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The Relationship Between Job Satisfaction and Teacher Performance of Vocational Agriculture Teachers in Louisiana.

Thomas Lewis Grady

Louisiana State University and Agricultural & Mechanical College

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THE RELATIONSHIP BETWEEN JOB SATISFACTION AND TEACHER PERFORMANCE OF VOCATIONAL AGRICULTURE TEACHERS IN LOUISIANA

A Dissertation
Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Vocational Agricultural Education

by
Thomas Lewis Grady
B.S., Texas A&M University, 1973
M.Ed., Texas A&M University, 1974
August, 1984
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>ii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>vi</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>vii</td>
</tr>
<tr>
<td><strong>CHAPTER</strong></td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>4</td>
</tr>
<tr>
<td>Specific Objectives of the Study</td>
<td>4</td>
</tr>
<tr>
<td>Significance of the Study</td>
<td>5</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>7</td>
</tr>
<tr>
<td>II. REVIEW OF LITERATURE</td>
<td>8</td>
</tr>
<tr>
<td>Definition of Job Satisfaction</td>
<td>8</td>
</tr>
<tr>
<td>Job Satisfaction Theories</td>
<td>11</td>
</tr>
<tr>
<td>Maslow's Theory</td>
<td>12</td>
</tr>
<tr>
<td>Herzberg's Theory</td>
<td>14</td>
</tr>
<tr>
<td>Equity Theory</td>
<td>20</td>
</tr>
<tr>
<td>Expectancy/Valence Theory</td>
<td>26</td>
</tr>
<tr>
<td>Job Satisfaction Measuring Instruments</td>
<td>33</td>
</tr>
<tr>
<td>Job Descriptive Index</td>
<td>33</td>
</tr>
<tr>
<td>Minnesota Satisfaction Questionnaire</td>
<td>35</td>
</tr>
<tr>
<td>Job Satisfaction — Job Performance Relationships</td>
<td>40</td>
</tr>
<tr>
<td>Performance to Satisfaction</td>
<td>40</td>
</tr>
<tr>
<td>Satisfaction—Performance</td>
<td>43</td>
</tr>
<tr>
<td>Satisfaction to Performance</td>
<td>40</td>
</tr>
<tr>
<td>Job Satisfaction in Education</td>
<td>57</td>
</tr>
<tr>
<td>Categories of Teachers</td>
<td>60</td>
</tr>
<tr>
<td>Job Satisfaction in Vocational Education</td>
<td>61</td>
</tr>
<tr>
<td>Assessing Teacher Performance</td>
<td>64</td>
</tr>
<tr>
<td>III. METHOD</td>
<td>71</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>71</td>
</tr>
<tr>
<td>Population and Sample</td>
<td>75</td>
</tr>
<tr>
<td>Data Collection</td>
<td>76</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>79</td>
</tr>
</tbody>
</table>

iii
IV. RESULTS .......................................... 84
   Description of Respondents. ...................... 84
      Vocational Agriculture Teachers. ............. 84
      Principals .................................. 88
   Objective One—Determine the Job Satisfaction
      of Vocational Agriculture Teachers .......... 91
   Objective Two—Determine the Factors that
      Significantly Affect Job Satisfaction
      of Vocational Agriculture Teachers .......... 94
   Objective Three—Determine the Teacher
      Performance of Vocational Agriculture
      Teachers ................................... 95
   Objective Four—Determine the Relationship of
      Selected Demographic Variables to Job
      Satisfaction and Teacher Performance .......... 95
   Hypothesis One—There will be a Positive
      Relationship Between Job Satisfaction
      and Job Performance. ....................... 101
   Hypothesis Two—There will be a Positive
      Relationship Between Job Satisfaction
      and Student Achievement. .................... 101
   Hypothesis Three—There will be a Positive
      Relationship Between Intrinsic Job
      Satisfaction and Teacher Performance .......... 102
   Hypothesis Four—There will be a Positive
      Relationship Between Extrinsic
      Job Satisfaction and Teacher Performance . . 102
   Hypothesis Five—There will be a Positive
      Relationship Between Supervisory Ratings
      and Student Achievement. .................... 104
   Hypothesis Six—Job Satisfaction Factors,
      as Measured by the MSQ, will Yield
      a Significant Model Explaining a Portion
      of the Variance in Teacher Performance .......... 104

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS ....... 108
   Summary ....................................... 109
   Conclusions and Discussion ...................... 112
   Recommendations ................................ 117

REFERENCES .......................................... 118
# Table of Contents (continued)

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPENDIX A</td>
<td>Minnesota Satisfaction Questionnaire</td>
<td>126</td>
</tr>
<tr>
<td>APPENDIX B</td>
<td>Vocational Agriculture I Student Test</td>
<td>134</td>
</tr>
<tr>
<td>APPENDIX C</td>
<td>Supervisory Assessment Form</td>
<td>141</td>
</tr>
<tr>
<td>APPENDIX D</td>
<td>Demographic Information Form</td>
<td>144</td>
</tr>
<tr>
<td>APPENDIX E</td>
<td>Reasons Given by Vocational Agriculture Teachers for not Participating in the Study</td>
<td>147</td>
</tr>
<tr>
<td>APPENDIX F</td>
<td>Pretest Cover Letter</td>
<td>149</td>
</tr>
<tr>
<td>APPENDIX G</td>
<td>National Computer Systems Answer Sheet (five item)</td>
<td>151</td>
</tr>
<tr>
<td>APPENDIX H</td>
<td>Pretest Instructions</td>
<td>154</td>
</tr>
<tr>
<td>APPENDIX I</td>
<td>National Computer Systems Answer Sheet (ten item)</td>
<td>157</td>
</tr>
<tr>
<td>APPENDIX J</td>
<td>Cover Letter to Principals</td>
<td>160</td>
</tr>
<tr>
<td>APPENDIX K</td>
<td>First Follow-up Letter to Principals</td>
<td>162</td>
</tr>
<tr>
<td>APPENDIX L</td>
<td>Second Follow-up Letter to Principals</td>
<td>164</td>
</tr>
<tr>
<td>APPENDIX M</td>
<td>Posttest Cover Letter</td>
<td>166</td>
</tr>
<tr>
<td>APPENDIX N</td>
<td>Posttest Instructions</td>
<td>168</td>
</tr>
<tr>
<td>APPENDIX O</td>
<td>Permission Letter to Copy the MSQ.</td>
<td>171</td>
</tr>
<tr>
<td>VITA</td>
<td></td>
<td>173</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Years of Vocational Agriculture Completed by the Teachers</td>
<td>85</td>
</tr>
<tr>
<td>2. Annual Income of the Vocational Agriculture Teachers</td>
<td>85</td>
</tr>
<tr>
<td>3. Student Enrollment of the Participating Schools</td>
<td>86</td>
</tr>
<tr>
<td>4. Distance of Vocational Agriculture Teachers from Home Community</td>
<td>87</td>
</tr>
<tr>
<td>5. Highest Degree Completed by the Vocational Agriculture Teachers</td>
<td>87</td>
</tr>
<tr>
<td>6. Teaching Experience of Vocational Agriculture Teachers</td>
<td>88</td>
</tr>
<tr>
<td>7. Principals' Years of Administrative Experience in Education</td>
<td>89</td>
</tr>
<tr>
<td>8. Principals' Years in Present Administrative Position</td>
<td>89</td>
</tr>
<tr>
<td>9. Academic Background of the Principals</td>
<td>90</td>
</tr>
<tr>
<td>10. Age of Principals</td>
<td>91</td>
</tr>
<tr>
<td>11. Categories of General Job Satisfaction Score</td>
<td>92</td>
</tr>
<tr>
<td>12. Vocational Agriculture Teachers' Mean Score on Scales of the MSQ</td>
<td>93</td>
</tr>
<tr>
<td>13. Multiple Regression Analysis of General MSQ Score by Scales of the MSQ</td>
<td>94</td>
</tr>
<tr>
<td>14. Supervisory Assessment Item Means for Vocational Agriculture Teachers</td>
<td>96</td>
</tr>
<tr>
<td>15. Least Squares Analysis of General Job Satisfaction by School Enrollment</td>
<td>99</td>
</tr>
<tr>
<td>16. Least Squares Analysis of General Job Satisfaction by Teaching Experience</td>
<td>100</td>
</tr>
<tr>
<td>17. Least Squares Analysis of Student Achievement by Status of College</td>
<td>102</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>18.</td>
<td>Correlations Between Intrinsic Job Satisfaction and Teacher Performance</td>
</tr>
<tr>
<td>19.</td>
<td>Correlations Between Extrinsic Job Satisfaction and Teacher Performance</td>
</tr>
<tr>
<td>20.</td>
<td>Correlations Between Student Gain and Teacher Performance</td>
</tr>
<tr>
<td>21.</td>
<td>Multiple Regression Analysis of Involvement in the Total Program by MSQ Scales</td>
</tr>
<tr>
<td>22.</td>
<td>Multiple Regression Analysis of Knowledge of the Subject Matter by MSQ Scales</td>
</tr>
<tr>
<td>23.</td>
<td>Multiple Regression Analysis of Teaching Skills by MSQ Scales</td>
</tr>
</tbody>
</table>
ABSTRACT

The purpose of this study was to determine the relationship between job satisfaction and teacher performance of vocational agriculture teachers in Louisiana. It was also the intent of the study to identify factors that most influence job satisfaction of these teachers.

Four instruments were used to collect the data for this study. The Minnesota Satisfaction Questionnaire (MSQ) was used to measure job satisfaction, a supervisory assessment form and student achievement were used to assess teacher performance, and a demographic form was employed to collect data regarding teachers and principals. Gain scores, used as the measure of student achievement in the study, were calculated by subtracting pretest scores from posttest scores on the student achievement test. A total of 50 teachers were randomly selected to be included in the study.

Findings revealed higher teacher job satisfaction in smaller schools. In addition, more experienced teachers were more satisfied with teaching. Moreover, students taught by teachers from non-land-grant colleges had higher gain scores on the student achievement test than did the students with teachers from land-grant colleges. It was discovered that gain scores were not related to job satisfaction nor teacher performance.

The teachers appear to be more satisfied with intrinsic job factors than extrinsic job factors. They were most satisfied with the MSQ job factors of Social Service, Moral Values, and Creativity. They were least satisfied with Company Policies and Practices, Advancement, and
Compensation. Seven job factors were identified as explaining 96% of the variance in general job satisfaction. These job factors were Authority, Responsibility, Security, Compensation, Co-workers, Supervision--Technical, and Working Conditions.

Teacher performance ratings indicated that principals perceived the teachers to possess the technical knowledge relative to vocational agriculture but were less skillful in classroom teaching. Teacher involvement in FFA activities was rated highest by the principals for involvement in the total program. There was less participation in professional activities and work with adults.

Significant models explaining a portion of the variance in teacher performance were identified. Components of these models included both intrinsic and extrinsic job factors as identified by the MSQ.
Chapter I
INTRODUCTION

Since the passage of the Smith-Hughes Act in 1917, federal funds have been provided for public vocational agricultural education throughout the United States. In addition, the development of departments of agricultural education in colleges and universities for the purpose of teacher education gained impetus. The Smith-Hughes Act provided one million dollars a year from national funds for the education of teachers in three vocational subjects including vocational agriculture (Hamlin, 1962).

From that beginning, vocational agriculture has grown and changed dramatically in areas such as curriculum and agricultural technology. In order to provide effective vocational programs that can adjust and advance with these changes, placement and retention of qualified teachers in existing and new vocational programs in agriculture is essential. However, there is a critical shortage of qualified vocational agriculture teachers in the United States. A major reason for this is that a large portion of agricultural education graduates enter other professions after training or leave teaching vocational agriculture after a short period of time (Craig, 1982).

Consequently, a question emerges as to why these graduates decide not to enter the teaching profession or leave shortly after entering. A study by Knight (1978) was conducted to determine why vocational agriculture teachers in Ohio leave teaching. Five factors ranked high
as reasons for leaving (p. 12):

1. Long range occupational goal was something different than teaching vocational agriculture.
2. They had students in class who should not have been in vocational agriculture.
3. They had inadequate advancement opportunities.
4. They worked long hours.
5. They felt their salary was inadequate.

In addition, Knight discovered that 50 percent of those who left teaching left by the end of their third year of teaching. Moreover, he states that the factors identified as being the most influential in the decision of teachers to leave the teaching profession in Ohio have also been identified in a variety of studies nationwide. Recognizing this, these factors may indicate a nationwide similarity as to reasons why vocational agriculture teachers leave teaching (Knight, 1978).

