers, and professional personnel. Weiss et al. (1967) suggested that when conducting the comparisons, a percentile score of .75 or higher indicates a high degree of satisfaction, .25 or lower represents a low level of satisfaction, and scores in between reflect a moderate level of satisfaction. This procedure was utilized to determine the general satisfaction of teachers in this study.

Reliability. Data supporting the internal consistency of the MSQ scales were presented by Weiss et al. (1967) in the MSQ Manual. Of 567 Hoyt reliability coefficients computed on 75 groups with 21 scales each, 83% were .80 or higher and only 2.5% were lower than .70.

Stability of the MSQ scales was achieved by two retest procedures. A one-week retest was administered to 75 employed, night school students of psychology, and a one-year retest performed on 115 employed individuals. For the one-week interval, stability coefficients ranged from .66 for Co-Workers, to .91 for Working Conditions. The median coefficient (excluding the General Satisfaction scale) was .83. The one-week stability

coefficient for the General Satisfaction scale was .89. Test-retest correlations for the 115 workers revealed that stability coefficients ranged from .35 for Independence to .71 for Ability Utilization. Median stability coefficient for the 20 scales (excluding General Satisfaction) was .61. Stability coefficient of the General Satisfaction scale for the one-year interval was .70. Canonical correlation analysis performed on the retest data indicated that the one-week and one-year coefficients (.97 and .89 respectively) were significant beyond the .001 level (Weiss, 1967).

In another study, Weiss et al. (1967) evaluated the internal consistency of the short form utilizing a sample of 1,460 males. The Hoyt reliability coefficients ranged from .84 to .91 (median = .86) on the intrinsic scale; .77 to .82 (median = .80) on the extrinsic scale; and .87 to .92 (median = .90) on general satisfaction (Weiss, 1967). Weiss et al. (1967) maintained that general satisfaction scores for the short form can be inferred from the long form since the same 20 items were used to obtain the general satisfaction score on the long form. Albright (1972), in reviewing the reliability of the long MSQ, stated: "The data on the reliability of the long form look quite satisfactory, although this should not be surprising in view of the repetitiveness of the item

content" (p. 1,064).

Since reliability may vary across groups, Weiss et al. (1967) suggested that reliability coefficients be computed for the group under investigation. To carry out this suggestion, Hoyt reliability coefficients were computed using data from the current study population of vocational agriculture teachers. The Hoyt reliability coefficients obtained were .84 on the intrinsic scale, .68 on the extrinsic scale, and .87 on general satisfaction.

Validity. The MSQ Manual does not contain direct evidence concerning the validity of the MSQ short form. However, Weiss et al. (1967) made the following observation relative to establishing its validity:

Since the short-form MSQ is based on a subset of the long form items, validity for the short-form may in part be inferred from validity for the long-form. Other evidence for the validity of the short-form MSQ is available from two sources: (1) studies of occupational group differences and (2) studies of the relationship between satisfaction and satisfactoriness, as specified by the Theory of Work Adjustment (p. 24).

In a study of 1,723 individuals, Weiss et al. (1967) found that occupational group differences in mean-

satisfaction scores were statistically significant for each of the three scales. Furthermore, an analysis of the relationship between measured satisfaction and measured satisfactoriness indicated the highest correlation between the two scales was $-.13$. According to the Theory of Work Adjustment, satisfaction and satisfactoriness are independent, although interacting, sets of variables. Since less than 2% of the variance was common between any satisfaction scale and any satisfactoriness scale, this result supports the construct validity of the scale. Data supporting the construct, concurrent, and content validity of the MSQ long form is contained in the MSQ Manual (Weiss et al., 1967).

Myers-Briggs Type Indicator

As can be determined from reading the detailed review of the Myers Briggs Type Indicator in Chapter II, it is an extremely versatile instrument which can be utilized to classify persons into the four temperament types identified by Keirsey and Bates (1984). In this investigation, the first 100 questions of Form G of the MBTI was utilized to classify teachers into one of the following temperament types: Dionysian (SPs), Epimethean (SJs), Promethean (NTs), or Appolonian (NFs). The last 26 items on Form G are included for research purposes and

are not essential to ascertaining temperament types.

Reliability. Stricker and Ross (1964) noted that the MBTI "Seems to have about the same reliability as the better known personality inventories such as the California Psychological Inventory, the Guilford Zimmerman Temperament Survey, the 16PF tests, and the MMPI" (p. 290). McCaulley (1987) made two observations regarding the reliability of the MBTI: (a) since MBTI scores are assumed to reflect underlying dichotomies, most MBTI users are interested in the consistency of remaining the same type over time, and (b) reliability estimates are expected to vary as a function of statistical procedures adopted, respondent's intelligence, participant's understanding of themselves, and the quality of their perception and judgment.

Split-half scores have been utilized to establish internal consistencies of continuous scores on the MBTI. Items selected for X and Y halves were based on how closely they resemble each other and the expected number of responses. Correlations in the .73 to .91 range were reported in the MBTI Manual.

McCaulley (1987) reported the following trends in reliability based on MBTI and IPAR (Institute for Personality Assessment and Research) data banks and studies of high school and college students (N = 10,796):

(a) reliabilities tend to be somewhat lower for respondents in their teens but stabilize for the 20s onward; (b) under-achieving students show much lower consistency in responses than do "over-achieving" or high-achieving students; (c) college preparatory students show higher reliabilities than their classmates in non-college preparatory courses; (d) reliability scores are higher in higher intelligence groups; and (e) females in the same school classes have higher reliabilities.

Stability of type categories has been investigated by the Center for Application of Psychological Type (CAPT) and several researchers. Test-retest percentages of agreement for the EI, SN, TF, and JP categories are presented for 11 groups in the MBTI Manual. Test-retest percentages of agreement ranged from .72 to .89 for the E-I; .64 to .92 for S-N; .68 to .90 for T-F; and .66 to .92 for J-P. It should be noted that the chance probability of choosing all four preferences on retest is 6.25% (McCaulley, 1987).

Carskadon (1977) examined test-retest reliabilities of continuous scores on the MBTI. He utilized 64 male and 70 female college students and an eight week test-retest interval. He noted that reliabilities were generally satisfactory (r 's ranging from .73 to .87) with the exception of scores for males on the Thinking-Feeling

scale ($\bar{r} = .56$). This finding concurred with Stricker and Ross (1964) who found test-retest correlation coefficients for continuous scores to range from .69 to .73 for all scales except T-F which was .48. McCaulley (1987) conceded that the T-F scales have traditionally been vulnerable to deficiencies in type development but postulated that this is because good judgment is the most difficult to develop.

Validity. Since this study does not attempt to make predictions about personality temperament, this review will be limited to a discussion of content and construct validity. As Carlyn (1977) and Plessman (1986) pointed out, the validity of the Myers-Briggs Type Indicator is inherent in its ability to measure the theoretical constructs of Jung's typology. Although quantitatively assessing Jung's concepts is a difficult endeavor, a vast number of studies have revealed that different personality types do tend to behave in consistently different ways.

The content validity of the MBTI can be evaluated in terms of the propriety of the content and the way test items are presented. Chapter 9 of the MBTI Manual is devoted to an extensive review of the methodology and criteria used in selecting and scoring items for the MBTI (McCaulley, 1987). This long and thorough process is

well documented in the literature and provides evidence for the instrument's content validity.

Other evidence of content validity comes from self-typing and comparisons with other instruments. Bradway (1964) conducted a study involving 28 Jungian analysts. When a comparison was made between self-typing and MBTI typing, there was 100% agreement on the E-I scale; 43% agreement on S-N, 61% on T-F, and 43% on all three dimensions. The MBTI scores were then correlated with continuous scores on the Gray-Wheelwright Questionnaire. Results indicated that 96% of the analysts obtained the same E-I classification on both tests, 75% obtained the same S-N classification, and 72% obtained the same classification on the T-F index. Fifty-four percent of the analysts received the same classification on all three dimensions of the test. Although the Gray-Wheelwright Questionnaire measures Jungian types, it contains no J-P index.

Stricker and Ross (1964) administered the MBTI and the Gray-Wheelwright Questionnaire to a sample of 47 male college students. The two E-I scales showed a .79 correlation, the S-N scales a .58, and the T-F a .60. Since all three correlations were significant at the .01 level, it would appear that both tests were effective in identifying Jungian opposites.

Tzeng, Outcalt, Boyer, Ware, and Landis (1984) administered the MBTI (Form G) to 444 college students and clerical employees in order to investigate item validity of the Indicator. After performing factor analysis on all 95 items, they concluded that the items yielded clear, simple structures with the "resultant empirical factors being matched almost perfectly with the theoretical scales of the MBTI" (p. 225). In addition, they found that correlations computed from subjects' raw scores on the eight preference poles of the four MBTI scales indicated a strong (negative) relationship ($r = 1 - .84$, $p < .001$) between the two dichotomous poles of each MBTI dimension and relatively low correlations ($r = 1 + .381$) across the poles of different dimensions. These data, at the item level, provide important support for the MBTI validity which, in the past, was suggested only at the scale level. The implication of this finding for the current study is that the MBTI can be used with confidence to determine separate temperament types in terms of the four dichotomous dimensions.