In a similar study, Dillon (1978) identified factors that influenced agricultural education graduates of the University of Nebraska-Lincoln (UNL) to leave teaching during the five years from 1969-1974. During this period, 124 teachers left the field. Of this number, 32 were UNL graduates with 26 of these graduates still in-state. Dillon reported that 22 of the 26 questioned left teaching after two years in the field. It was noted that some who left teaching took less pay for a job they liked better.

Bundy and Froelich (1966) cited the following reasons for vocational agriculture teachers leaving the profession after having taught one to five years (p. 135):

1. Lack of advancement opportunity
2. Inadequate salary
3. Too many evening responsibilities
4. Long hours
5. State reports

Teachers leaving after five years of teaching gave two additional factors that influenced their decision to leave. These were community attitude toward vocational agriculture and little or no opportunity to specialize. In addition, having to complete state vocational agriculture teacher reports were not of primary influence after five years in the field.

From the studies cited, it can be seen that many vocational agriculture teachers leave the profession for a variety of reasons and enter occupations outside the field of teaching. It is difficult to judge why these teachers leave the field. However, to leave would imply a dissatisfaction with some aspect of teaching to such a degree that other jobs appear to be more satisfying to an individual. Since retention of teachers is important to success of vocational agriculture programs, a study of factors influencing one's satisfaction or dissatisfaction with teaching seems critical.

In addition, there may be teachers remaining in the profession who are relatively dissatisfied but not to the point of leaving teaching. A variety of reasons for which a person in this situation might remain in teaching are the insecurity of changing jobs, tenure, family ties and obligations, and lack of available jobs in their geographical area. If there are individuals who are dissatisfied in teaching, what impact does their dissatisfaction have on the performance of these individuals as teachers?
Locke (1970) indicated that, in general, there is a relationship between performance and job satisfaction in industry. Realizing the teaching profession may be different from the business world in areas such as the nature of job, interpersonal relations, compensation, and supervision, it should be beneficial to determine what relationships exist between job performance and job satisfaction of teachers. In addition, since teacher performance appears to be linked to student achievement in the school setting, it is important to ascertain not only what makes teachers a satisfied group, but also to find what kinds of relationships in fact do exist between teacher performance, as defined by student achievement, and teacher job satisfaction.

Statement of the Problem

The purpose of this study was to determine the relationship of job satisfaction to teacher performance ratings and student achievement of vocational agriculture teachers in Louisiana. In addition, the study described these teachers with respect to various demographic variables.

Specific Objectives of the Study

This study was conducted to accomplish the following specific objectives:

1. Measure the job satisfaction of vocational agriculture teachers in Louisiana.

2. Ascertain the factors that significantly affect job satisfaction of vocational agriculture teachers in Louisiana.

3. Determine the teacher performance of vocational agriculture teachers in Louisiana.

4. Determine the relationship of selected demographic variables to job satisfaction and teacher performance.
5. Determine if a relationship exists between teacher performance ratings and job satisfaction.
6. Determine if a relationship exists between student achievement and job satisfaction.
7. Determine the relationship between performance and intrinsic and extrinsic sources of job satisfaction.
8. Determine the relationship between supervisory ratings and student achievement tests as measures of teacher performance.

Significance of the Study

The fact that there is a teacher shortage throughout the United States in vocational agriculture creates concern among many teacher educators, supervisors, and school superintendents with respect to continuing vocational agriculture programs in secondary institutions. This problem seems to be encountered for two reasons. One is that only about 50 percent of agricultural education graduates enter the teaching profession. The other reason is that there are numerous individuals leaving the profession. This turnover seems to imply that dissatisfaction, at least with some aspect of teaching, has caused a person to seek other employment. According to Gruneberg (1976), there is a definite correlation between turnover and job satisfaction. It would seem, then, that identification of factors influencing teacher satisfaction would be an important focus for individuals wishing to reduce this turnover.

Moreover, one must realize that some individuals, though dissatisfied, may continue in the profession. Therefore, a question emerges relevant to the teaching performance of those individuals who are relatively dissatisfied with teaching but do not leave. Through
identifying relationships between performance and job satisfaction of teachers, a determination may be made as to whether satisfied teachers tend to perform at a higher level than dissatisfied teachers.

Moreover, identification of relationships between job performance and satisfaction may provide implications for job redesign or job enrichment. This could possibly lead to reconsideration of job descriptions and role requirements for vocational agriculture teachers. Administrators could likewise benefit from information relative to factors that are important to teacher job satisfaction. They may become aware of various job facets that can be provided or reinforced to enhance one's satisfaction and/or performance.

Furthermore, conditions conducive to job satisfaction may have an effect on the quality of teachers drawn into teaching. Many graduates who would not have entered teaching may be attracted to the teaching profession. This may eventually enlarge the pool of qualified applicants for teaching positions and ultimately reduce the teacher shortage. In addition, quality of job performance and harmony in interpersonal relations on the job may be increased. It seems imperative, then, to determine what attitudes exist among vocational agriculture teachers and how they are reflected in behavior in terms of teacher performance.

Another outcome of this study could be implications for selection of entrants into programs by identifying predictors of success from among the factors found to be associated with satisfaction and performance. By determining what factors are related to job satisfaction/dissatisfaction, teacher educators will be better able to prepare prospective teachers for adjustment to the practical realities
Hypotheses

The following hypotheses were tested:

1. There will be a positive relationship between job satisfaction and job performance ratings of vocational agriculture teachers.

2. There will be a positive relationship between job satisfaction and student achievement of vocational agriculture teachers.

3. There will be a significant relationship between intrinsic sources of job satisfaction and job performance of vocational agriculture teachers.

4. There will be a positive relationship between extrinsic sources of job satisfaction and job performance of vocational agriculture teachers.

5. There will be a positive relationship between supervisory ratings and student achievement.

6. Job satisfaction factors, as measured by the Minnesota Satisfaction Questionnaire (MSQ), will yield a significant model explaining a portion of the variance in job performance ratings of vocational agriculture teachers.
Chapter II
REVIEW OF LITERATURE

Work occupies a significant position in our lives and, in so doing, fills most of our waking moments. Work is important to man in that it provides a means of supplying the basic necessities of life. In addition, it enables man to consciously act on his surroundings and observe the outcomes of his behavior. This process can be very satisfying.

The process of work places individuals in an organizational network in which efforts of others are combined to achieve a common purpose. In addition, people are involved in using technological resources to help accomplish various tasks. These various aspects of the work-place exert influences on job attitudes. As a result, these attitudes play a definite part in influencing life satisfaction and family relationships. It seems imperative, therefore, for man to attempt to develop ways to provide satisfying job experiences to accentuate positive experiences and attitudes (Locke, 1976). An understanding and knowledge of factors related to or influencing this job satisfaction may help man design jobs in which the worker can achieve more meaningful and productive experiences (Locke, 1976).

Definition of Job Satisfaction

Locke (1976) defines job satisfaction as follows:

Job satisfaction results from the appraisal of one's job as attaining or allowing the attainment of one's important job values,
providing these values are congruent with or help to fulfill one's basic needs. These needs are of two separable but interdependent types: bodily or physical needs and psychological needs, especially the need for growth. Growth is made possible mainly by the nature of the work itself. (p. 1319)

He elaborates further by saying that job satisfaction is an emotional response that can only be discovered and grasped through the process of introspection. The individual is forced to cognitively evaluate his/her response to a job as satisfying or dissatisfying (Locke, 1976). Job satisfaction, then, is a pleasurable or positive emotional state that results from this appraisal of one's job experiences.

When discussing job satisfaction, two other terms closely related to it may surface; "job morale" and "job involvement". It will further clarify the meaning of job satisfaction if a differentiation among these terms is made.

Job morale may often be confused with job satisfaction. Job morale is an attitude of group satisfaction regarding an organization or job that influences a person to want to continue in and work toward the goals of the job (Locke, 1976). This concept reveals that job morale is more future oriented and group referenced. It differs from the idea of job satisfaction given in the definition by Locke in that job satisfaction is primarily based on conclusions and attitudes formulated on previous or present experiences. Also, the determination of job satisfaction is made with reference to the individual in his given job situation (Locke, 1976).
Likewise, there is a dichotomy existing between the terms job involvement and job satisfaction. A person highly involved in a job takes the job seriously. He/she establishes important values that are at stake in the job. Consequently, moods and feelings are extremely sensitive to and affected by job experiences. An individual may feel extreme satisfaction or dissatisfaction with a job because of this high level of job involvement. Conversely, a less involved person would have less extreme emotional reaction to the same or similar job experiences.

According to Mortimer (1979), job satisfaction is sensitive to a wide range of external (environmental) and internal (individual) work dimensions. This concept of job satisfaction gained impetus from the "Fit" hypothesis which states that job satisfaction is a function of the fit between the worker and his job (Mortimer, 1979). It stresses a compatibility of external work features and internal attributes that the individual encounters in the work situation. External dimensions may include autonomy, good salary, job security, promotional opportunities, variety, use of valued skills and abilities, and interpersonal relationships on the job. The internal factors are (Mortimer, 1979):

1. Social characteristics—education, race, etc.
2. Values— intrinsic and extrinsic reward values
3. Needs—safety, affiliation, self-actualization (p. 4)

The emphasis is on the difference between workers in what is sought from the job and the impact of this difference in affecting satisfaction and dissatisfaction (Mortimer, 1979).

Mortimer further suggests that even though all occupational categories reflect factors influencing both intrinsic and extrinsic job satisfaction, there seems to be a decline in job satisfaction among all
segments of the work place. The fact is that even though there may be a decline in overall job satisfaction there is an ever-increasing emphasis on work as a central focus in life.

Obviously, job satisfaction plays an important part in the lives of every working person. Because of this, numerous theories have been developed in an attempt to readily identify and explain factors that influence job satisfaction and dissatisfaction.

**Job Satisfaction Theories**

Job satisfaction is hard to define. However, up to this point, it seems to be best described as a combination of psychological, physiological, and environmental circumstances that cause a person to say that he/she is satisfied with their job (Hoppock, 1935). A person may be satisfied with one aspect of a job and dissatisfied with another. Therefore, balancing the specific satisfactions against the specific dissatisfactions allows one to arrive at a general feeling of satisfaction with the job itself. "Most people seek an optimum satisfaction that releases them from the pressure and tension of a frantic and persistent urge to be doing something else, yet leaves them dissatisfied enough to have something to work for" (Hoppock, 1935, p. 51). Hopefully, understanding job satisfaction can help us relieve some of the painful dissatisfaction that may hinder productivity of individuals and society.

Job satisfaction is primarily a result of one's subjective judgement of a job. Subjective measuring techniques can be easily altered through rationalization or falsification by the respondent. Until a better measuring system can be devised, we accept one's own estimate of his/her job satisfaction (Hoppock, 1935).
Family relationships, health, social status, and a variety of other variables may affect one's job satisfaction as much as the job itself. A person may never be completely satisfied with his job but be contented enough to remain, while others become so dissatisfied that they move through a variety of jobs. In view of this, job satisfaction of employees is of great importance to employers in terms of employee retention (Hoppock, 1935).

In an attempt to identify and explain job satisfaction, several theories have been developed that examine this topic from different perspectives.

Maslow's Theory. Several contemporary theories of job satisfaction draw upon Maslow's theory of need fulfillment. Maslow assumes a hierarchy of human needs and the degree to which a job fulfills these needs (Quinn and Gonzales, 1979). Maslow (1954) states that there are five basic categories or levels of human needs:

1. Physiological needs
2. Safety needs
3. Love and belonging needs
4. Esteem needs
5. Self-actualization needs

These levels are also considered to be a hierarchy of prepotency. In this hierarchy, the most prepotent need controls a person's attention and direction, while less prepotent needs are minimized (Sergiovanni and Starratt, 1979). According to Maslow, when one need is satisfied, the following prepotent need in the hierarchy surfaces and tends to command the individual's attention. Consequently, gratified needs are no longer considered active motivators of behavior since the individual has gone
on to striving to fulfill the next unfulfilled need in the hierarchy. The organism's behavior is dominated by unsatisfied needs and its behavior organized only by unsatisfied needs. The levels of the hierarchy are briefly described below (Maslow, 1954).

1. Physiological needs. This is the lowest end on the hierarchy of human needs. However, these needs can become pre-eminent if neglected since this need concerns itself with the very existence of the organism. If a person is deprived of physical sustenance, attention is focused on fulfilling this level and all other needs are pushed to the background. Conversely, when a person eats regularly, hunger or survival ceases to be a primary motivation and man moves at once to meet other and higher needs that now dominate him.

2. Safety needs. If the physiological needs are relatively well met, the next need that emerges in the hierarchy is safety. According to Maslow, man seeks protection against danger, threat, and deprivation. When a person feels threatened or dependent, the greatest need is for guarantees, protection, or security. Fortunately, we are existing in a relatively smooth running, organized society that makes its members feel safe from most exterior threats or dangers. However, in jobs, the safety phenomena translates into need for tenure, retirement pensions, and insurance of various kinds to provide a sense of economic safety and job security.

3. Social needs. If physiological needs and safety needs are fairly well met, the social needs of belonging, love, and affection emerge. Primarily, the individual seeks association, acceptance by fellows, friendship and love at this level. He/she will hunger for affectionate relationships with people and a place in his group.
Thwarting of these needs can create cases of maladjustment and psychopathology. When social needs are thwarted, a person may become resistant, antagonistic, and uncooperative.

4. **Esteem or ego needs.** All people in society have a persistent need for a positive, healthy view of themselves illuminating in self-respect or self-esteem. Satisfying this need can lead to feelings of self-worth, self-confidence, adequacy, and usefulness. Thwarting this need, however, may produce inferiority, feelings of weakness, and helplessness. Consequent depression or neurotic trends can then become debilitating problems. Coupled with this is the need for status, recognition, appreciation, and respect from associates. This self-esteem, however, should be based on real capacity and adequacy to do the task rather than other's opinion, external fame, or notoriety.

5. **Self-fulfillment or self-actualization.** There is a final level in the hierarchy that may give rise to discontent if left unfulfilled. This level is called self-actualization. This need refers to a person's desire for self-fulfillment, that is, to become what one is capable of becoming. These needs will vary from person to person, but each person has the common bond of a craving for continued self-development and creativity.

The emergence of these needs is dependent on the satisfaction of the lower prepotent levels. This hierarchy, however, does not suggest that the more prepotent needs have to be fully satisfied before the less prepotent ones function. Rather, it suggests that the more prepotent needs will be relatively more fulfilled than the less prepotent ones (Locke, 1976).

**Herzberg's Theory.** The Herzberg theory is one of the most
discussed, studied, and controversial theories of job satisfaction (Freeman, 1978). Herzberg, Mausner, and Snyderman (1959) conducted an extensive study with 200 accountants and engineers in Pittsburgh, Pennsylvania to determine causes of job satisfaction and dissatisfaction. A semi-structured interview using the critical incident technique was employed to ascertain employee attitudes about their jobs. This technique was used to identify the sequence of events in the work experiences of the interviewees that influenced their feeling exceptionally good or exceptionally bad about their jobs.

The content of these interviews was analyzed. The interview statements were divided into single events that lead to a particular feeling (first level factors), a description of the needs, motives, and perceptions of the person speaking (second level factors), and description of a single effect of events of performance, turnover, and mental health (Herzberg et al., 1959). The first level factors are objective elements of the situation that are sources of good or bad feelings about a job. These factors are (Herzberg from Moxley, 1977):

1. **Recognition.** The major criterion for this category is some act of recognition to an individual. An act of praise or blame from a supervisor, management representative, peer, colleague, or the general public is involved here.

2. **Achievement.** This category includes items such as successful completion of a job, successful problem solving, and seeing the results of one's work. This definition also includes failure and lack of achievement.

3. **Possibility of Growth.** This factor includes instances in which the respondent indicated changes in his situation that involved
objective evidence that potentials for growth are now increased or decreased.

4. **Advancement.** This refers to the actual change in the position or status of the individual in the organization.

5. **Salary.** This includes wage and salary increases, or unfulfilled anticipations of salary increases.

6. **Interpersonal Relations.** Responses to this category on questions was limited to verbal description of characteristics of interactions relative to the three major areas of interpersonal relations with subordinates, one's superior, and one's peers.

7. **Supervision—Technical.** This factor emphasizes the technical aspects of the supervisor's job such as his level of competence, degree of willingness to delegate responsibility, or his willingness or unwillingness to teach.

8. **Responsibility.** This category includes statements from respondents with respect to satisfaction from being given responsibility for one's own work or the work of others. In addition, the assignment of new responsibilities was included. Also, a decrease in satisfaction due to lack of responsibility was considered.

9. **Company Policy and Administration.** Factors such as responses about good or poor communications, agreement or disagreement with company goals, degree of adequacy of company management or organization, and impact of personnel policies are included. This refers primarily to some overall aspect of the company as it influences level of satisfaction.

10. **Working Conditions.** Included in this factor are physical conditions and requirements of the job, amount of work involved, or type
and adequacy of facilities provided for doing the job.

11. Work Itself. This category includes the respondent's statements regarding the satisfaction derived from actually doing the job or the tasks involved in the job.

12. Personal Life. Any aspect about a job that affected an individual's personal life such that the effect became a factor in the respondent's perceptions and feelings about the job were included in this factor. Excluded were sequences from individuals that indicated a factor in one's personal life that had nothing to do with the job even though it may create feelings that affect the job.

13. Status. Any sign or indication of status as being a factor in one's feelings about the job were included in this factor if it was mentioned by the respondent.

14. Job Security. Included here are objective indications of job security or lack of it such as tenure or company stability or instability.

As a result of content analysis of the interviews, several job factors emerged as having a significant relationship to job satisfaction and job dissatisfaction. Herzberg found these factors to form two separate dimensions. He labeled these as "motivators" and "hygienes". One set of factors, the motivators, revolved around the actual doing of the job, the job content, or "intrinsic" aspects of the job. The other set, the hygienes, dealt with the environmental setting of the job, the surrounding conditions, the job content, or the "extrinsic" aspects of the job (Whitsett and Winslow, 1967).

The motivating factors, or intrinsic elements of the job, that emerged from the analysis were achievement, recognition, responsibility,
work itself, and advancement. These factors are elements that lead to personal growth and self-actualization and are also called "satisfiers" (Herzberg et al., 1954). These results indicated that the motivators contributed to periods of satisfaction more than did others. These produced good attitudes toward work and were found to be related to periods of superior performance and effort.

The hygiene, or extrinsic factors, were company policy and administration, supervision (technical and human relations), working conditions, and salary. These elements were additionally labeled "dissatisfiers". These hygienes are a distinct and separate group of factors dealing with peripheral conditions of a job. Herzberg et al., (1954), explain that when these are present in the work environment, dissatisfaction is prevented. This does not force the individual to superior performance or bring about job satisfaction. Consequently, they were labeled hygienes because of their analogous comparison to a medical situation in which certain health hazards are removed from the environment to prevent diseases rather than to cure them (Whitsett and Winslow, 1967).

From these findings, Herzberg developed the two-factor theory of job satisfaction entitled the Motivation-Hygiene Theory (M–H Theory). The key to understanding this theory is that dissatisfaction and those factors that contribute to it are separate from those associated with enhancing job satisfaction. Therefore, job satisfaction and job dissatisfaction are not opposite poles of the same continuum but operate on two separate linear models. The opposite, then, of job satisfaction is "no satisfaction" while the opposite of job dissatisfaction is "no job dissatisfaction" (Whitsett and Winslow, 1967).
This concept is radically different from the traditional job theory purporting that job satisfaction is opposite from job dissatisfaction and vice-versa. The traditional model of job satisfaction states that satisfaction consists of the total body of feelings that an individual has about his job. This total is the sum of influences of the job. Consequently, when the total of job influences gives rise to feelings of satisfaction, the person is job satisfied. Conversely, when they give rise to feelings of dissatisfaction, the individual is job dissatisfied (Gruneberg, 1976). In other words, the more satisfied an employee is, the less dissatisfied he becomes.

Herzberg's two-factor theory operates with two extremely different needs of man. One set of needs are related to the physical or animal nature of man leading to the avoidance of pain. The hygiene factors act upon these. They do not create growth or lead to growth. The growth needs, the other set of factors, are acted upon by the motivators. They relate directly to self-realization and psychological feelings of accomplishing a meaningful task. This can be completed through the intrinsic aspects of the job called motivators. With this relationship, motivator factors cannot relieve pain nor can hygiene factors satisfy growth needs (Whitsett and Winslow, 1967). Therefore, one set of factors (hygienes) satisfy the animal needs and another set of factors (motivators) satisfy the psychological needs.

Herzberg expanded his theory to a needs classification somewhat similar to Maslow's needs hierarchy. Hersey and Blanchard (from Freeman, 1972) say that the point at which the individual's needs can be met by motivation factors is the esteem level.

Herzberg concluded that some factors, the motivators, were
satisfiers when present but not dissatisfiers when absent, while other factors, hygienes, were dissatisfiers, but when withdrawn did not cause positive motivation or satisfaction (Herzberg from Sergiovanni and Carver, 1969).

Herzberg's theory, even though controversial, has made a major contribution to understanding the nature of job satisfaction. This is primarily due to the emphasis placed on psychological growth as a precondition of job satisfaction. In addition, he postulated that such growth stems from the work itself (Locke, 1976, pp. 1318-1319). Satisfaction is enhanced by work that varies, allows autonomy, is not physically fatiguing and is mentally challenging with an experience of success. Therefore, individuals may be satisfied with agents in a work situation to the degree that they are seen as facilitating the attainment of work goals and rewards (Locke, 1976).

Equity Theory. Feelings of unfairness were frequently mentioned as a source of job dissatisfaction in Herzberg's research. Although the Motivation-Hygiene Theory gives little attention to this, Adam's theory deals directly with the fairness of the exchange in which an individual gives something and gets something in return. Adams (1963) defines equity as, "a fair exchange between the employee and employer which is not perceived as merely an economic matter of overpayment or underpayment, but contains an element of relative justice that supervenes economics and underlies perceptions of inequity" (p. 422).

Whenever there is an exchange between people, there is always the potential that one or both of the parties will perceive that the exchange is inequitable. If an individual gives services for a reward such as pay, he/she may feel education, intelligence, skill, age,
efforts, etc., are his contributions to the exchange, for which a just return is expected. These are variables a person brings with him/her to the job and are called inputs. Inputs are perceived as such by the contributor but may not be seen exactly as such by the other party to the exchange. Consequently, inputs have two conceptually distinct characteristics: recognition and relevance. If the possessor perceives an attribute to be relevant and expects a just return for it, it becomes an input. A problem of inequity results when only the contributor views the attributes as relevant in the exchange.

On the other side of the exchange are the things a person may receive for his/her services. As with inputs, these "outcomes" must be perceived (recognition and relevance) by the person who receives them as relevant to the exchange if they are to function effectively. Outcomes are items such as pay, seniority, fringe benefits, job status, and rewards accompanying the job.

Job inputs and outcomes are intercorrelated and are independent only in a conceptual fashion. The intercorrelations, however, are imperfect. This leads to the third variable in the theory which is the reference group or person that a person uses in evaluating the equity of one's own exchange relationship (Miner, 1980).

The reference source may be co-worker, colleague, neighbor, relative or a professional group. For this comparison to function, it is assumed that the reference group or person will be one comparable to the comparer in one or more attributes. This is usually a co-worker. When an individual finds his inputs and outcomes not in balance in comparison to his/her "significant" other, feelings of inequity result.
Adams (1963) further states that, "Inequity exists for an individual whenever his perceived job inputs and/or outcomes stand psychologically in an obverse relation to what he perceives are the inputs and/or outcomes of the individual or group used as a reference source" (p. 424).

An individual may feel underrewarded in terms of what he/she puts into a job relative to what someone else is getting for his/her contribution. The theory, however, also extends beyond an inequity unfavorable to a person to one that may favor the individual. Therefore, feelings of inequity can occur when a person considers himself overrewarded, given his inputs, in comparison with others. He considers his efforts low and his pay high, while the reference source is receiving low pay for low effort. The assumption is that greater inequity will result when both inputs and outcomes are discrepant, than when only one or the other are discrepant.

Since most exchanges involve multiple inputs and outcomes, these are summed across all factors to arrive at an operative ratio of inputs/outcomes. However, the various components of this ratio may not have the same importance levels for any one individual. Therefore, a person may value some inputs and outcomes more than others. For example, one individual may value education highest among inputs, and pay dominate among outcomes. Consequently, a disproportionate amount of weight would be given these two factors in their respective totals. Coupled with this, Adams (1963) further states, "thresholds for inequity are different (in absolute terms from a base of equity) in cases of under and overcompensation, for a certain amount of incongruity on those cases can be acceptably rationalized as 'good fortune'" (p. 426).
Consequently, the motivational effects of a favorable inequity remain immobilized at a degree of disparity that would be motivating if the disparity were unfavorable.

Adams (1963) offers, then, two general postulates with respect to the concept of equity/inequity:

1. The presence of inequity in the contributor creates a tension in him in proportion to the amount of inequity.

2. The tension serves as a motivating force to reduce the inequity to zero. The strength of this drive is proportional to the tension created.

Adams (1963) discusses a variety of alternatives that may be used to reduce the perceived inequity of an exchange relationship. These are discussed below.