Establishing construct validity entails correlating the ability of an instrument to measure abstract variables with observable behaviors related to the construct (variables). Researchers have often used factor analysis to investigate the relationship between

the constructs being measured by the MBTI and those measured by other tests. In the MBTI Manual, McCaulley (1987) cited numerous correlations of MBTI continuous scores with other scales. A few of the instruments compared included the Adjective Check List, Maudsley Personality Inventory, Personality Research Inventory, Stein-Self-Description Questionnaire, Sixteen Factor Questionnaire (16PF), Kuder Occupational Interest Survey, Strong-Campbell Interest Inventory, the Opinion, Attitude and Interest Scales (OAIS), and the Kolb Learning Style Inventory. A comparison of the MBTI preferences with scales of personality, interest, and academic tests gives a better understanding of the dimensions of the MBTI. However, when interpreting this data, it is important to note that many correlations should not be significant. For example, E should be correlated with measures of sociability whereas T should not. McCaulley (1987) pointed out that, while lending credence to construct validity, correlations have their limitations. They have the problems of confounding direction and strength of a preference and often understate the magnitude of the relationship.

Another study providing support for the construct validity of the MBTI was conducted by Cohen, Cohen, and Cross (1981). They administered the MBTI and Behavioral

Style Inventory (BSI) to 45 subjects. The subjects were asked to rate themselves reflecting the ideal image a person holds of himself or herself. When scales of the MBTI and BSI were compared using Kappa coefficients, significant results emerged in three of the dimensions (E-I Kappa = .70, $p < .001$; T-F Kappa = .78, $p < .001$; S-N Kappa = - .43, $p < .01$). The Kappa for the J-P scales was not significant (Kappa = - .08). However, self-typing showed no agreement with the MBTI. The nonsignificant and negative correlations between subjects' ideal rating and their scores on the MBTI were seen as evidence of divergent validity. This result is consistent with the idea that the MBTI should not reflect the ideal image a person holds of himself or herself.

Several researchers have pointed out limitations to the validity of the MBTI. Mendelshon (1965), in reviewing the instrument, stated: ". . . the scales measure only limited aspects of their underlying constructs . . ." (p. 322). Stricker and Ross (1964) surmised that, based on content of the scales and their correlations with a wide variety of tests, the SN and TF scales may reflect the dimensions they were theorized to represent but that the EI and JP scales were more questionable. Finally, Coan (1978) noted that because the JP preference scale correlates substantially with the

SN preference, the value of the JP scale in assessing Jungian types remains doubtful.

Although all questions concerning the validity of the instrument have not been answered, the MBTI has generally received very favorable reviews. Mendelsohn (1965) conceded that the instrument has potential utility and that type scores relate to a wide range of variables. Coan (1978) concluded that group differences and correlations are broadly supportive of the construct validity of the scales. Carlson and Levy (1973) reported that the Stricker and Ross (1964) critique of the MBTI was misleading and premature. Carskadon (1979) encouraged the use of the MBTI with both individuals and within organizations. As a result of continuous research at the Center for Applications of Psychological Type (CAPT), resources of the Isabel Briggs-Myers Memorial Library, the CAPT MBTI data bank, and hundreds of studies being conducted with the MBTI, data supportive of its validity have continued to emerge.

Demographic Survey Form

The demographic survey form was developed by the researcher. It was designed to collect basic information about the subjects related to the research questions. In order to enhance the validity and reliability of the instrument, it was field tested by vocational agriculture

teachers who attended the 1988 Virginia State FFA Conference. Items which teachers viewed as "subject to misinterpretation" were modified and re-evaluated.

Data Collection

Data were collected during the second session (August 2) of the 1988 West Virginia Vocational Agriculture Teachers Conference held in conjunction with the annual Vocational Conference in Charleston, West Virginia. The second session was selected for data collection following a consultation with the state supervisor concerning which session traditionally experienced maximum attendance. In addition, consideration was given to scheduling data collection only after all registration had been completed. The researcher cooperated with officers of the West Virginia Vocational Agriculture Teachers Association in obtaining a complete list of registrants for the conference. During registration for the conference, vocational agriculture teachers were permitted to register for door prizes to be given away during the data-gathering session (contingent upon attendance).

The special session on job satisfaction and personality was scheduled with the West Virginia Department of Education and approved by the Vocational Agriculture Teachers Association executive committee

during January of 1988 (note Appendix A). At that time, plans were formulated to follow up the data-collection session with a workshop during the 1990 conference. This session would include a review of overall findings and pragmatic application of individual results.

The investigator carefully monitored the data-gathering procedure by: (a) explaining why the research was being conducted, (b) encouraging each participant to respond freely, (c) ensuring confidentiality of results (assigning numbers to each packet and distributing at random), and (d) reviewing the mechanics of administration. A questionnaire packet containing a demographics form prepared by the researcher, the short form of the Minnesota Satisfaction Questionnaire, Form G of the Myers-Briggs Indicator, and answer sheets were distributed to each participant. To facilitate scoring, all three forms had been coded and extra questions on the Myers-Briggs blocked out prior to administering. In the interest of time, opening remarks and directions were confined to approximately seven minutes. Individuals taking more than five minutes on the MSQ Short Form and 20 minutes on the first 100 questions of Form G (MBTI) were encouraged to move quickly through the responses to ensure their answers were "natural" for them.

The Data Analysis

The data collected in this study were scored and analyzed in the following manner: (a) Form G of the Myers-Briggs Type Indicator (MBTI) was hand scored by the investigator and Keirsey temperaments tabulated, (b) The short form of the Minnesota Satisfaction Questionnaire (MSQ) was computer scored by the Vocational Psychology Research Center at the University of Minnesota. (The output from this scoring included raw scores by individual, means, reliabilities, and standard deviations for the population), and (c) Data from the MSQ, MBTI, and demographic survey forms were processed on the mainframe computer at West Virginia University utilizing the Statistical Package for the Social Sciences (SPSS-X). This package provided the necessary analytical procedures such as means, frequencies, standard deviations, and correlation coefficients.

Each research question is presented below with a summary of the descriptive analytical procedure employed to investigate the population in this study:

1. What is the distribution of temperament types among West Virginia vocational agriculture teachers?

The distribution was explained utilizing means and frequencies.

2. What is the distribution of job satisfaction

preferences among West Virginia vocational agriculture teachers?

The research question was answered using means and standard deviations.

3. What is the degree of job satisfaction (intrinsic, extrinsic, and general) of West Virginia vocational agriculture teachers?

The research question was answered using means and standard deviations.

4. What is the distribution of job satisfaction preferences (intrinsic, extrinsic, and general) by temperament type of West Virginia vocational agriculture teachers?

Means were displayed by temperament type to answer the research question.

5. What is the distribution of West Virginia vocational agriculture teacher temperament types by age?

Means with standard deviations were displayed by temperament type to answer the research question.

6. What is the distribution of West Virginia vocational agriculture teachers by temperament type and educational level?

This research question was answered using frequencies.

7. What is the distribution of vocational

agriculture teachers by temperament type and marital status?

Frequencies were used to report the distribution.

8. What is the relationship between age and job satisfaction of West Virginia vocational agriculture teachers?

The relationship was analyzed using frequencies and Pearson product moment correlations.

9. What is the relationship between educational level and job satisfaction of West Virginia vocational agriculture teachers?

The relationship was analyzed using a Kendall Tau Coefficient.

10. What is the distribution by marital status and job satisfaction of West Virginia vocational agriculture teachers?

Means with standard deviations were displayed by temperament type to answer the research question.

11. What is the relationship between years spent teaching vocational agriculture and job satisfaction of West Virginia vocational agriculture teachers?

A Pearson coefficient was employed to explain the relationship.

12. What is the distribution of temperament type and years spent teaching vocational agriculture of West

Virginia vocational agriculture teachers?

The research question was answered using frequencies, means, and standard deviations.

13. What is the relationship between number of teachers in the agriculture department and job satisfaction of West Virginia vocational agriculture teachers?

Means, standard deviations, and frequencies were determined. The relationship was analyzed using Pearson product moment correlations.

Summary

Thirteen research questions were utilized to investigate the relationship between personality temperament type and selected demographic variables with job satisfaction of vocational agriculture teachers posed in this investigation. The study design utilized a survey approach which employed the short form of the Minnesota Satisfaction Questionnaire (MSQ) to measure job satisfaction, Form G of the Myers-Briggs Type Indicator (MBTI) to determine Keirsey and Bates temperament types, and a survey form developed by the researcher to accumulate demographic data.