1. Alter inputs—If an individual perceives inequity, he/she may choose to change inputs either upward or downward to compensate for the present situation. One may alter either the quantity or quality of work to align them with the reference source. Inputs can be anticipated to be lowered when the inequity is perceived to be unfavorable to oneself. Likewise, inputs are likely to be increased if the inequity is considered to be favorable (Miner, 1980). It seems that effort is the primary input susceptible to reduction or change in order to achieve a perceived position of equity.

2. Change outcomes—If possible, increasing outcomes will serve to reduce unfavorable inequities. In addition, there could also be the acquisition of benefits, perquisites, or status. This could be done through possible use of union pressure to shift outcomes into balance with expectations. However, reducing outcomes in a favorable inequity
position is not usually done. Individuals with very high personal incomes may be motivated to give to charitable organizations in an attempt to respond to feelings of this type of inequity.

3. Leave the field—This response may lead to quitting a job or transferring, or to absenteeism. This will vary with the magnitude of the inequity present and one's tolerance and ability to cope with inequity in a flexible fashion.

4. Distort inputs and outcomes—Some individuals psychologically distort inputs and outcomes to achieve equity. This may be hard, at times, since reality influences us greatly. For example, the absolute value of one's education as an input is difficult to distort. However, the utility of it may easily be altered. Therefore, shifts in relative weighting of inputs and outcomes can achieve the same result (equity).

5. Acting on the reference source—A person may distort the inputs and outcomes of the referent or force the referent to leave the field. The changes applied to the other would be the opposite of those mentioned regarding the contributor. If the contributor's effort is too low compared to the other's and to his own pay, he might persuade the other person to decrease effort instead of increasing his own.

6. Change the reference source—Many individuals may seek to simply shift to a new reference source in an attempt to reduce inequity. This particular method may be least fruitful when a prior reference source has been used a long time.

Adams (from Miner, 1980) offers several statements regarding choices among alternatives to reduce inequities:

1. Individuals will attempt to maximize outcomes that are highly valued. In addition, the overall value of outcomes will be increased.
2. Only minimal changes in inputs will occur when they are difficult and costly to change.

3. Inputs and outcomes that are central to one's self-concept and self-esteem tend not to be distorted.

4. Inputs and outcomes are more easily distorted when attributed to the reference source as opposed to oneself.

5. Leaving the field becomes a viable option when inequity is large and other means of reducing it are unfavorable.

6. It will be difficult to change a reference source once that source has been used and has stabilized over time.

Even though evidence seems to support the notion of an equity theory, its major problem lies in the fact that it does not seem to allow for individual differences (Miner, 1980). Furthermore, it is not possible to predict from the theory who will respond to particular inequity induction and who will not. In addition, there are no direct measures of inequity tension.

Pritchard (1969), after reviewing several studies regarding equity theory as a means of explaining a person's motivation to behave in a certain way, suggests some additions or alternatives to the theory as Adams sees it. He suggests that feelings of inequity may arise from disparity one feels about his own inputs and outcomes without comparing oneself with a reference source. In this case, the individual compares himself with himself. That is, the person may feel satisfied if his inputs match his outcomes. If inputs are greater than outcomes, inequity and dissatisfaction will follow regardless of the input-outcome ratio of someone else. Furthermore, individuals that perceive outcomes to be greater than inputs will tend to maximize gain and feel less
inequity in a situation where there is no one in a direct exchange relationship with them whose input-outcome ratio is less than theirs. Therefore, it is the amount of psychological contact between the contributor and those who might be available for comparison that determines the presence and quantity of inequity and not simply an absolute discrepancy between individuals' input-outcome ratios. Another consideration to be made is that if a contributor to an exchange relationship is in a better position than others, dissatisfaction due to feelings of overcompensation may not always occur. There may well be an attitude that what has occurred is unfortunate but that it is the fault of the system and not the contributor himself, since he/she has no control over the situation that created the perceived inequity.

Pritchard, Dunnette, and Jorgenson (1972) conducted a study that addressed the effects of perceptions of inequity with respect to performance and satisfaction. They concluded that satisfaction with pay did not differ between groups that were overpaid compared with those who were equitably paid. However, underpaid individuals did express more overall dissatisfaction than did equitably paid individuals. Those who were overpaid exhibited the same results.

Expectancy/Valence Theory. Expectancy theory is a process theory which attempts to identify relationships among variables in a dynamic and changing state as they affect individual behavior. The relationship among inputs is the basic focal point rather than inputs themselves. It is a cognitive theory that assumes that individuals are rational, thinking beings who have expectations and beliefs regarding their future (Steers and Porter, 1975).

A variety of individuals have contributed to the notion of the
expectancy theory. The first individuals offering a theoretical approach in this direction were Georgopoulous, Mahoney, and Jones (1957). According to their approach, people in work situations are attempting to satisfy certain needs by working toward certain goals. This "working toward" behavior is considered, in part, to be a function of rational planning or decision-making in terms of goal-directedness. If a person follows this avenue of thought, one arrives at a path-goal approach. This approach is based on the assumption that productivity is a function of one's motivation to produce at a given level. This motivation depends on the particular needs of the individual reflected in the goals he/she is moving toward and perception of the usefulness of productivity behavior as an instrumentality or path to reaching these goals. Therefore, the path-goal hypothesis is stated this way:

If a worker sees high productivity as a path leading to the attainment of one or more of his personal goals, he will tend to be a high producer. Conversely, if he sees low productivity as a path to the achievement of his goals, he will tend to be a low producer (Georgopoulous et al., 1957, p. 346).

The major independent variable in this theory is that of the worker's perception of the instrumentality (usefulness) of productivity as a path leading to a variety of job related goals. These path-goal perceptions may be considered as expectations of certain amounts of returns as a result of certain behaviors. Therefore, according to this theory, behavior is seen as a function of path-goal perception, level of need, and level of freedom to act. It must be noted that a person motivated to high productivity may be hindered by certain forces or barriers that act as limitations to the translation of motivation into
actual productive behavior. This requires that an individual be allowed relative freedom to pursue the desired path.

Victor Vroom (1964) expanded upon the path-goal theory somewhat by including the notion that a person has preferences among outcomes. This preference refers to a relationship between the strength of a person's desire for two outcomes. Vroom uses the word "valence" (positive, negative, or zero) to distinguish this as affective orientations toward particular outcomes. It must be noted that the valence of an outcome to a person and its value to that individual are quite different. There may be substantial discrepancy between the anticipated satisfaction from an outcome and the actual satisfaction that results. For example, an individual may join a particular group or club because it is believed that it will increase his/her social standing. In effect, means assume a valence as a result of their expected relationship to ends. However, outcomes may acquire a valence in their own right. For example, one person may find accumulation of earnings to be satisfying while another may view income as simply a means for purchasing a new automobile.

Vroom (1964) states this proposition as a basis for establishing a valence of a specific outcome:

The valence of an outcome to a person is a monotonically increasing function of the algebraic sum of the products of the valences of all other outcomes and his conceptions of its instrumentality for the attainment of these other outcomes. (p. 17)

The second variable in Vroom's theory is "expectancy". He postulates that outcomes attained by a person are not dependent simply on the individual but are also effected by events and circumstances outside one's realm of control. Consequently, when an individual
chooses an alternative which involves uncertain outcomes, his behavior is affected not only by preference but also by the degree to which he believes these outcomes can be obtained. These beliefs are called "expectancies." Vroom (1964) defines expectancy as, "a momentary belief about the likelihood that a particular act will be followed by a particular outcome and is described in terms of its strength" (p. 17). This may range from an absolute subjective certainty that an outcome will occur to an absolute subjective certainty that the act will not be followed by the outcome. It is an action-outcome association ranging from zero to one. Instrumentality, however, is an outcome-outcome association ranging from -1, a belief that attainment of the second outcome is certain without the first, to a +1, which is indicative that the first outcome is necessary for the second.

A third variable in the relationship is that of "force." Expectancies plus total valence yields a person's motivation or potential for a given course of action. This particular combination is called "force" and is given in this proposition:

The force on a person to perform an act is a monotonically increasing function of the algebraic sum of the products of the valences of all outcomes and the strength of his expectancies that the act will be followed by the attainment of these outcomes.

(Vroom, 1964, p. 18)

Since a multiplicative relationship is offered, it must be noted that outcomes holding no valence and outcomes viewed as totally unlikely to result from actions have no influence on the total force. This second proposition has many implications for occupational choice, job satisfaction, and job performance.
Galbraith and Cummings (1967) clarified another dimension of the theory by distinguishing between first and second level outcomes. They declared that first level outcomes have a valence that the investigator is interested in predicting. This may be, for example, performance on the job. It acquires a valence by its expected relationship to second-level outcomes over which the worker has preferences. The second-level outcomes are events to which first-level outcomes are expected to lead. These are defined by the authors as actually being expected to result from the first-level outcomes. Therefore, they added to Vroom's model by providing a valence figure in the total valence picture that represents the internalized or intrinsic motivation involved.

The progressive development of the expectancy theory of motivation and performance led to the design and theoretical postulates by Lawler and Porter (1975) which are based on four basic points:

1. People have preferences among outcomes available to them.
2. People have expectancies about the likelihood that effort will lead to intended performance.
3. People have expectancies about the probability of certain outcomes following their behavior.
4. Actions a person chooses to take are determined by the expectancies and preferences a person has at the time.

According to Porter and Lawler, effort is a product of the interaction between the value of a reward and perceived effort-reward probability. This is basic from the Vroom model. The effort-leads-to performance relationship is modified by abilities and traits, which refer to the long term characteristics of a person such as intelligence,
manual skills, etc., and role perceptions that include behaviors that the individual feels are necessary to do the job successfully. A caveat must be issued at this point that this model does not predict a perfect relationship between effort and performance due to these two variables that impact on performance even though an individual is exerting considerable effort. If an individual lacks the ability to do a certain job, or defines his job differently than his superiors, performance may be low even though effort is high.

In this more developed model, rewards received from self or others are viewed as a function of performance but an inconsistent one at times. This is due, in part, to the fact that many organizations do not reward individuals for outstanding performance. An example of this would be a situation in which pay increases are given to everyone on the basis of longevity or seniority. Furthermore, affiliative rewards from co-workers seldom go to the high performers. Usually, the opposite is true in which the outstanding performers are socially ousted from the group.

The next variable in the model is "satisfaction". According to the model, satisfaction stems from the amount of rewards received. However, this varies as each individual judges for himself the level of reward deemed adequate. Consequently, a feedback loop is fitted to the model that relates the link between performance and reward back to perceived effort-reward probability. This would indicate that past experiences with the organizational reward practices will influence one's estimates of the probability that future efforts will be rewarded.

Porter and Lawler (1975) further divide rewards into intrinsic and extrinsic rewards. They define intrinsic rewards as relating to higher
level needs and can be administered by the employee. These rewards also seem to relate closer to performance than do extrinsic rewards which fill lower level needs and come from the organization. In addition, a causal link was added between performance and perceived equitableness of rewards. The perceived equitableness of the rewards is simply the amount of rewards a person considers fair (Behling and Schriesheim, 1975). Miner (1980) further explains the addition of two feedback loops in that to the extent that performance does result in reward, the perceived effort-reward probability is enhanced. In addition, when satisfaction is experienced after receiving a reward, it tends to influence the future valence of that reward. This varies, of course, with the particular reward or outcome.

Lawler (1973) identifies various determinants of effort-performance expectations as:

1. Level of self-esteem
2. Past experiences
3. Actual situation
4. Communication from others

Determinants of the performance-outcomes expectancies are also identified as:

1. Past experience
2. Attractiveness of outcomes
3. Belief in internal versus external control of one's destiny
4. Effort-performance expectancies
5. Actual situation
6. Communication from others
Job Satisfaction Measuring Instruments

In the process of conducting research, it is necessary to develop valid and reliable measurements of the variable under study. Several instruments have been developed to measure job satisfaction. Two of the most commonly used are the Job Descriptive Index (JDI) and the Minnesota Satisfaction Questionnaire (MSQ).

Job Descriptive Index. The JDI is a job satisfaction measuring instrument which includes five factors regarding a person's job and an overall job-in-general measure. These five factors or areas of job satisfaction are work, pay, promotions, supervision, and co-workers. These items were selected after an extensive review of the literature and factor analytic studies. They consistently emerged as of primary importance, even though these are not all the factors that may influence satisfaction on the job (Smith, Kendall, and Hulin, 1975).

Under each job category there are either 9 or 18 adjectives or descriptors which are used for an individual to describe his work. The original search for descriptors for each factor scale included 30 to 40 items per scale. A variety of workers were asked to describe the job he/she would most like to have (Best Job), the present job, and the job he/she would least like to have (Worst Job) by indicating a "yes", "?", or "no" as to which of the words applied to their job. It was felt that by looking at responses to each adjective when describing the present job and also the ones describing the best and worst jobs, an indication as to the direction of scoring could be made for each adjective. If a subject indicated any given adjective as descriptive of his/her best job and not of the worst, then the presence of this characteristic on the present job would be considered a source of satisfaction. This avoids
the assumption that certain factors are necessarily satisfying for an entire population. This assumes that the psychological distance between the worker's present and his best and worst jobs is a main determinant of his satisfaction. From this item-development process, the 30 to 40 items were reduced to either 9 or 18 items per job factor considered.

All five JDI scales were used because:

1. They represent discriminably different areas of satisfaction.
2. Although the areas are correlated, some areas may be more important to some people than to others.
3. Different areas may be related quite differently to different personal background variables and individual characteristics such as age, education, and performance.
4. The intercorrelation among different areas may be a function of common measurement method and of specific job situations and employee samples, and, thus, they may vary widely from one company or situation to another.
5. Different areas may be affected differently by different situation variables. (Smith et al., 1975, p. 78)

Scoring of the JDI is one of assessing points to a scale depending on the response to each individual descriptor and summing all the points for each scale or factor used. The respondent is asked to place a "y" in front of the descriptor that describes the work, a "n" if it does not describe the job and a "?" if he/she cannot decide. If the respondent has placed a "y" or "n" in the appropriate blank corresponding to the scoring key, then three points are given. One point is given for each "?" or omission. If a "y" or "n" is placed in an inappropriate blank, zero points are given. A total of 54 points is possible on the 5 scales.
and 72 points are possible on the job-in-general scale. The higher the score on each scale, the higher the satisfaction will be on that factor.

Even though the raw scores do have meaning in their own right, we can extract a good deal more information from them. In order to do this, the researchers stratified each scale with respect to certain norms. This was done by stratifying on sex, individual income, education, job tenure, community prosperity, and community decrepitude. This stratification gives an indication of how an individual respondent compares with others on a percentile basis for each norm category.

Several advantages accrue by using the JDI (Smith et al., 1975):
1. It is directed toward specific areas of satisfaction rather than global or general satisfaction.
2. The verbal level required to answer the JDI is low.
3. The JDI asks a person to describe the work. This gives a job-referent measure rather than a self-referent one.
4. The JDI categories can be used for a large cross-section of individuals and jobs.
5. It can be completed quickly and easily.
6. The versatility of the measures makes possible the use of the JDI where heterogeneous groups are being studied.

Minnesota Satisfaction Questionnaire. The MSQ measures job satisfaction of an individual with respect to specific aspects of work and the work environment. It is composed of both a long form and a short form. The long form consists of 100 items which contain five items for each of 20 different scales. The items appear in blocks of 20 so that items for each scale appear at 20 item intervals. The 20 scale
categories are (Weiss, Dawis, England, and Lofquist, 1967):

1. Ability utilization—The chance to do something that makes use of my abilities
2. Achievement—The feeling of accomplishment I get from the job.
3. Activity—Being able to keep busy all the time.
4. Advancement—The chances for advancement on this job.
5. Authority—The chance to tell other people what to do.
6. Company policies and practices—The way company policies are put into practice.
7. Compensation—My pay and the amount of work I do.
8. Co-workers—The way my co-workers get along with each other.
9. Creativity—The chance to try my own methods of doing the job.
10. Independence—The chance to work alone on the job.
11. Moral values—Being able to do things that don't go against my conscience.
12. Recognition—The praise I get for doing a good job.
13. Responsibility—The freedom to use my own judgment.
15. Social service—The chance to do things for other people.
16. Social status—The chance to be "somebody" in the community.
17. Supervision-human relations—The way my boss handles his men.
18. Supervision-technical—The competence of my supervisor in making decisions.
19. Variety—The chance to do different things from time to time.
20. Working conditions—The working conditions (pp. 1, 2)

Responses may be given to one of five alternatives for each item on
the questionnaire: Very Dissatisfied; Dissatisfied; Neither; Satisfied; Very Satisfied. The items are scored 1 through 5 proceeding from left to right on the page. Each scale is scored by adding responses for each item per scale. The design of the MSQ yields a General Satisfaction Score by adding one item from each of the twenty scales. This will yield a score ranging from 20 to 100. The respondent, on the average, can complete the long form of the MSQ in 15-20 minutes.

Raw scores can be converted to percentile scores using tables that have been developed using normative data. A percentile score can give an individual his relative position in the norm group. The scores are most meaningful when the norm group appropriate for the individual is used. This is the group that corresponds exactly to one's job. Determining similarity of groups on a superficial basis may create misinterpretation of MSQ scores. If an individual is engaged in an occupation for which norms have yet to be developed, norms for "employed disabled" or "employed non-disabled" are available. Therefore, an individual can find his percentile score in one of these two norm groups if the norm group for his occupation is not available. In addition, interpretation of MSQ scores may be done by simply ranking them. This can give indications as to areas of relatively greater, or lesser, satisfaction. Norms for the long-form of the MSQ include the following data (Weiss et al., 1967):


2. Demographic characteristics such as sex, age, education, and tenure.

3. Source of the data.
4. Percentile equivalents of raw scores for all 21 scales.

5. Mean, standard deviation, Hoyt reliability coefficient and standard error of measurement.

The short form of the MSQ consists of one statement relative to each of the 20 items listed as scale categories on the long-form. The short form consists of three scales: Intrinsic Satisfaction, Extrinsic Satisfaction, and General Satisfaction. The Intrinsic Satisfaction score is found by summing twelve of the twenty items and the Extrinsic measure is determined by adding six items. Norms have also been developed for the short form but are not as extensive in scope regarding occupational areas as the long form. Normally, administration of the short form varies from five to ten minutes.

The MSQ was originally developed to eliminate the cumbersome nature of previous measures used in the Work Adjustment Project of which the MSQ is an offspring. Therefore, the new instrument was formed which sampled intrinsic and extrinsic reinforcement dimensions. Items were shortened and scale content was made more homogeneous through item rewording. The items were also designed for maximum readability and were rated at a 5th grade level. The short form was developed by choosing twenty representative items, one from each scale, that were correlated the highest with their respective scales.

Hoyt reliability coefficients for 22 groups were compiled and reveal a high of .97 on "ability utilization" and a low of .59 on "variety." Median reliability coefficients ranged from .93 on Advancement and Recognition scales to .78 for Responsibility. It must be noted that of 567 Hoyt reliability coefficients reported, 83 percent were .80 or higher and 2.5 percent were below .70. This seems to
suggest that the MSQ has adequate internal consistency reliabilities. Reliability, however, may vary across groups. It is suggested that a reliability coefficient for internal consistency be computed for a sample of the group on which the MSQ is to be used.

A canonical correlation analysis of test-retest data was used to measure stability of the MSQ and yielded a maximum coefficient of .97 over one week and .89 over one year. This indicates that approximately 95 percent of the variance of the canonical variates is predictable on one week retest from knowledge of the first set of scores and about 80 percent over a one year interval.

Factor analyses were conducted on the MSQ and indicated that half of the common MSQ scale score variance can be accounted for by extrinsic satisfaction factors. The remaining half is accounted for by the intrinsic satisfaction factors. The factor structure, however, varies among occupational groups.

The short form MSQ also has established reliability coefficients. For the intrinsic scale, coefficients range from .84 to .91. For extrinsic and general satisfaction, coefficients range from .77 to .82, and from .87 to .92, respectively. Validity has also been established in that occupational group differences in variability were not statistically significant.

There are several advantages to using the MSQ in assessing the job satisfaction of individuals in the work place. A more individualized picture of worker satisfaction is achieved than is possible with more general measures of satisfaction with the job as a whole. For example, two individuals may express relatively the same amount of general satisfaction but for different reasons. One person may allow pay to
satisfy needs for independence and security, while another equally satisfied individual satisfies needs through achievement and creativity. Consequently, it is useful to measure satisfaction with specific aspects of work and work environments. Another plus in using the MSQ is the fact that it takes a relatively short period of time to administer both the long and short form. It also meets the accepted standards for reliability and shows evidence of validity. Finally, the MSQ allows an indication of extrinsic and intrinsic measures of job satisfaction for a given individual (Weiss et al., 1967).

Job Satisfaction -- Job Performance Relationships

Performance to Satisfaction. One alternative in examining the possible relationships is the performance to satisfaction relationship. Behling and Schriesheim (1976) suggest that any explanation of the relationship, whether it be satisfaction to performance or the opposite, should contain the following:

1. Provision for interdependence of the two variables.
2. Allowance for factors that may change, weaken, or eliminate the basic relationship between the two variables.
3. No marked conflict from general motivation theory.
4. Be supported by research. (p. 83)

It is suggested that the Expectancy Theory may offer a plausible explanation with regard to the above criteria and offers several advantages. First, it lays out ideas that fit closely with what many organizational theorists and practicing managers believe. Second, this explanation of a performance to satisfaction directional relationship is more nearly complete with the number of variables considered and the specification of relationships among them. Third, the general
predictions from it are supported by empirical research.

Siegel and Bowen (1971) conducted a study to investigate the direction of causality in this relationship using three different designs: when satisfaction and performance were measured at the same time, when satisfaction was measured prior to performance, and when satisfaction was measured subsequent to performance. The data seemed to suggest that satisfaction may be dependent upon performance. If there is support for the suggestion that a satisfied worker is a productive one, it seems to stem from the enjoyment of rewards earned through prior performance, rather than anticipation of future rewards.

Lawler and Porter (1967) examined the relationship with 148 middle and lower level managers with respect to two factors. These factors were how hard the manager worked and how well the manager performed his job. Findings indicated that job satisfaction correlates significantly with both superior's and peer ratings of performance. There was a stronger relationship between superior's rankings of performance and satisfaction than between superior's ranking of effort and performance. Highest correlations with performance appear for self-actualization needs (higher order needs).

They indicate that the advantage of providing employees with intrinsically interesting jobs is that good performance is rewarding in and of itself. It seems important, then, to include measures of higher order need satisfaction in attitude surveys in addition to measures of extrinsic rewards. This may give clues as to the effectiveness of the organization in creating interesting and rewarding jobs and indirect evidence of how motivating the jobs are themselves.

Sheridan and Slocum (1975) further investigated whether the
direction of the causal relationship between satisfaction and performance could be influenced by the operational definition used to measure job satisfaction. Three hypotheses were examined:

1. Measures of the affective component of job satisfaction would be directly related to job performance in a cross-lagged performance-satisfaction relationship.


3. Measures of job satisfaction, including the multiplicative "importance" moderator will have significantly higher correlation with performance than those without the importance moderator.

It was discovered that the affective component of managers' satisfaction was significantly related to job performance in a cross-lagged performance-satisfaction relationship. Job satisfaction seemed to develop from the perception that previous performance resulted in presence of desirable facets on the job and provided the "pull" for continued high performance. High motivation resulted from reinforcement of high work performance with desired job facets. For machine operators, need dissatisfaction provided the push for attaining higher performance. It is noted that need deficiency cannot be considered as sufficient motivation in itself for performance due to the fact that dissatisfied workers may not view high performance as the means for satisfying their needs or may view low performance as leading to greater need satisfaction.

A study by Ivancevich (1978) supports these contentions in terms of the effect of stimulating versus non-stimulating jobs. According to Ivancevich, stimulating jobs are characterized by opportunity to do
meaningful work, outcomes that are intrinsically meaningful, and feedback about what has been accomplished. Low stimulating jobs do not exhibit these characteristics and are not likely to provide satisfaction as an outcome of high performance, in and of themselves. Performance ratings were inferred as the source of causation for intrinsic satisfaction in that the correlation increased with intrinsic satisfaction in stimulating jobs. Extrinsic satisfaction was inferred as being causally related to performance ratings on low stimulating jobs. It seems that non-stimulating jobs have low potential for satisfying higher order needs. Job monotony, lack of variety, and low autonomy were more associated with non-stimulating jobs than stimulating jobs. Data indicated that different job stimulation and measures of performance and satisfaction have significant effects on the causal relationship between performance and satisfaction.

Satisfaction -? Performance. It is noted that Brayfield and Crockett (1955) questioned the validity of the causal relationship between job satisfaction and performance as purported by the human relationists. They suggest, rather, that this relationship might be concomitantly rather than causally related. Several suggestions and ideas have been offered that attempt to explain this complex and intricate relationship through the influence of a third and unknown variable acting to moderate the relationship.