The population for the study consisted of 63 vocational agriculture teachers who attended the annual West Virginia Vocational Conference in August 1988. Data

were collected during the second session of the conference. A packet containing the survey forms was distributed to each participant and the data-gathering procedure carefully monitored by the investigator.

After collecting the data, Form G of the MBTI was hand scored by the investigator and Keirsey temperaments tabulated. The short form of the MSQ was computer scored by the Vocational Psychology Research Center. Data from the MBTI, MSQ, and demographic survey form were processed on the mainframe computer at West Virginia University utilizing the Statistical Package for the Social Sciences (SPSS-X). Only descriptive analytical procedures were utilized in the study of this population. The specific procedures used to answer each research question are identified in the chapter.

CHAPTER IV

Presentation of the Findings

Since teacher disenchantment often results in the loss of effective dedicated teachers to other vocations, policy makers have attempted to find ways to monitor and enhance teacher satisfaction (Brumback, 1986; Chapman, 1984; Grady, 1985). Recent studies within the teaching profession have generally documented a positive relationship between selected personality types and job satisfaction (Allison, 1984; Grutchfield, 1982; McGowan, 1981). Kuhn (1980) and Plessman (1986) utilized the typological approach to establish that teacher satisfaction/dissatisfaction occurs in patterns among selected teacher populations. However, this pattern has not been established for West Virginia vocational agriculture teachers.

This study was conducted to determine the personality profile pattern of a study population of West Virginia vocational agriculture teachers. In addition, it sought to determine to what degree teachers were satisfied with their jobs and whether job satisfaction was related to Keirse personality temperament or demographic variables.

In this chapter, a summary of the study design is followed by an explanation of the data analysis and findings relative to each research question.

Summary of the Study Design

This study utilized a survey approach to answer the research questions enumerated in Chapter I. The population consisted of 63 vocational agriculture teachers who attended the 1988 West Virginia Annual Vocational Conference. Data obtained from Form G of the Myers-Briggs Type Indicator (MBTI) was hand scored by the researcher and Keirsey temperaments tabulated. The short form of the Minnesota Satisfaction Questionnaire (MSQ) was computer scored by Vocational Psychology Research. All data were analyzed using the Statistical Package for the Social Sciences (SPSS-X) on the mainframe computer system at West Virginia University. Since this study involved an entire population, descriptive statistics were employed.

Statistical Analysis of the Research Questions

Thirteen research questions were formulated to determine personality characteristics of vocational agriculture teachers and investigate whether relationships existed between temperament type and job satisfaction. Each research question is restated below, followed by analysis of the data and discussion relevant to the particular research question.

Research Question One

What is the distribution of temperament types among

West Virginia vocational agriculture teachers?

Keirsey (1984) noted the lack of sensing-perceiving (2.0%) and intuitive-thinking (6.0%) types among school personnel. As noted in Table 1, this population contained a higher percentage of both SPs (23.7%) and NTs (13.6%) than would be expected. Although the SJs (57.6%) would be comparable with Keirsey results (56.0%), vocational agriculture teacher NFs (5.1%) composed a lower percentage of the population than that projected by Keirsey (36.0%).

When comparing the vocational agriculture temperament types with the general population norm as reported by McCaulley (1987) using Form G, some interesting trends emerged. SJs (sensing-judgers) were found in greater frequencies (57.6%) than would be expected in the general population (38%). In addition, vocational agriculture NFs (intuitive-feelers) at 5.1% were lower than that reported by McCaulley (12.0%) for the general population. The percentage of sensing-perceivers (23.7) was less than expected in the general population (38%). However, in contrast to the data reported by Keirsey (1984) for school personnel, the frequency of NTs (intuitive-thinkers) among teachers (13.6%) roughly paralleled that in the general population (12.0%).

Table 1

Temperament Types of Vocational Agriculture Teachers

(N=59)

Keirsey Temperament	<u>n</u>	%
SJ	34	57.6
SP	14	23.7
NT	8	13.6
NF	3	5.1

Note: SJ = Sensing-Judging, SP = Sensing-Perceiving,
 NT = Intuitive-Thinking, NF = Intuitive-Feeling

Research Question Two

What is the distribution of job satisfaction preferences among West Virginia vocational agriculture teachers?

As reported in Table 2, teachers were generally satisfied with the intrinsic aspects of their jobs. It is interesting that the first five items for which teachers expressed satisfaction were intrinsic factors and the last five items for which teachers expressed dissatisfaction were all extrinsic factors. No extrinsic factor was scored as high in satisfaction as the lowest intrinsic factor (i.e. "chance to tell people what to do"). This trend further substantiates the observation of Grady and Burnett (1985) that vocational agriculture teachers appear more satisfied with intrinsic than extrinsic factors.

Based on mean satisfaction scores (see Table 2), teachers seemed to be least satisfied with company policies and practices, advancement, compensation, and supervisor competence. The job facets they appeared to be most satisfied with were creativity ("Try own methods"), social service ("Do for others"), and independence ("Do things different"). These results concurred with Reilly and Welton (1980) who found that social service and independence were factors which

Table 2

Means and Standard Deviations for Job Satisfaction Items

(N=61)

Job Satisfaction Item	Scale	\bar{X}	SD
	a	b	
1. Chance to do things different	I	4.33	0.85
2. Do things for other people	I	4.31	0.62
3. Chance to try own methods	I	4.13	0.67
4. Able to keep busy	I	4.12	0.84
5. Making use of abilities	I	4.03	0.80
6. Chance to work alone	I	3.99	0.79
7. Not going against conscience	I	3.97	0.77
8. Chance to be "somebody"	I	3.93	0.73
9. Steady employment	I	3.93	0.89
10. Freedom to use judgment	I	3.90	0.83
11. Feeling of accomplishment	I	3.85	0.81
12. Chance to tell people what to do	I	3.61	0.61
13. Way co-workers get along	*	3.51	1.04
14. Working conditions	E	3.25	1.14
15. Praise for doing a good job	*	3.00	1.11
16. Competence of supervisor	E	2.99	1.12
17. Pay and amount of work	E	2.89	1.24
18. Way boss handles workers	E	2.86	1.13
19. Chances for advancement	E	2.80	1.00
20. Way company policies are started	E	2.64	0.87

Note: a I = Intrinsic satisfaction scale items, E = Extrinsic satisfaction scale items, * = Used to determine general but not intrinsic or extrinsic satisfaction. b Dissatisfied = < 2.5, neutral = 2.5 to 3.5, and satisfied = > 3.5.

encouraged Kansas vocational agriculture teachers to remain in the profession.

Research Question Three

What is the degree of job satisfaction (intrinsic, extrinsic, and general) of West Virginia vocational agriculture teachers?

In determining the degree of job satisfaction (intrinsic, extrinsic, and general) of this teacher population, mean scores were tabulated by the Department of Vocational Psychology Research (see Table 3) at the University of Minnesota.

In order to avoid incomplete data, an upper limit of blank (or mis-answered) items was specified. When the number of blank items was exceeded, the individual was eliminated from the scoring run. Intrinsic satisfaction was given a limit of two, extrinsic satisfaction a limit of one, and general satisfaction a limit of three blank items per individual. Two individuals from this study population were eliminated from job satisfaction scoring as a result of leaving items blank.

The Minnesota Satisfaction Questionnaire (MSQ) does not establish norm group percentile scores for vocational agriculture teachers. However, Weiss et al. (1967) suggested that job satisfaction score comparisons could be made with a selected norm group similar to the one

Table 3

Mean Satisfaction Scores of Vocational AgricultureTeachers

(N=61)

Category	\bar{X}	SD
Intrinsic	48.10 ^a	5.62
Extrinsic	17.13 ^b	4.06
General	71.98 ^c	9.78

Note: ^a Dissatisfied = < 30, neutral = 30-42, and satisfied = > 42. ^b Dissatisfied = < 15, neutral = 15-21, and satisfied = > 21. ^c Dissatisfied = < 50, neutral = 50-70, and satisfied = > 70.

under investigation. They also suggested that if there is not an occupational group similar to the one under study, comparisons should be made to the group entitled "Employed Non-disabled" in the Manual for the Minnesota Satisfaction Questionnaire. The authors noted that when conducting the comparison, a percentile score of .75 or higher indicates a high degree of satisfaction, .25 or lower represents a low level of satisfaction, and scores in between reflect a moderate level of satisfaction. As noted in Table 3, this population had a mean general satisfaction score of 71.78 which translates into .27 on the "Employed Non-disabled" percentile chart (moderately satisfied). Thirty-eight percent of the teachers had mean overall general satisfaction scores in the 70s; 23% in the 80s; and 39% below 70. Teachers reported mean intrinsic satisfaction of 48.10 and a mean extrinsic satisfaction of 17.13.

Research Question Four

What is the distribution of job satisfaction (intrinsic, extrinsic, and general) by temperament type of West Virginia vocational agriculture teachers?

Few suggestions are found in the literature for identifying differences between means that can be considered of practical significance. J. C. Arnold (personal communication, 1990) pointed out that what

constitutes practical differences between means in a population is more of a subjective than a statistical question. He noted that each researcher often establishes his or her own guidelines commensurate with the problem under investigation. Kuhn (1980), who conducted a study comparing teacher personality types to job satisfaction, suggested that differences between means that exceed one-third to one-half standard deviation can be considered as important, useful, and of practical significance. Based on these suggestions, a decision was made to use one-half standard deviation as the criterion for determining practical differences between group means. Discounting the high satisfaction of the small NF group ($n = 2$), little variation in satisfaction by temperament type was found among the Keirsey temperaments. As the standard deviations reported in Table 4 reveal, temperament types were most consistent in evaluations of extrinsic job factors than either intrinsic or general satisfaction.

An example of the methodology utilized in determining practical differences between means in this study is illustrated using Table 4 and extrinsic job satisfaction. The average standard deviation was computed for each level of satisfaction (J. D. Oliver, personal communication, 1990). In order to ensure representative

Table 4

Mean Satisfaction (Intrinsic, Extrinsic, General) Scores
by Temperament Type

(N=58)

Type	n	Intrinsic		Extrinsic		General	
		\bar{X}^a	SD	\bar{X}^b	SD	\bar{X}^c	SD
SJ	34	49.24	5.36	17.62	3.91	74.09	9.35
SP	14	46.14	5.14	15.07	4.23	66.79	9.20
NT	8	47.75	8.24	17.50	4.11	72.13	2.45
NF	2	48.00	0.00	20.00	1.40	75.50	2.12

Note: SJ = Sensing-Judging, SP = Sensing-Perceiving,
 NT = Intuitive-Thinking, and NF = Intuitive-
 Feeling. ^a Dissatisfied = < 30, neutral = 30-42,
 and satisfied = > 42. ^b Dissatisfied = < 15,
 neutral = 15-21, and satisfied = > 21.
^c Dissatisfied = < 50, neutral = 50-70, and
 satisfied = > 70.

standard deviations, a decision was made to exclude standard deviations from groups having small cell sizes (note NF group in Table 4). In the case of extrinsic job satisfaction, the average standard deviation was 4.08. One-half the standard deviation, or 2.04, was used as the basis for determining practical differences between means. Using this approach, one will note that sensing-perceivers (SPs) with a mean extrinsic satisfaction of 15.07 had a practical difference (over 2.04) from all other temperament types. Thus, SPs were found to be less extrinsically satisfied than other Keirsey temperaments. Likewise, SPs were less satisfied than other Keirsey temperaments with regard to general satisfaction but did not show a practical difference on intrinsic job satisfaction.

Research Question Five

What is the distribution of West Virginia vocational agriculture teacher temperament types by age?

The mean age for teachers in this population was 37.1 with a mode of 35.0. Teachers ranged from 22 to 62 years of age. As presented in Table 5, the average age of teacher by temperament type ranged from 39.21 for sensing-judgers (SJs) to 32.27 for sensing-perceivers (SPs).

When temperament types were categorized by age,

Table 5

Mean Age by Temperament Type (N=55)

Temperament	n	\bar{X}	SD
SJ	33	39.21	8.75
SP	11	32.27	6.16
NT	8	35.25	11.60
NF	3	36.67	15.14

Note: SJ = Sensing-Judging, SP = Sensing-Perceiving,
 NT = Intuitive-Thinking, NF = Intuitive-Feeling.

sensing-judgers (SJs) comprised 60% of the teachers; sensing-perceivers (SPs) 20%; intuitive-thinkers (NTs) 15%; and intuitive-feelers (NFs) 5%. There were few NTs and NFs in this population and they varied widely in age as discerned by the standard deviations.

Research Question Six

What is the distribution of West Virginia vocational agriculture teachers by temperament type and educational level?

On a demographic survey, participants were asked to report the highest educational level attained ranging from zero for less than bachelors to five for doctorate. In order to relate temperament type to educational level, participants were also asked to complete the Myers-Briggs Type Indicator (MBTI). Fifty-nine teachers, or 93.7% of the population, completed both the MBTI and demographic survey form. One should note from Table 6, that 30 teachers (50.8%) held a bachelors degree; eight held a masters degree (13.6%); 20 were in advanced graduate school (33.9%); and one held a doctorate (1.7%).

Keirseey and Bates (1984) made the observation that ". . . SPs tend to abandon formal education in greater numbers than any other type" (p. 158). In this population of West Virginia vocational agriculture teachers, 62% of SJs and 36% of SPs attained an

Table 6

Distribution of Vocational Agriculture Teachers by
Educational Level and Temperament Type

(N=59)

Educational Level	Temperament Type								Total
	SJ		SP		NT		NF		
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%	
Bachelors	13	22.0	9	15.2	6	10.2	2	3.4	50.8
Masters	6	10.2	2	3.4	0	0.0	0	0.0	13.6
Advanced G	15	25.4	3	5.1	1	1.7	1	1.7	33.9
Doctoral	0	0.0	0	0.0	1	1.7	0	0.0	1.7
Total	34	57.6	14	23.7	8	13.6	3	5.1	100.0

Note: SJ = Sensing-Judging, SP = Sensing-Perceiving,
NT = Intuitive-Thinking, NF = Intuitive-Feeling.

educational level higher than a bachelors. However, only 33% of NFs and 25% of NTs obtained degrees above a bachelors. In analyzing these findings, it is imperative to note the small sample sizes obtained in both the NT and NF groups.

Research Question Seven

What is the distribution of vocational agriculture teachers by temperament type and marital status?

As tabulated in Table 7, over half the study population of West Virginia vocational agriculture teachers were married (57.6%) and of the sensing-judging (SJ) personality type. All intuitive-feelers (NFs), 85.3% of SJs, 62.5% of NTs, and 64.3% of SPs in the population were married. Of the 55 males and four females represented in this group, the four females represented all four temperament types (i.e. NF, SJ, SP, and NT). The NF and SJ females were married and the SP and NT females were single.

Research Question Eight

What is the relationship between age and job satisfaction of West Virginia vocational agriculture teachers?

The mean age for this population of vocational agriculture teachers was 37.1 with a mode of 35.0. For purposes of analyzing this research question (see Table

Table 7

Distribution of Temperament Types by Marital Status

(N=59)

Type	Single		Married		Total
	<u>n</u>	%	<u>n</u>	%	
SJ	5	8.5	29	49.2	34
SP	5	8.5	9	15.3	14
NT	3	5.0	5	8.5	8
NF	0	0	3	5.0	3
Total	13	22.0	46	78.0	59

Note: SJ = Sensing-Judging, SP = Sensing-Perception,
 NT = Intuitive-Thinking, NF = Intuitive-Feeling.

8), teachers were grouped into age categories of 22-30 (younger), 31-45 (middle), and 46-62 (older). Using this approach, 21.1% of the teachers were in the "younger" group; 37 or 64.9% were in the "middle" group; and 14.0% were in the "older" category. Five teachers did not report their ages.

When teachers were grouped into age categories, some interesting trends emerged. Teachers in the "younger" age group (22-30) reported mean satisfaction scores of 46.0 on intrinsic satisfaction compared to 48.1 for the population; mean extrinsic satisfaction of 15.9 compared to 17.1 for the population; and mean general satisfaction of 67.8 compared to 72.0 for the population.

Teachers in the "middle" age group (31-45) reported scores very near the population mean. They reported a mean intrinsic satisfaction score of 47.6 compared to 48.1 for the population; an extrinsic score of 17.2 compared to 17.1 for the population; and a general satisfaction score of 71.7 compared to 72.0 for the population. Teachers in the "older" (46-62) age group reported mean intrinsic satisfaction scores of 51.1 compared to a mean of 48.1 for the population as a whole; mean extrinsic satisfaction of 19.6 compared to 17.1 for the population; and mean general satisfaction of 78.6 compared to 72.0 for the whole population.

Table 8

Mean Job Satisfaction by Age Group (N=57)

a Age Category	Satisfaction						
	n	Intrinsic		Extrinsic		General	
		\bar{x}^b	SD	\bar{x}^c	SD	\bar{x}^d	SD
Younger	12	46.01	6.26	15.92	4.33	67.75	11.14
Middle	37	47.59	5.51	17.22	3.95	71.68	9.70
Older	8	51.13	3.52	19.63	2.67	78.63	4.34

Note: ^a Younger = 22-30 years, middle = 31-45 years,
^b older = 46-62 years. Dissatisfied = < 30,
neutral = 30-42, and satisfied = > 42.

^c Dissatisfied = < 15, neutral = 15-21, and

^d satisfied = > 21. Dissatisfied = < 50, neutral =
50-70, and satisfied = > 70.