One alternative has been the concept or theory of work adjustment by Dawis (Behling and Schriesheim, 1976). This theory defines satisfaction as the results from correspondence between individual's need set and the organization's reinforcer system. The nature of this correspondence will have a major impact on a person's decision to remain
with or withdraw from the organization. Satisfactoriness, on the other hand, is stated as being the organization's evaluation of behavior of its members. It is a function of correspondence between the requirements imposed by the job and the abilities possessed by the employee. It can result in one of several consequences such as promotion, transfer, etc. (Schwab and Cummings, 1970). With this idea, the reward system acts as a moderator in the relationship between satisfaction and performance. Outcomes then become associated with varying degrees of satisfactoriness (Behling and Schriesheim, 1976).

Another alternative explanation is that pressure for production impacts on the relationship in that satisfaction is inversely related to pressure for production. Performance, according to this postulate, improves in the midrange for this pressure.

A third explanation, which may also explain the inconsistent relationship between satisfaction and performance, is offered by March and Simon (from Behling and Schriesheim, 1976) who suggest that the relationship may vary independently in three ways. They suggest that satisfaction and performance are related only when performance is seen as a means for reducing discontent when experienced by the employee. Therefore, these variables may, at times, vary independently of each other. For example, an individual may feel satisfied but not exhibit good performance when he/she fails to see performance as a means to an end, or if another path is perceived to be better in achieving a certain end. A second way is that performance may be high but satisfaction may be low if the employee perceives performance as the method to receive need fulfillment but none of the rewards are forthcoming that were anticipated. Thirdly, performance may be good but little satisfaction
may result if a person's perception of an adequate reward for high performance changes between the time of decision to perform and the receipt of the rewards. In these three alternatives, both performance and satisfaction can serve as independent variables. Performance, then, becomes a function of the degree of dissatisfaction and the perceived instrumentality of performance for the attainment of valued rewards. These avenues of explanation seem to avoid the pitfall of treating satisfaction as the only cause of performance.

Steers (1975) studied a group of female first line supervisors and reported support for the hypothesis that a positive relationship would be found between both attitudes and performance for high need-for-achievement subjects and that no such relationship would be found for low need-for-achievement subjects. Significant relationships were found for both performance-attitude relations for high need-for-achievement individuals. None were reported for low need-for-achievement subjects. It is noted, however, that those low in need-for-achievement may not view high performance as being instrumental to need satisfaction. In addition, the satisfaction of these individuals may be related to other types of behavior such as making friends, if a person has a high need-for-affiliation. It was emphasized that need-for-achievement does appear to be an important variable in the job performance-job attitude relationship when the nature of the task is sufficiently challenging to trigger the achievement motive. It was also discovered that for individuals with high need-for-achievement scores, significant involvement-performance associations were found. This tends to support the notion that persons with a high need-for-achievement tend to become involved in their work to the extent that such work is achievement
related and results in performance-based rewards. Steers made it clear that the relationships were not extremely large and, consequently, may give indication that other important factors also influence the relationship to a marked degree (Steers, 1975).

Another study was conducted that examined the moderating influence of Higher Order Need Strength (HONS), such as need for personal growth and development and achievement, on the satisfaction to performance relationship. Abdel-Halim (1980) suggests that individuals with HONS are more likely to put a high valence on the attainment of their performance objectives than those with weak HONS. It is argued that outstanding performance for the strong HONS group will be a type of intrinsic reward and often leads to the receipt of positively valent extrinsic rewards from the organization such as pay, promotion, and recognition. If these rewards are perceived to be a result of effective performance and are of the magnitude expected by the employee, the person will tend to be satisfied. Weak HONS individuals are most likely to be motivated by needs such as security and social needs. It was hypothesized in this study of 123 non-supervisory personnel that performance ratings will be positively related to intrinsic and extrinsic measures of job satisfaction for persons with strong HONS while no such relation exists for persons with weak HONS (Abdel-Halim, P. 337). It was reported that HONS does moderate the satisfaction-performance relationship. More specifically, performance was positively related to both intrinsic and extrinsic sources of job satisfaction for individuals with strong HONS while the relationship approaches zero or becomes negative for those with weak HONS. A caution is issued here in that the relationship between job performance and
certain extrinsic sources of job satisfaction should not be treated as always being positive for all persons even if the overall general relationship is positive (Abdel-Halim, 1980).

The implication is that administrators should attempt to take advantage of motivational properties of placing individuals with strong HONS in complex and challenging jobs to enhance the intrinsic motivation and satisfaction of these individuals. They should also beneficially use social interaction since the research indicates that the quality of interpersonal relations is an important factor in determining employee's reactions to the motivational characteristics of their jobs. It is also suggested that attention should be given to the administration of pay and promotional programs and how they are perceived by different HONS individuals. The effectiveness of reward systems could be established by periodically assessing the strength and direction of the relationship between performance evaluations and job attitudes among different HONS groups. Furthermore, it could prove helpful to gather information regarding employee perception and the impact it is having on their job behaviors. Effectiveness of rewards could be improved and level of motivation and satisfaction may be increased. Since moderator variables such as HONS may increase the satisfaction from performance covariation (Abdel-Halim, 1981), a final factor that ought to be determined is the employee expectations in order to determine the motivational power of different types of rewards.

A variety of studies seem to indicate that the relationship is indeed influenced by a third variable. Cherrington, Reitz, and Scott (1971) examined the question regarding pay as a potential moderator of the satisfaction to performance relationship. The researchers
considered three different reward systems: Random rewards which were given on a basis independent of performance (hypothesized a zero correlation); Positively contingent rewards which were based directly on performance (hypothesized a positive correlation); and Negatively contingent rewards which were based on low performance (hypothesized a negative correlation). The results supported the basic hypothesis that the nature and magnitude of the relationship between satisfaction and performance depend heavily upon the performance-reward contingencies that have been arranged.

As a result of this study, it seems that one should take into account the contingencies between performance and rewards to potentially alter employee attitudes and/or behavior. If rewards are not positively contingent, then the administration of rewards will not only fail to encourage performance increments, but it may also increase dissatisfaction and, ultimately, absenteeism and resignations among the highest producing employees (Cherrington et al., 1971, p. 536).

Kesselman, Wood, and Hagen (1974) conducted a similar study regarding contingent and noncontingent reward systems and found that levels of performance under performance and seniority reward systems were similar. However, it was stated that pay and promotion were viewed as significantly more related to job performance in the performance contingent sample than in the seniority contingent sample. In the seniority sample, pay was more strongly related to satisfaction with interpersonal components of the job, the supervisor, and co-workers than it was in the performance sample. In the performance sample, there was a significant correlation between performance and satisfaction with work, pay, and promotion. In addition, a surprising finding was that
pay and work satisfaction were highly related to superior's performance ratings. The conclusion is that the performance-reward contingency significantly mediated the performance-satisfaction relationship (Kesselman et al., 1974).

Jacobs and Solomon (1977) support these findings and go on to express that not only does the performance-reward contingency significantly increase the observed covariation of satisfaction and performance, but self-esteem (Siegel and Bowen, 1971) has a moderating effect, as well. Therefore, incorporation of moderator variables in a moderated regression approach may well increase the observed performance-from-satisfaction covariation.

Satisfaction to Performance. The notion that satisfaction causes performance on the job began with the human relations movement. Herzberg's work is probably the most illustrative theory of this type philosophy. However, most of the evidence regarding this approach has been primarily nonexperimental in design. Therefore, many consider this explanation as detrimental to understanding worker motivation because the interpretation is widely accepted even though little experimentally derived evidence is seemingly available for support. In addition, a combination of ambiguous and often contradictory evidence has lead to a formulation of a causal relationship between these two variables (Schwab and Cummings, 1970). Brayfield and Crockett (1955) reviewed about 50 different studies and came to the following conclusions:

1. Satisfaction with one's position does not necessarily imply a strong inclination to outstanding performance.

2. Productivity may be only partially related to many goals a worker may work toward.
Locke (1970) suggests, with reference to this proposed association, that certain actions follow positive and negative appraisals of a situation which would yield the relationship questionable at best. For example, if there is a positive appraisal, then two actions will likely result. Either the individual will act out an "approach" response by retaining the object or repeat the action which produced it, or he/she will switch activities or goals. This is usually done because success on one problem may be a signal to turn to another one. Therefore, tasks chosen will become more demanding as one's knowledge and skills increase. A negative response would normally be expressed by avoidance, changing the object by whatever means necessary, changing one's reaction to the object by modifying the hierarchy of values, or simply tolerating the situation.

He further states that there is no necessary relationship between overall job satisfaction and subsequent production. Simply because a person likes a job does not reflect why he/she likes it. High satisfaction may be caused by factors other than high production. Also, whatever yielded satisfaction in the past may not be the same as that which yields it in the future. Furthermore, it may be misleading to think of satisfaction, as such, as the cause of performance. An individual's emotions are a crucial incentive to action but do not determine value choices or goals or knowledge. Locke (1970) emphasizes:

An individual will aim for high production (as he defines it) on the job, providing he believes it to be possible and to the extent that he believes that it will entail or lead to the attainment of his important job values (and will not negate other important values). (pp. 496-497)
Consequently, Locke feels that satisfaction should be regarded primarily as a product of performance and only very indirectly as a determinant of performance. A man's actions are determined by the goals he seeks which are a result of basic values, interpretation of the situation, knowledge, anticipations, and methods of thinking. Locke feels strongly, then, that individual differences in goals and values is important in predicting the relationship between satisfaction and performance. Satisfaction may be associated with qualities of the job unrelated to its effective performance and, conversely, effective high performance may be a means to other ends (Nathanson and Becker, 1973).

Nathanson and Becker (1973) sought to answer the question in a study measuring performance and job satisfaction of physicians in outpatient clinics. It was noted that a relationship between satisfaction and performance would be more likely to be found when three conditions are present. These are:

1. When the performance in question represents a valued skill.
2. When the individual has internalized a well-defined set of job values.
3. When high levels of interaction in the work setting facilitate transmission to the individual of positive performance evaluations by others.

Vroom (1964) further stipulates that performance may well be an end, as well as a means to the attainment of an end. For instance, an individual may derive satisfaction from effective performance, and dissatisfaction from ineffective performance regardless of the externally mediated consequences of the performance. He adds to what Nathanson and Becker (1973) found and expands upon those conclusions.
He suggests that increases in the following variables will boost the level of performance:

1. The strength of an individual's need for achievement.
2. The degree of overcompensation.
3. The task requires abilities which a person values or possesses.
4. Feedback that is given.
5. Opportunity is given to participate in making decisions having future effects.

Kirchner (1965) supported this idea by finding a significant correlation ($r = .46$) between general job attitude and total sales points for advertising salesmen. This was found in a situation that allowed the employee a good deal of control over his productivity. Such significant relationships seem to exist in situations where job behaviors are primarily worker controlled. This suggests that where job behaviors are restricted by situational contingencies, significant relationships would not be expected.

It seems to be evident from these findings that a simple satisfaction-to-performance relationship may be unrealistic. Understanding this relationship may require an understanding of its separate parts. Herman (1973) proposes that the direction may proceed from a cognitive awareness of a stimulus object, to evaluation of it, to predisposition to behave, and, then, performance. The perceived effect of that performance may act as a new attitude stimulus object and have an associated effect. Performance-outcome, then, simply becomes or acts as the stimulus on which new or changed attitudes are based. Herman further suggests that it is necessary to distinguish between job behavior and the outcome of that behavior, performance. Job
performance, normally, is the outcome of a number of job behaviors and becomes a complex summary measure if viewed from this perspective. Consequently, measurement of these variables becomes a source of variance in the scores and ratings gathered.

Moreover, variance in objectively measured performance stems from situational differences and individual differences. In a performance situation relatively free of situational contingencies, such as the physical setting and degree of supervision, individual differences in abilities, motives, or behavioral disposition could be expected to determine the observed variance in job performance. When the performance is highly structured, however, individual differences are expected to account for a small portion of performance variance. One reason, then, for the inconsistencies in job attitude-job performance research may well be the differences in situational restrictions.

Herman (1973) hypothesizes that when job performance is highly structured due to the contingencies of the situation, that a significant attitude-performance relationship cannot be expected. In other words, when an employee has freedom to choose among alternative behaviors, his job satisfaction should be related to his performance. He found this to be true. The data demonstrated that when behavior alternatives are not structured by situational contingencies, then job attitudes predict job performance.

Wanous (1974) investigated the relationship by measuring overall job satisfaction as well as extrinsic and intrinsic factors. Cross-lagged and dynamic correlational procedures were used in which two variables are measured at two points in time. These procedures allow both concurrent and predictive relationships between all pairs of
variables to be represented by correlations. Results showed that for overall job satisfaction there were no significant correlations between job satisfaction and performance. However, there was a test-retest significant correlation between satisfaction and performance. Extrinsic factors showed a positive relationship with performance. In addition, there was a significant correlation between extrinsic satisfaction at one month and performance at three months. It was not, however, significantly different from the other three correlations relating job satisfaction and performance. Intrinsic factors, however, indicated that performance at one month was significantly related to subsequent intrinsic job satisfaction. This finding was significantly different from both concurrent correlations. The dynamic correlations revealed that only intrinsic satisfaction and job performance were significantly correlated.