As reported in Table 9, correlational analysis revealed a relationship between age and extrinsic satisfaction of $r = .32$. Correlations were determined for the study population between age and intrinsic ($r = .26$) and age and general satisfaction ($r = .35$). Although this investigation found a low relationship between age and job satisfaction, the results generally concur with Sweeney (1981) who found that older teachers were more satisfied in their positions and that teachers in the 25 to 34 age group were the least satisfied.

Research Question Nine

What is the relationship between educational level and job satisfaction of West Virginia vocational agriculture teachers?

Previous research has found little relationship between intrinsic, extrinsic, or general satisfaction and educational level (Kuhn, 1980; Plessman, 1986). The current findings tend to support this observation. As reported in Table 10, the relationship between extrinsic satisfaction and educational level was $r = .28$. In addition, the relationship between educational level and intrinsic was $r = .33$ and between educational level and general satisfaction was $r = .36$.

The results, using correlational analysis, were further examined by computing means and standard

Table 9

Pearson Product Moment Correlations for the Relationship
Between Age and Job Satisfaction

(N=57)

Category	<u>r</u>	Significance Level
Intrinsic	.26	.047
Extrinsic	.32	.016
General	.35	.008

Table 10

Kendall's Tau C Correlations for the Relationship Between
Educational Level and Job Satisfaction

(N=61)

Job Satisfaction Category	r	Significance Level
Intrinsic	.33	.0007
Extrinsic	.28	.0035
General	.36	.0003

deviations for each educational level. As denoted in Table 11, no teacher reported an educational degree below the bachelors level. A practical significant difference was found across all three satisfaction levels (intrinsic, extrinsic, and general) between teachers holding a bachelors and those with a masters degree. Intrinsic satisfaction increased from a mean of 45.79 at the bachelors level to a mean of 49.11 for those holding a masters degree; extrinsic satisfaction increased from a mean of 15.41 at the bachelors level to a mean of 19.33 at the masters level; and general satisfaction increased from a mean of 67.17 at the bachelors level to a mean of 76.33 at the masters level. As denoted in Table 11, practical differences in mean satisfaction scores (intrinsic, extrinsic, general) were also obtained between teachers holding a bachelors and those at the advanced graduate level. The one teacher holding a doctorate expressed higher satisfaction scores (intrinsic, extrinsic, general) than the means (intrinsic, extrinsic, general) of those at the advanced graduate level. One may note from Table 11 that, in general, all levels of satisfaction--intrinsic, extrinsic, and general--increased slightly as individuals attained higher educational levels.

Table 11

Mean Satisfaction by Educational Level (N=61)

Level ^a	Satisfaction						
	Intrinsic		Extrinsic		General		
	<u>n</u>	\bar{X}^b	SD	\bar{X}^c	SD	\bar{X}^d	SD
2	29	45.79	6.47	15.41	4.03	67.17	10.46
3	9	49.11	2.85	19.33	3.12	76.33	5.96
4	22	50.23	3.64	18.36	3.67	75.95	7.02
5	1	59.00 ^e	.00	20.00 ^e	.00	85.00 ^e	.00

Note: ^a 2 = Bachelors, 3 = Masters, 4 = Advanced Graduate, and 5 = Doctorate (note small cell size). ^b Dissatisfied = < 30, neutral = 30-42, and satisfied = > 42. ^c Dissatisfied = < 15, neutral = 15-21, and satisfied = > 21. ^d Dissatisfied = < 50, neutral = 50-70, and satisfied = > 70. ^e Represents raw score instead of mean score.

Research Question Ten

What is the relationship between marital status and job satisfaction of West Virginia vocational agriculture teachers?

Mean satisfaction levels for the population by marital status are reported in Table 12. Married teachers reported a mean intrinsic satisfaction score of 49.26 compared to a mean of 44.21 for single teachers; mean extrinsic satisfaction of 17.77 compared to 15.00 for single teachers; and mean general satisfaction of 74.13 compared to 64.79 for single teachers. Utilizing the approach suggested by Kuhn (1980) for analyzing mean differences, this investigation found a practical difference in job satisfaction levels (intrinsic, extrinsic, general) by marital status. These results correspond with those of Carroll (1973) who reported that married workers were more satisfied with their jobs than single people.

Research Question Eleven

What is the relationship between years spent teaching vocational agriculture and job satisfaction of West Virginia vocational agriculture teachers?

The mean time spent teaching vocational agriculture by this population was 13.5 years with a range from 0-35. The mode was 16 years. When Pearson Correlations were

Table 12

Mean Satisfaction by Marital Status (N=61)

Satisfaction	Married (<u>n</u> =47)		Single (<u>n</u> =14)	
	\bar{X}	SD	\bar{X}	SD
Intrinsic	49.26 ^a	4.57	44.21 ^a	7.15
Extrinsic	17.77 ^b	3.81	15.00 ^b	4.28
General	74.13 ^c	7.81	64.79 ^c	12.39

Note: ^a Dissatisfied = < 30, neutral = 30-42, and satisfied = > 42. ^b Dissatisfied = < 15, neutral = 15-21, and satisfied = > 21. ^c Dissatisfied = < 50, neutral = 50-70, and satisfied = > 70.

Table 13

Correlational Analysis of Job Satisfaction (Intrinsic, Extrinsic, General) and Length of Teaching Experience
(N=59)

Category	Satisfaction		
	Intrinsic	Extrinsic	General
Years as a vocational agriculture teacher	.33	.26	.35
Significance level	.01	.05	.01

used to test the relationships between years spent teaching vocational agriculture and job satisfaction, the results reported in Table 13 were obtained. Note that a correlation $r = .33$ was obtained for intrinsic, $r = .26$ for the extrinsic dimension, and $r = .35$ for general satisfaction.

Research Question Twelve

What is the distribution by temperament type and years spent teaching vocational agriculture?

As reported in Table 14, West Virginia vocational agriculture teachers were found to be predominately of the sensing-judging (58.6%) and sensing-perceiving (22.4%) temperament types. The sensing-judgers had taught the highest mean number of years (15.15) followed closely by sensing-perceivers (13.38) and intuitive-feelers (12.33). The eight intuitive-thinkers had taught the lowest mean number of years (9.63).

Research Question Thirteen

What is the relationship between number of teachers in the agriculture department and job satisfaction of West Virginia vocational agriculture teachers?

In the current investigation, teachers were asked to report the number of teachers in their department on a demographic survey form (Appendix B). Satisfaction levels by number of teachers in an agricultural department are reported in Table 15. The number of

Table 14

Mean Years Spent Teaching Vocational Agriculture by
Temperament Type

(N=58)

Temperament Type	Years Taught		
	<u>n</u>	\bar{X}	SD
SJ	34	15.15	8.14
SP	13	13.38	8.27
NT	8	9.63	10.28
NF	3	12.33	14.74

Note: SJ = Sensing-Judging, SP = Sensing-Perceiving,
NT = Intuitive-Thinking, NF = Intuitive-Feeling.

Table 15

Mean Job Satisfaction by Number of Agriculture Teachers
in a Department

(N=57)

Department Size by number of Teachers	n	Intrinsic		Extrinsic		General	
		\bar{X}	SD	\bar{X}	SD	\bar{X}	SD
Single	31	48.81	5.87	17.48	4.03	72.84	10.21
Two	13	46.85	5.30	17.85	4.86	72.00	9.90
Three	6	51.83	3.06	16.67	3.50	76.33	5.39
Four	2	51.00	0.00	18.50	3.54	78.00	4.24
Five	5	44.60	1.67	15.00	2.55	64.60	3.36

Note: ^a Dissatisfied = < 30, neutral = 30-42,
and satisfied = > 42. ^b Dissatisfied = < 15,
neutral = 15-21, and satisfied = > 21.
^c Dissatisfied = < 50, neutral = 50-70, and
satisfied = > 70.

teachers reported ranged from 1 to 5. The mean number of teachers in a department was 1.8 with a mode of 1. Thirty-one teachers reported working in a single-teacher department (54.4%), 13 in a two-teacher department (22.8%), six in a three-teacher department (10.5%), two in four-teacher departments (3.5%), and five in five-teacher departments (8.8%). There were four unusable responses. In terms of school level, 8.1% of the teachers taught at the junior high level, 62.9% at the high school level, and 29% taught at both the junior high and high school levels.

As tabulated in Table 15, teachers in five-teacher departments reported the lowest mean satisfaction scores (practical difference) across all three scales (intrinsic, extrinsic, and general). A practical difference in satisfaction was also observed for teachers in two-teacher departments. Teachers in two-teacher departments were less satisfied (intrinsic, extrinsic, general) than teachers in three or four-teacher departments.

In addition to descriptive analysis, a correlation coefficient was utilized to examine the relationship. As noted in Table 16, a correlational analysis of this population using a Pearson coefficient yielded an intrinsic value of $r = - .11$, an extrinsic value of $r = -$

Table 16

Correlational Analysis of Number of Teachers in an
Agricultural Department and Job Satisfaction

(N=57)

Job Satisfaction Category	r	Significance Level
Intrinsic	-.11	.45
Extrinsic	-.14	.31
General	-.13	.35

.14, and a general satisfaction value of $\underline{r} = - .13$.

Summary

Results of the study have been reported in this Chapter. Initially, a summary of the study design was provided, followed by a statement of each research question, an analysis of the data, and discussion relevant to each particular research question. Research questions 1 and 2 yielded distributions of temperament types and job satisfaction respectively. Research question 3 tested the degree of job satisfaction. Research question 4 determined the relationship between temperament type and job satisfaction. Research questions 5, 6, 7, and 12 tested temperament type in relation to demographic variables. Finally, research questions 8, 9, 10, 11, and 13 tested job satisfaction in relation to demographic variables.

CHAPTER V

Summary, Discussion, and Recommendations

Educators and policy makers have long sought to determine how to enhance the satisfaction and retention of effective teachers (Hoppock, 1935; Kalker, 1984; Knight & Bender, 1978). Recent issues such as extended employment and compensation within the West Virginia vocational agriculture teaching profession have made the need to find the sources of teacher satisfaction/dissatisfaction of particular interest to those concerned with teacher retention (Michael, 1988; Pepper, 1988). One possible factor influencing teacher satisfaction--personality temperament--was examined in this study.

Although research by Kuhn (1980) and Plessman (1986) demonstrated that teacher satisfiers/dissatisfiers occur in patterns and are associated with specific personality types, a review of the literature revealed that no personality temperament profile for West Virginia vocational agriculture teachers existed. Furthermore, it was not known whether job satisfaction of West Virginia vocational agriculture teachers was influenced by temperament.

Summary of Purposes and Procedures

The Purpose

The purpose of this study was to: (a) determine the distribution of personality temperament types of the study population of West Virginia vocational agriculture teachers, (b) determine the degree of job satisfaction expressed by West Virginia vocational agriculture teachers, (c) determine the distribution of job satisfaction among West Virginia vocational agriculture teachers by temperament type, (d) determine the distribution of West Virginia vocational agriculture teachers' temperament types by selected demographic variables, and (e) determine the relationship between West Virginia vocational agriculture teachers' satisfaction and selected demographic variables.

The Population

The population for this study consisted of 63 vocational agriculture teachers who attended the Annual West Virginia Vocational Conference in August 1988.

The Data Collection

After obtaining permission to use the psychometric instruments involved, data were collected during the second session of the 1988 West Virginia Vocational Agriculture Teachers Conference held in conjunction with the Annual Vocational Conference in Charleston, West

Virginia. All vocational agriculture teachers present at the conference were in attendance at the data-gathering session. However, one declined to participate in the study because of being a first-year teacher. A packet containing a field tested demographic survey form prepared by the researcher, the Minnesota Satisfaction Questionnaire, and Form G of the Myers-Briggs Indicator (including answer sheet), was distributed to each participant (Appendix B). To facilitate scoring, all three forms had been coded and extra questions on the Myers-Briggs blocked out prior to administering. The researcher carefully monitored the data gathering procedure by: (a) explaining why the research was being conducted, (b) encouraging each participant to respond freely, (c) ensuring confidentiality of results, and (d) reviewing the mechanics of administration.

The Data Analysis

Form G of the Myers-Briggs Type Indicator (MBTI) was hand scored by the researcher and Keirsey temperaments were tabulated. The short form of the Minnesota Satisfaction Questionnaire (MSQ) was computer scored by the Vocational Psychology Research Center at the University of Minnesota. The output from this scoring included raw scores by individual, means, reliabilities, and standard deviations for the population. Data from

the MSQ, MBTI, and demographic survey form were processed on the mainframe computer at West Virginia University utilizing the Statistical Package for the Social Sciences (SPSS-X). This package provided for the necessary analytical procedures such as means, frequencies, standard deviations, and correlation coefficients.

Summary of Findings

The research findings were as follows:

1. The sensing-judging (SJ) Keirsey temperament type was found to compose 57.6% of the study population of West Virginia vocational agriculture teachers compared to 23.7% sensing-perceiving (SP); 13.6% intuitive-thinking (NT); and 5.1% intuitive-feeling (NF).

2. On intrinsic factors, teachers reported mean satisfaction item scores in the satisfied range (greater than 3.5). Teachers reported mean satisfaction item scores of 4.33 for "Chance to do things different," 4.31 for "Do things for other people," 4.13 for "Chance to try new methods," 4.12 for "Able to keep busy," and 4.03 for "Making use of abilities."

3. On extrinsic factors, teachers reported mean satisfaction item scores in the neutral range (2.5 - 3.5). They reported scores of 2.99 for "Competence of supervisor," 2.89 for "Pay and the amount of work," 2.86

for "Way boss handles workers," 2.80 for "Chances for advancement," and 2.64 for "Way company policies are started."

4. West Virginia vocational agriculture teachers had a mean intrinsic satisfaction score of 48.1 (satisfied), a mean extrinsic satisfaction score of 17.1 (neutral), and a mean general satisfaction score of 71.9 (satisfied).

5. Sensing-judgers (SJs) reported an intrinsic mean satisfaction score of 49.24 (satisfied), an extrinsic score of 17.62 (neutral), and a general satisfaction score of 74.09 (satisfied).

6. Sensing-perceivers (SPs) reported a mean intrinsic score of 46.14 (neutral), a mean extrinsic score of 15.07 (dissatisfied), and a general satisfaction score of 66.79 (neutral).

7. Intuitive-thinkers (NTs) reported mean satisfaction scores of 47.75 (satisfied) for intrinsic, 17.50 (neutral) for extrinsic, and 72.13 (satisfied) for general.

8. Intuitive-feelers (NFs) reported mean satisfaction scores of 48.00 (satisfied) for intrinsic, 20.00 (satisfied) for extrinsic, and 75.50 (satisfied) for general (note small cell size).

9. Teachers of the sensing-judging (SJ) type were

found to be the oldest (39.21 mean years) and sensing-perceiving (SP) the youngest (32.27 mean years).

10. In the study population, 62% of the sensing-judgers (SJs) and 36% of the sensing-perceivers (SPs) had attained an educational level higher than a bachelors.

11. Only 33% of intuitive-feelers (NFs) and 25% of intuitive-thinkers (NTs) were found to have attained degrees above a bachelors degree.

12. Over one-half of the study population (57.6%) were found to be married, sensing-judgers (SJs).

13. All intuitive-feelers (NFs), 85.3% of the sensing-judgers (SJs), 62.5% of intuitive-thinkers (NTs), and 64.3% of SPs in the population were found to be married.

14. When analyzing the relationships between age and satisfaction, the following correlations were obtained: $\underline{r} = .26$ for intrinsic factors, $\underline{r} = .32$ for extrinsic scales and $\underline{r} = .35$ for general satisfaction.

15. A low, but positive, relationship ($\underline{r} = .28$) was found between extrinsic job satisfaction and educational level of West Virginia vocational agriculture teachers.

16. A low, positive relationship was found between educational level and both intrinsic ($\underline{r} = .33$) and general ($\underline{r} = .36$) job satisfaction of West Virginia vocational agriculture teachers.

17. Married teachers were found to have higher mean satisfaction scores on intrinsic, extrinsic, and general satisfaction than single teachers. Married teachers reported mean intrinsic satisfaction of 45.43 (satisfied) compared to 42.29 (satisfied) for single teachers; a mean extrinsic satisfaction of 16.62 (satisfied) compared to 13.07 (dissatisfied) for single teachers; and 65.43 (neutral) for general satisfaction compared to 60.93 (neutral) for single teachers.

18. A low, but positive, correlation was found between years spent teaching and intrinsic ($r = .33$), extrinsic ($r = .26$), and general job satisfaction ($r = .35$).

19. Intuitive-thinkers (NTs) were found to have taught the lowest mean number of years (9.63) of any temperament type category.

20. Teachers of the sensing temperament types (SJs and SPs) were found to occur in the greatest numbers (81%) and had taught the highest mean years (SJs = 15.15, SPs = 13.38).

21. Correlational analysis of the number of teachers in a department and job satisfaction yielded an intrinsic value of $r = -.11$, an extrinsic value of $r = .14$, and a general satisfaction value of $r = -.13$.

Discussion

The study objectives provided a logical framework for understanding the conclusions and implications derived from the findings of this investigation. Each objective is followed by a discussion designed to address the problem as delineated in Chapter I.

Distribution of Personality Temperaments

The distribution of personality temperaments of West Virginia vocational agriculture teachers differed from the normative high school teacher population as reported by Keirsey and Bates (1984). Vocational agriculture attracts more practical, action-oriented, realistic types--sensing-judging and sensing-perceiving. However, there were more teachers of the intuitive-thinking (NT) and fewer of the intuitive-feeling (NF) temperament than projected for the normal high school population. This trend supports the theory of Keirsey and Bates (1984) who postulated that individuals tend to gravitate toward occupations best suited to their temperament type.