It seems that a simple satisfaction-performance relationship is a tenuous one. Vroom (1964) reports that the range of the relationship found in research studies is extremely large, with a median correlation of .14. With such a small relationship existing, it is not yet known exactly the direction of the relationship between these two variables or what conditions affect the magnitude. In fact, the notion that satisfaction creates performance is suspect for three reasons. First, it is incomplete and oversimplified in that little room is allowed for individual differences. Second, it tends to contradict the other theories of motivation if we say that feelings of satisfaction are a result of the degree to which needs of the individual are filled. Thus, it suggests that filled needs rather than unfilled ones are the source of behavior. Third, evidence is lacking in that almost all the studies
conducted to substantiate this relationship are correlational in nature and what evidence exists seems to indicate that there is no simple and universal relationship between satisfaction and performance (Behling and Schriesheim, 1976).

From the foregoing discussion and literature review, it becomes clear that individual job satisfaction is a complex psychological and emotional perception that is far from being predictable in all situations for all occupations. Not only is its identification and measurement uncertain, but its relationship to performance is not easily explained. The evidence seems to be inconsistent regarding satisfaction as a causal variable in the overall satisfaction to performance relationship. However, when job satisfaction is broken into parts there are significant correlations among certain components and performance measures. When certain third variable components such as situational contingencies, rewards, individual need set, etc., are considered as moderating the relationship, the correlation becomes stronger. When the relationship is reversed and performance becomes the independent variable, there also appears to be a predictable relationship.

Wanous and Lawler (1972) offer suggestions that may explain the conflicting results reported in studies of job satisfaction. An important consideration is the different measuring instruments that have been used to assess job satisfaction. This problem is illustrated by different studies on the relationship of satisfaction to performance where different measures of job satisfaction have yielded different results. Wanous and Lawler (1972) state that "it does not appear to be safe to assume that because two different measures are reported as measuring satisfaction that, in fact, they are highly correlated" (p. 103).
According to Schwab and Cummings (1970), a similar problem exists in measuring job performance. A fundamental problem is the treatment of performance as an "ultimate" criterion as if it was a unidimensional construct. In fact, many have treated performance as a homogeneous variable. Research seems to indicate that this point of view is inadequate. Alternative criterion measures do not seem to be stable over time nor highly correlated. This situation suggests that relationships between certain variables and performance would depend on the measures of performance used. Therefore, the expectation would be to see differences in relationships between satisfaction and performance due to different types of measures.

One possible solution to the problem of overall measurement is to address the components or facets of both job satisfaction and performance. Wanous and Lawler (1972) suggest that "it is possible to validly measure peoples' satisfaction with different facets of their jobs" (p. 103). Locke (1969) emphasizes that since a job is not experienced as a single entity, it should not be initially evaluated as such. A better way of assessing overall job satisfaction is to sum the evaluation of the elements comprising the job. Consequently, a valid measure of job satisfaction would be the sum of the satisfaction responses to the selected job factors.

There seems to be research evidence supporting all three viewpoints to varying degrees. This is not to say, however, that the conclusions are completely accurate. There is a need for more research regarding all three relationships and with all theories involved. Additionally, research should be done to establish more explanatory and predictive information in this important relationship between job satisfaction and
Job Satisfaction in Education

Job satisfaction is obviously not confined or limited to only certain occupations. It is a personal component of all jobs. It is especially relevant in this study to consider job satisfaction with respect to teachers.

In an early study, Hoppock (1935) surveyed 500 teachers from 51 urban and rural communities in the northeastern United States. They were asked to estimate their own job satisfaction on four attitude scales. He reported several characteristics that were evident in teachers with regard to job satisfaction (Hoppock, 1935).

The teachers who were satisfied showed fewer indications of emotional maladjustment. This is important in that emotional problems can thwart an individual's search for happiness and success which he/she may frequently attach to the work itself or to the working situation. The satisfied teachers were also more religious and tended to enjoy better human relationships with superiors and associates. Even with the dissatisfied group, two-thirds stated that they liked the people they worked with. Most of those who were satisfied lived in cities above 10,000 population. The difference in salaries between those satisfied and those dissatisfied was not statistically significant.

The satisfied teachers felt more successful in their jobs. This may give rise to the possibility that self-esteem can mean more than money and sincere praise can be an incentive to increase human effort.

Family influence and social status were more favorable among the satisfied. In addition, more of the satisfied "selected" teaching as a vocation. It was also discovered that no teacher "disliked" children.
Correspondingly, four-fifths of the teachers who said they were dissatisfied found their work uninteresting. Monotony and fatigue were reported more frequently among the dissatisfied.

Finally, Hoppock stated that the satisfied teachers were an average of 7.5 years older than the dissatisfied. However, he qualified this by saying that it is not certain whether this was due to dissatisfied teachers leaving the profession sooner or to increased satisfaction as one grows older. This was also suggested by Bishop (1969).

In another study, Cole (1977) compared the job satisfaction among elementary, middle level, and senior high school teachers in Colorado using the JDI. He found that all teachers in the study were generally satisfied. However, elementary teachers were significantly more satisfied than middle level or senior high school teachers. Cole found it interesting that a teacher's perception of community support and appreciation coupled with adequate facilities and curriculum were related to their satisfaction with the job.

A variety of studies were conducted which upheld the factors that Herzberg claimed were satisfiers or dissatisfiers. Bishop (1969) found that achievement, work itself, and good relations with subordinates were the satisfiers while school policies, working conditions and policy and administration were potential dissatisfiers. Wickstrom (1971) found, in addition to the above, that responsibility was also a satisfier. This seems to substantiate the theory that satisfiers are closely related to the job while dissatisfiers are related to conditions surrounding the job.

Reinecker (1972/1973), while studying tenured teachers, concluded basically the same thing. He states that intrinsic (satisfiers) job
satisfaction factors are a prominently considered phenomena by a high proportion of tenured teachers.

With teachers from elementary through the secondary level, job satisfaction seems to follow the basic contingency as outlined by Herzberg. Sergiovanni (1966) substantiates the fact that, overall, teachers' satisfaction tends to focus on work itself and dissatisfaction factors gravitate toward conditions of work. The dominant satisfiers were achievement, recognition, and responsibility, while the dominant dissatisfiers were poor interpersonal relationships, primarily with students. It is interesting, however, to note that advancement and work itself were not listed as dominant satisfying factors by Sergiovanni.

To help maximize job satisfaction for teachers, Sergiovanni suggests that administration can play an important role. According to Sergiovanni, administrators ought to emphasize not only "teacher-centered" behavior which concentrates on eliminating dissatisfaction factors but also "task-oriented" behavior. This could include encouraging teachers to exercise more autonomy in making decisions, increasing responsibility in developing and implementing programs, and providing opportunities to develop professional skills. Coupled with these activities would need to be recognition for successful teacher task-oriented behavior as a measure of success (Sergiovanni, 1969).

After considering teachers from elementary through secondary level as to job satisfaction, the question arises as to the characteristics of those teachers involved in higher education in relation to job satisfaction. In general, literature on the subject indicates that long
tenure and good job performance are dependent on job satisfaction (Seegmiller, 1977). Seegmiller (1977) found that a high degree of satisfaction for college teachers was due to factors of achievement, growth, recognition, responsibility, and the work itself. Satisfaction was high with all motivating factors. He further found that response to the hygiene factors of interpersonal relations, supervision and working conditions are largely satisfied, thereby yielding a lack of dissatisfaction. Dissatisfaction did exist, however, in the areas of administration, policy, and salary. Moxley (1977) substantiated this finding in stating that in her study, she found that the area of policy, salary/budget, and supervision-technical were all contributors of dissatisfaction. Even though these hygienes coincided with Seegmiller's findings, the hygienic factors of responsibility and advancement acted unidimensionally in the opposite direction to that predicted by Herzberg.

Categories of teachers. While theory argues that satisfiers are motivators, it would be wrong to conclude that some people are not motivated by dissatisfiers. In some cases dissatisfiers or hygiene factors do create motivation. For healthy people, however, the normal case seems to be to respond as the M-H Theory suggests. Healthy individuals who cannot receive satisfaction on the job will inevitably seek this outside the sphere of this work. This may be found at home, in sports, etc.

Those teachers, then, who seem more interested in hygiene factors may be divided into three categories (Sergiovanni and Starratt, 1979).

1. The first category of teachers has a great deal of potential for motivation seeking but are frustrated by insensitive and closed
administration, supervisory and organizational policies and practices (p. 169).

2. The second group of teachers also have potential for motivation seeking, but seeks this in other areas of their lives. This group uses their jobs as a means to achieve goals not related to the school. As a result, the teaching occupation is used to achieve a higher standard of living.

For the most part, these teachers are people who give honest work for what they seek from the school. However, outstanding performance is usually not the case because they lack commitment to the school and its purposes. They probably will not become full partners until they are attracted to the motivational factor. These individuals can be major contributors if competently supervised or when placed in environments with motivation seekers.

3. The third group of teachers seems fixed at a lower need level. They are most likely to be obsessed with avoiding discomfort to the extreme that they have not developed the ability to seek satisfaction through motivators and the higher need level. They actually have little or no potential for motivation-seeking on or off the job.

Regarding these teachers, Sergiovanni and Starratt (1979) state "In general, hygienically oriented teachers think of their jobs too much in terms of salary, working conditions, supervision, status, job security, school policies and administration, and social relationships" (p. 170).

Job Satisfaction in Vocational Education

Since this study will deal with graduates who have prepared to teach in a vocational area, it would seem appropriate to review studies conducted to determine some identifiable characteristics of job
satisfaction in teachers of vocational subjects.

The identification of sources of satisfaction and dissatisfaction for vocational teachers was not much different than was done for teachers in general. Hadaway (1978) substantiated findings in most other studies regarding teachers. He suggests that satisfaction is primarily dependent on intrinsic areas, while dissatisfaction stems from extrinsic factors. However, he did find some information that reflects differences in scores on the job satisfaction scales used. The differential effects were (Hadaway, 1978):

1. Sex and non-teaching work experience did not significantly differentiate any of the 20 job satisfaction scales used.
2. Age significantly differentiated the authority and compensation scale.
3. Education achievement significantly differentiated the advancement and responsibility scales.
4. Prior teaching experience significantly differentiated the advancement and responsibility scales.
5. Current teaching experience significantly differentiated the following scales: activity, school policies and practices, compensation, responsibility, supervision-technical, and supervision-human relations.

Hall's (1972/1973) findings in a study of business teachers in Arizona, disagreed somewhat with Hadaway's study. This study used the MSQ for determining job satisfaction of teachers. Hall discovered that the satisfaction of these teachers was clearly affected by co-worker relations, supervision, and opportunity to work alone. This seems to indicate that extrinsic job satisfaction factors are just as influential
Kaufman and Buffer (1978) found also that an emphasis for satisfaction can be placed on both extrinsic and intrinsic factors. In their study of industrial arts teacher educators, their findings reflect support for the more traditional view of job satisfaction. According to Kaufman and Buffer, therefore, any variable in the job situation could be both a satisfier and a dissatisfier.

Both intrinsic and extrinsic variables were identified as being valued by the professors. Opportunity to teach undergraduates and graduates and academic freedom were intrinsic variables valued highly. Dissatisfaction was expressed with regard to salary, promotion opportunities, evaluation procedures, and supervisory decisions. A high value was placed on these by the professors making them possible satisfiers.

Bowen (1980), using the "Faculty Job Satisfaction/Dissatisfaction Scale", found that teacher educators in agriculture reflected a high degree of job satisfaction. They were most satisfied with interpersonal relationships as well as the work itself and job responsibility. The least satisfying factor was salary. Bowen (1980) states that "three of five dissatisfier factors were more strongly correlated with job satisfaction that were any of the satisfier factors as defined by Herzberg" (p. 9). These three dissatisfier factors were interpersonal relations, policy and administration, and supervision-technical.

Claycomb (1978/1979) conducted a study of vocational agriculture teachers and young farmers participating in adult education programs in northwestern Missouri. The researcher wanted to determine if job satisfaction and selected demographic variables were related to the
meaning and value of work as perceived by both groups. He found no significant difference between mean scores of young farmers and vocational agriculture instructors on job satisfaction. However, vocational agriculture instructors who did not participate in vocational agriculture in high school were found to be less satisfied with their jobs than the young farmer group.