The fact that there was a relatively large number of teachers with intuitive-thinking (NT) and few with intuitive-feeling (NF) temperaments in the vocational agriculture population concurs with earlier findings for agriculturists by Barrett (1985). Teachers of the intuitive-thinking temperament are attracted to

occupations requiring work with abstract ideas and relationships (Plessman, 1986). Therefore, the scientific nature of the subject matter studied in vocational agriculture may be attractive to the NT teacher. Moreover, intuitive-feeling (NF) teachers may find it difficult to cope with the structured demands of an occupation dominated by sensing-judgers (Keirsey & Bates, 1984). Since the distribution of temperament types among West Virginia vocational agriculture teachers is compatible with both earlier research findings and temperament theory, it augmented the development of a profile of West Virginia vocational agriculture teachers.

Degree of Job Satisfaction

West Virginia vocational agriculture teachers are more satisfied with intrinsic than extrinsic job factors. The intrinsic factors for which they are most satisfied include creativity, social service, and independence. The extrinsic factors they are most dissatisfied with include school policies and practices, advancement, and supervisor competency. These conclusions concur with those of Grady (1985). Compared to the norm (employed non-disabled group), West Virginia vocational agriculture teachers are satisfied with their work in terms of general job satisfaction. They are satisfied with intrinsic job factors but neither satisfied nor

dissatisfied with extrinsic aspects of their work.

The results of this study imply that administrators should be concerned with improving extrinsic job factors. This observation concurs with Davis and Williams (1980) who found that stressing extrinsic factors resulted in a high degree of job satisfaction among Iowa agricultural teachers. West Virginia administrators should be especially cognizant of the low rating given to the extrinsic items "the way school policies are formulated" and "teacher pay." Although West Virginia teachers were neither satisfied nor dissatisfied with school policies and pay (Table 2), these items were rated relatively low compared to other job satisfaction factors. In view of the fact that these extrinsic items are potential sources of dissatisfaction (Kuhn, 1980; Mattox, 1974), administrators supervising West Virginia vocational agriculture teachers may want to review policies with regard to pay, promotion, and involvement of teachers in administrative decisions affecting agricultural programs.

Although the results of this study conclude that West Virginia vocational agriculture teachers are moderately satisfied with their jobs (general satisfaction, p. 90), they scored only at the .27 percentile when compared to norm of "Employed Non-disabled" individuals as tabulated in the Manual for the Minnesota Satisfaction

Questionnaire (note that .25 represents a low level of satisfaction). This implies that administrators need to monitor job satisfaction among West Virginia vocational agriculture teachers and find ways to enhance it.

Degree of Job Satisfaction by Temperament Type

The results of this research support the conclusions by other researchers that there is a relationship between personality temperament and job satisfaction (Kuhn, 1980; Plessman, 1986). West Virginia teachers of the sensing-perceiving (SP) temperament type exhibited the lowest satisfaction scores among the Keirsey temperaments on extrinsic and general satisfaction. Although no other practical differences were observed when comparing satisfaction by temperament type, each Keirsey temperament type did vary across satisfaction scales. These results, showing a definite pattern of job satisfaction by temperament type, lend credence to the theory that personality patterns may be a logical way to view job satisfaction.

One may wonder why sensing-perceiving (SP) teachers in this population expressed lower satisfaction than other Keirsey types. A possible reason may be that since SPs thrive on freedom (Keirsey, 1984), SP teachers may view administrative decisions affecting agricultural education (i.e. budget cuts, name change, etc.) as

indications they are losing their arena for spontaneity. New regulations mandating strict accountability (Michael, 1988) may not be suited to the impulsive nature of the SP.

Temperament Type by Demographic Variables

The demographic variables investigated in this study revealed some individual differences with regard to teacher temperament types useful in constructing the temperament profile presented in this chapter. For example, West Virginia teachers of the sensing-judging (SJ) type were older, attained higher educational levels, and had taught longer than any other temperament type. This implies that SJ teachers may be attracted to and remain in the vocational agriculture teaching profession longer and in greater numbers than other Keirsey types.

The sensing-perceiving (SP) teachers in this study were characterized by being the youngest and least satisfied of the temperament types. However, they were more likely to have attained advanced degrees than either of the intuitive types (NT, NF). This is in contrast to the Keirsey and Bates (1984) statement that ". . . SPs tend to abandon formal education in greater numbers than any other type (p. 158)." Keirsey and Bates (1984) noted that both SP students and teachers have high dropout rates with regard to completing educational objectives

because the rigid schedule demanded in the classroom does not appeal to their impulsive nature. When one considers the unusually high percentage of SPs in the study population (23.7% compared to 2% in general teaching), their commitment to formal education, and the fact that they have greater longevity in teaching than intuitive thinkers, one might question why they are so attracted to the vocational agriculture profession. Temperament theory suggests that SPs are attracted to the profession because they view vocational agriculture teaching as an "action-oriented" occupation where they can exercise freedom to experiment with new methods (Keirsey & Bates, 1984).

West Virginia teachers of the intuitive-thinking temperament had the lowest number of advanced degrees of any temperament type and had taught the lowest mean number of years. Since Keirsey and Bates (1984) postulated that NTs are the most likely temperament type to complete advanced degrees, one may wonder why this was not the case among West Virginia teachers. One reason may be that NT teachers in West Virginia need to rely on "less preferred processes" to operate in the practical, sensing environment demanded by the vocational agriculture program (largely controlled by SJs). As suggested by Plessman (1986), this requires more energy

than operating in the NT "world of ideas." Therefore, more experienced NTs in "pushing the system" to get needed changes, may have become frustrated, and left the profession. The NTs currently teaching vocational agriculture may not have been in the system long enough to have completed advanced degrees.

Among West Virginia vocational agriculture teachers, intuitive-feelers (NFs) had taught a mean of 12.33 years. This finding concurs with Keirsey and Bates (1984) who projected that NFs would have a long stay in teaching. However, only three teachers with NF temperaments were found among West Virginia teachers. Were NF students attracted to the college of agriculture? If so, did they complete teacher training, or enter other professions? One possible explanation is that they were not recruited as teachers. Keirsey and Bates (1984) suggested that sensing-judgers (SJs) have difficulty communicating with and accepting "non-conforming" temperaments. Therefore, it could be that West Virginia agriculture teachers who are predominately SJs recruited other SJs as teachers at the expense of NFs and other temperament types.

Satisfaction by Demographic Variables

There is little relationship between the variables of age, educational level, years experience, or number of teachers in a department and job satisfaction of West

Virginia vocational agriculture teachers. However, some trends with regard to age and experience were revealed with implications for maintaining quality teachers in the profession.

The results of this study agree with other researchers who found that, as teachers age and gain experience, they become more satisfied (Grady, 1985; Lowther, 1982). As suggested by Brightwell (1981), it is probable that older West Virginia teachers have more developed coping strategies and many of those who were dissatisfied have already left the profession. Regardless of the reasons why teachers become more satisfied with age and experience, it behooves policy makers to be cognizant of this fact when considering early retirement legislation or reduction in force. It may not be in the best interest of the educational system to replace experienced satisfied teachers with less experienced and less satisfied individuals.

This investigation found little correlation between the number of teachers in an agriculture department and teacher job satisfaction. Although teachers in five-teacher departments appeared least satisfied, the number of teachers reporting in each category were too small to establish meaningful trends. However, there were enough practical differences in job satisfaction scores to

justify the observation that job satisfaction is influenced by the number of teachers in a department.

Profile of a West Virginia Vocational Agriculture Teacher

Based on the results of this investigation, the four Keirsey and Bates (1978) temperament types of participating West Virginia vocational agriculture teachers exhibited the following characteristics:

Sensing-Judgers--(SJs)--(Duty oriented, independent)

1. Comprised 57.6% of the study population.
2. Exhibited the highest intrinsic satisfaction of any temperament type.
3. Were the oldest teachers of any temperament type (mean age of 39.2).
4. Had obtained higher average educational levels than any other type.
5. Were married (85.3%).
6. Had taught a mean of 15.15 years (most of any type)

Sensing-Perceivers--(SPs)--(Impulsive)

1. Comprised 23.7% of the study population.
2. Expressed lowest extrinsic and general job satisfaction of any temperament.
3. Were at the bachelors educational level (64%)
4. Were likely married (64.3%).
5. Had taught a mean of 13.38 years.

Intuitive-Thinkers--(NTs)--(Rely on intelligence)

1. Comprised 13.6% of the population.
2. Were moderately satisfied on intrinsic, extrinsic, and general satisfaction scales.
3. Had a mean age of 35.25 years.
4. Had the lowest number of advanced degrees of any temperament type (75% were at bachelors level).
5. Were mostly married (62.5%).
6. Had taught the lowest (9.63) mean number of years of any temperament type.

Intuitive-Feelers (NFs)--(Rely on integrity and truth)

1. Comprised 5.1% of the population.
2. Displayed the highest mean extrinsic, and general satisfaction of any temperament type.
3. Had a mean age of 36.67 years.
4. Were married (100%).
5. Had taught a mean of 12.3 years.

Recommendations for Practical Application

1. The results of this research concerning job satisfaction should be shared with school administrators to facilitate working more effectively with vocational agriculture teachers.
2. Seminars and workshops to assist teachers in understanding sources of satisfaction/ dissatisfaction within the profession should be

conducted.

3. Administrators should establish new avenues by which to involve vocational agriculture teachers in policy making, increase satisfaction with pay, and provide for professional advancement.
4. The profession should include "type" counseling as part of the agricultural education teacher-training curriculum and periodically hold "type-job satisfaction workshops" to assist teachers in dealing with stress resulting from "temperament-role" conflicts within the profession.

Recommendations for Further Research

1. Additional studies are needed to determine whether the temperament characteristics found among West Virginia agriculture teachers are true elsewhere.
2. Future studies should include research to isolate extrinsic job satisfaction/dissatisfaction factors which may result in teacher attrition.
3. Studies should be conducted to determine why West Virginia teachers consider educational advancement important.
4. Studies to determine the influence of age,

experience, and job satisfaction on teacher performance should be designed.

Chapter Summary

This chapter presents a summary of the purpose and procedures of the study including the instruments utilized, population, and data collection and analysis. The summary of the findings is followed by a discussion related to each study objective. The discussion is followed by a profile of West Virginia vocational agriculture teacher personality temperament types. The chapter is concluded with recommendations for practical application and further research.

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APPENDIX A
PERMISSION TO CONDUCT STUDY



West Virginia Department of Education

Capitol Complex, Charleston 25305

Tom McNeal - State Superintendent of Schools

June 23, 1988

Mr. Larry Watson
 Vo-Ag Teacher
 Marion Co. Voc. Ctr.
 Route 1
 Farmington, WV 26571

Dear Larry:

We are very excited about the plans to involve West Virginia in your stress research project. I have talked with the state officers of the West Virginia Vo-Ag Teachers Association and they wholeheartedly endorse the project (survey at the state conference followed by an in-depth presentation next year). I have shared our discussions (from this spring) relative to the project with selected bureau staff, as well as the vo-ag teachers.

We are all very excited about this timely research topic and stand ready to assist you in any way possible.

With best wishes always, I am

Sincerely yours,

Donald L. Michael
 State Supervisor
 Vocational Agriculture

/lb

APPENDIX B
SURVEYS USED IN THIS STUDY

MINNESOTA SATISFACTION QUESTIONNAIRE

(short-form)

Minnesota Satisfaction Questionnaire sample

questions reproduced by permission of

Vocational Psychology Research,

University of Minnesota,

Copyright 1977

minnesota satisfaction questionnaire

(short-form)



Vocational Psychology Research
UNIVERSITY OF MINNESOTA

Copyright 1977

minnesota satisfaction questionnaire

The purpose of this questionnaire is to give you a chance to tell **how you feel about your present job**, what things you are **satisfied** with and what things you are **not satisfied** with.

On the basis of your answers and those of people like you, we hope to get a better understanding of the things people **like and dislike about their jobs**.

On the next page you will find statements about your **present** job.

- Read each statement carefully.
- Decide **how satisfied you feel about the aspect of your job** described by the statement.

Keeping the statement in mind:

—if you feel that your job gives you **more than you expected**, check the box under **"Very Sat."** (Very Satisfied);

—if you feel that your job gives you **what you expected**, check the box under **"Sat."** (Satisfied);

—if you **cannot make up your mind** whether or not the job gives you what you expected, check the box under **"N"** (Neither Satisfied nor Dissatisfied);

—if you feel that your job gives you **less than you expected**, check the box under **"Dissat."** (Dissatisfied);

—if you feel that your job gives you **much less than you expected**, check the box under **"Very Dissat."** (Very Dissatisfied).

- Remember: Keep the statement in mind when deciding **how satisfied you feel about that aspect of your job**.
- Do this for **all** statements. Please answer **every** item.

Be frank and honest. Give a true picture of your feelings about your **present job**.

Ask yourself: How **satisfied** am I with this aspect of my job?

Very Sat. means I am very satisfied with this aspect of my job.

Sat. means I am satisfied with this aspect of my job.

N means I can't decide whether I am satisfied or not with this aspect of my job.

Dissat. means I am dissatisfied with this aspect of my job.

Very Dissat. means I am very dissatisfied with this aspect of my job.

On my present job, this is how I feel about . . .

	Very Dissat.	Dissat.	N	Sat.	Very Sat.
1. Being able to keep busy all the time	<input type="checkbox"/>				
2. The chance to work alone on the job	<input type="checkbox"/>				
3. The chance to do different things from time to time	<input type="checkbox"/>				
4. The chance to be "somebody" in the community	<input type="checkbox"/>				
5. The way my boss handles his/her workers.....	<input type="checkbox"/>				
6. The competence of my supervisor in making decisions	<input type="checkbox"/>				
7. Being able to do things that don't go against my conscience	<input type="checkbox"/>				
8. The way my job provides for steady employment	<input type="checkbox"/>				
9. The chance to do things for other people	<input type="checkbox"/>				
10. The chance to tell people what to do	<input type="checkbox"/>				
11. The chance to do something that makes use of my abilities	<input type="checkbox"/>				
12. The way company policies are put into practice	<input type="checkbox"/>				
13. My pay and the amount of work I do	<input type="checkbox"/>				
14. The chances for advancement on this job	<input type="checkbox"/>				
15. The freedom to use my own judgment	<input type="checkbox"/>				
16. The chance to try my own methods of doing the job	<input type="checkbox"/>				
17. The working conditions	<input type="checkbox"/>				
18. The way my co-workers get along with each other	<input type="checkbox"/>				
19. The praise I get for doing a good job	<input type="checkbox"/>				
20. The feeling of accomplishment I get from the job	<input type="checkbox"/>				
	Very Dissat.	Dissat.	N	Sat.	Very Sat.

MYERS-BRIGGS TYPE INDICATOR

(Form G)

Permission to Include the Enclosed Sample

Test Items Obtained from

Consulting Psychologists Press, Inc.

Palo Alto, California

PART I. Which Answer Comes Closer to Telling How
You Usually Feel or Act?

1. When you go somewhere for the day, would you rather
(A) plan what you will do and when, or
(B) just go?

PART II. Which Word in Each Pair Appeals to You More?

1. (A) scheduled unplanned (B)

PART III. Which Answer Comes Closer to Telling How
You Usually Feel or Act?

1. Do you think it more important to be able
(A) to see the possibilities in a situation, or
(B) to adjust to facts as they are?

DEMOGRAPHIC SURVEY FORM

Demographic Survey Form

ID Number _____ (for grouping purposes only).

Please circle or fill in the appropriate response:

1. Complete your name only if you would like individual results mailed to you _____.
2. Sex

1 = Male	2 = Female
----------	------------
3. Marital status

1 = Single	2 = Married
------------	-------------
4. What is your present age _____?
5. Educational level

1 = Less than bachelors
2 = Bachelors
3 = Masters
4 = Advanced graduate
5 = Doctorate
6. Level of school in which you teach

1 = Junior high only
2 = High school only
3 = Both high school and junior high
7. Number of teachers in your department _____.
8. Total length of time you have been in teaching _____.
 Years you have been teaching vocational agriculture _____.

VITA

Larry W. Watson was born September 17, 1946, at Mannington, West Virginia. He graduated from Mannington High School in 1964 and received his Bachelor of Science degree in Agricultural Education with a minor in biological sciences from West Virginia University in 1969.

He taught vocational agriculture from 1969-1975 at Shady Spring High School in Raleigh County, West Virginia. In July, 1975, he returned to Mannington where he was employed as a vocational agriculture teacher from 1975-1979. In 1976, he received the Master of Science degree with a major in Agricultural Education from West Virginia University.

From 1980-1984, he was employed as a vocational agriculture teacher at Marion County Technical Center. In 1985, he began work toward his Doctor of Education degree in Vocational and Technical Education at Virginia Polytechnic Institute and State University. From September 1985, to July, 1986, he was a graduate teaching assistant in the Agricultural Education Program Area.

In 1986, he returned to the Marion County Technical Center where he taught vocational agriculture while completing a Doctorate in vocational education.

Larry Walter Watson received the Doctorate of

Education degree in May, 1990, with a major in Vocational and Technical Education. The professional area of concentration was in agriculture teacher education with cognate studies in meat science.

Larry Walter Watson

Larry Walter Watson