In a recent study, Abdul Malek (1984) assessed the job satisfaction of vocational agriculture teachers in the Southeastern United States and indicated that these teachers scored higher on three measures of job satisfaction than those of the norm group of the JDI. These three categories were work on present job, supervision, and people on the job. Their satisfaction response to the job-in-general scale was found to have a highly significant relationship to annual salary and years of teaching experience. Moreover, female teachers were more satisfied with pay than male teachers. City teachers were also more satisfied with pay than rural teachers. It is interesting to note that annual salary and number of months employed per year were related to and were significant predictors of more scales of the JDI than other variables.

**Assessing Teacher Performance**

It is presumed by many that education is concerned with the acquisition of knowledge and skills. The individual held primarily responsible for bringing this about is the classroom teacher. This is especially true with the increase in demand for teacher accountability. McNeil and Popham indicate that the best criterion to judge teacher competence is a modification in the learner (From Bartz, Blanke, and Percich, 1978). In a more detailed fashion, Smith and Gremillion (1971)
emphasize that:

A teacher's principal rule is to produce desirable changes in the lives of pupils - to improve their knowledge, their skills, and their attitudes. An effective teacher, then, is one who produces these desired changes in pupils and does it with some degree of efficiency. Effective teaching like effective manufacturing or farming ultimately must be evaluated by the quality of its products. (p. 4)

Consequently, the instructor must take responsibility for the results that instruction produces in the learner.

Teaching performance may be defined as measurement of what a teacher does and/or measurement of what students do. Hall (1980) states that measurement of teaching effectiveness can take several forms including observations, tests of teaching skills, and measures of student growth. Bolton (1973) suggests that:

The measuring instruments used for gathering data for teacher evaluation can be categorized according to the purpose of the evaluation: is it to assess the process of teaching (the teacher's performances in and/or out of the classroom), or the outcomes of teaching (the learner's development following instructional treatment)? (p. 129)

If the measure is what the teacher is doing (process) then the observation or measures of teaching skills would be appropriate. The question then arises, who should evaluate the teacher? To answer the question, Kowalski (1978) states that "the most frequently cited evaluators of senior high school teachers are: the principal and assistant principal; the principal, assistant principal, and department
Admitted weaknesses of administrator ratings are that there may well be bias due to previous personal relationships and the principals' own values and preferred teaching styles (Lewis, 1982). In addition, lack of current teaching experience may distort one's focus in the evaluation. However, in spite of the potential drawbacks to the use of administrative ratings, Kowalski (1978) indicates that most research proposes that those who are in the best position to evaluate teachers are supervisors and school principals. For more effective supervisory ratings, adequate time and observation must be given to rating the teacher on characteristics of teaching related to desired student outcomes.

If, on the other hand, assessment concentrates on what students are learning (product), measures of student growth and achievement are appropriate. In fact, Bolton (1973) states that:

Most educators agree that the most satisfactory criterion measure is the product of performance; the emphasis is on the result or outcome of instruction rather than the process of instruction. The major reason for preferring pupil outcomes as the measure of teacher effectiveness is that the goal of teaching is learner development; therefore, the teacher should be accountable by providing evidence that learning has occurred. (p. 118)

In terms of product measures, many researchers agree that the ultimate criterion of teacher effectiveness is pupil growth or achievement (Gephart, Ingle, and Saretsky, 1974; Lauritis, 1967; McGreal, 1983; Peterson and Ward, 1980; Smith et al., 1971). Therefore, measuring student achievement (outcome of instruction) can be another means of
evaluating teachers. Bolton (1973) indicates that measures that have been used in assessing student achievement are:

1. Knowledge and ability measures - tests designed to measure what a person knows,
2. Skill performance measures - tests designed to measure what a person can do,
3. Attitudinal measures - tests designed to assess a person's feelings or desires, and
4. Interest measures. (p. 118)

Some opposition has been raised regarding use of tests and test scores as indices of teacher performance. Opponents cite problems such as inadequacy of measuring instruments, instrument validity and reliability, and methods of dealing with different learning rates and student backgrounds and experiences (Bartz, 1977). Soar (1975) and Berliner (1975) further suggest that pupil achievement varies in numerous ways due to factors such as differences in ability, level of achievement, home background, interests, motivation, and age. Consequently, the outcomes of the teaching process may differ from student to student. The biggest problem, then, in evaluating teacher performance in terms of pupil outcomes is the recognition that what goes on in the classroom may not be the only influence on where a pupil stands in achievement at the end of the year.

Much of this opposition has focused primarily on the use of standardized achievement tests as a pupil learning index. First, much of the pupil achievement on standardized measures may be brought about by non-teaching variables such as home environment, socioeconomic class, pupil ability and perceptions of the social environment of learning,
thus reducing the amount of "gain" score variation which can be attributed to teacher behavior. Second, test content may have only minimal overlap with the content of classroom instruction during the course of the school year. Third, teachers in process-product research are often not assessed behaviorally while directly involved in teaching instructional units having content that matches the content of standardized achievement tests (Ellett, Capie, and Johnson, 1980).

Berliner (1975) agrees that off-the-shelf standardized tests make poor dependent variables for studies of teaching performance. However, McGreal (1983) offers an alternative to standardized testing when he says that:

In evaluating teachers, pupil performance is often measured as an indication of the teacher's effectiveness in communicating specific content or skills. Therefore, tests used for this purpose must cover the content or skills the teacher has emphasized rather than more remote, highly discriminating content. A criterion-referenced test seems to suit this purpose. (p. 23)

Ellett, et al. (1980) found that teacher-made tests used as an index of pupil learning (or criterion of teaching effectiveness) produced significant predictive validity coefficients for the majority of items on the Teacher Performance Assessment Instrument. This particular instrument assesses teaching plans and materials, classroom procedures, interpersonal skills, professional standards, and student perceptions. Furthermore, it seems logical to assess pupil learning gains on tests specifically related to each teacher's instructional objectives, rather than on a common standardized measuring instrument. Hall (1980) offers three ways to improve tests for the study of
teaching:

1. Select items in which there is evidence of substantial change in difficulty level over an instructional period.

2. Select items that correlate weakly with measures of general intelligence.

3. Consider how much time is spent on the material addressed by certain questions.

Findings further suggest that planning with specific objectives is an important teaching element related to pupil learning. In addition, McGreal (1983) suggests that since student growth is the business of the teacher, assessing teacher effectiveness by measuring changes in student achievement should be done over a prespecified period of time such as a semester or a school year. This student achievement is commonly measured in terms of gain scores.

Tests have been used in measuring student achievement in a variety of situations. For example, Denton and Tooke (1981-82) used achievement tests to assess learner cognitive attainment as a basis for evaluating student teachers. Attainment of objectives by students of the students teachers was observed to be stable across objectives ranging from a high of 72 percent to a low of 63 percent attainment. In another instance, Schofield (1981) conducted a study to determine if teachers possessing desired cognitive and affective attributes may inspire them in their students. A mathematics achievement test was given to fourth and sixth grade students of 48 student teachers. Findings indicated that high achievement and positive attitudes in teachers were each significantly related to high achievement. It was discovered that teacher enjoyment of mathematics was significantly and positively related to their pupils'
achievement. This information was based on a paper and pencil type test. In another study, Martin (1980) sought to determine if selected supervisory techniques would contribute to the success of beginning teachers of vocational agriculture. The teachers were assessed using a 50-item test and supervisory ratings. The point to be made here is that achievement tests and supervisory ratings can be used as a means of measuring teacher performance.

Even though achievement tests seem to be considered suitable criteria for evaluating teacher performance, some suggest that more than one measure of teacher performance gives a better overall assessment of the teacher (Hall, 1980; Lewis, 1982; Millard, 1976; Soar, 1975). Bartz and Townsend (from Bartz, 1975) suggest five components to be used on a teacher performance model. These are:

1. Student ratings
2. Principal ratings
3. Peer ratings
4. Self-ratings
5. Student achievement data

Millard (1976) also suggests that teacher evaluation is a combination of many factors such as:

1. Assessment of teacher skills and abilities.
2. Observing behavior.
3. Observing student behavior and achievement.

A combination of teacher performance measures seems preferable to using any one measure for teacher assessment. From the literature cited, the two most commonly accepted and used seem to be supervisory ratings conducted by the school principal and measures of student achievement on content-specific tests.
Instrumentation

Four instruments were used in the collection of data for this study. One instrument was used to measure job satisfaction, two were used to assess teacher performance, and one was employed to collect demographic data on each vocational agriculture teacher.

A variety of instruments have been designed to measure job satisfaction. The instrument selected was the long form of the Minnesota Satisfaction Questionnaire (MSQ) developed by Weiss, Dawis, England, and Lofquist (1967) (see Appendix A for a copy of the MSQ). The MSQ was last copyrighted in 1977. It was selected for the following reasons:

1. The MSQ measures 20 factors that affect job satisfaction. Most measures do not include this many factors and, consequently, are limited in the identification of variables that may impact on one's feelings of job satisfaction.

2. Intrinsic and extrinsic factors are identified in the MSQ, allowing the researcher to correlate job performance with both of these factors, independently. The intrinsic job satisfaction is obtained by summing the scores of the following scales:
   a. Ability Utilization
   b. Achievement
   c. Activity
d. Authority

e. Creativity

f. Independence

g. Morality

h. Recognition

i. Responsibility

j. Social Status

k. Social Service

l. Variety

m. Co-workers

In like fashion, the extrinsic job satisfaction score is found by summing the scores of the following scales:

a. Advancement

b. Company Policies and Practices

c. Compensation

d. Supervision—Technical

e. Supervision—Human Relations

f. Work Conditions

g. Security

3. The MSQ has established validity and reliability. For 27 normative groups, Hoyt reliability coefficients for MSQ scales ranged from .97 on Ability Utilization and Working Conditions to a low of .59 on Variety. Weiss et al. (1967) stated that "the reliability of some scales, however, tends to vary across groups" (p. 14). Therefore, it is suggested that reliability coefficients be computed for the group on which the MSQ is to be used. A standardized Cronbach's alpha reliability coefficient of .95 for the MSQ was computed using data from
the group involved in this study.

4. The MSQ is very readable and can be easily understood.

5. The MSQ has established norm group percentile scores for a variety of occupations. Job satisfaction score comparisons can be made with a selected norm group that is similar to the one under study to determine the relative satisfaction to a general population of workers. Weiss et al., (1982) suggest that if there is not an occupational group similar to the one under study, comparisons should be made to the norm group entitled "Employed Non-disabled." This group includes skilled and unskilled blue collar workers, skilled and unskilled white collar workers, and professional personnel. It must be noted that when conducting the comparison, a percentile score of .75 or higher would be indicative of a high degree of satisfaction, .25 or lower would represent a low level of satisfaction, and scores in between these would reflect a moderate satisfaction level.

The instrument to assess student achievement was designed by the researcher to measure the student's knowledge of basic vocational agriculture as taught at the Vocational Agriculture I level in Louisiana. The test contained 50 multiple choice items and addressed the different subject matter areas covered in Vocational Agriculture I (see Appendix B for a copy of the test). Questions on the test addressed the subject matter areas of:

1. Soil Science
2. Plant Science
3. Animal Science
4. Agricultural Mechanics
5. Orientation to Vocational Agriculture
6. Career Information

7. Agricultural Leadership

The number of questions per subject matter area was determined by the researcher proportionately according to the amount of time allotted for that area during the school year as defined in the Louisiana Vocational Agriculture/Agribusiness Program Planning Guide, Bulletin 1570.

The 50-item multiple choice achievement test was validated by a panel of vocational agriculture teachers. It was field-tested in late August, 1983 using two Vocational Agriculture II classes totaling 64 students. A reliability coefficient of .72 was calculated using the KR-20 formula. Minor changes were made on some items as indicated by the discrimination index calculated from the field test data. A standardized reliability coefficient of .73 was calculated using Cronbach's alpha on the sample in the study. It was calculated using the fall pretest data.

A third instrument was used to assess the performance of the instructor in terms of the principal's rating. A 21-item evaluation instrument designed by Moore, Yoder, and Armstrong (1980) was used to assess the principal's perceptions of the teacher's teaching skills (items 11-18), knowledge of subject matter (items 23-28), and involvement in the total program (items 19, 20, 21, 29) (see Appendix C for complete instrument). In addition, the instrument assessed the overall knowledge of the subject (item 30) and overall teaching effectiveness (item 31). The items on the assessment instrument came from a review of literature which identified them as highly correlated with teaching effectiveness (Moore et al., 1980). Respondents, in this study principals, are asked to rate each item on a scale of 1 to 99.
One is low, while 99 is high. Any number between 1 and 99 could be selected by the principals to indicate their evaluation on each item. This instrument was used in a study involving 150 vocational agriculture teachers after being field tested (Moore et al., 1980). The field test indicated no changes were needed. The evaluation instrument has an established reliability coefficient of .96. A standardized Cronbach's alpha reliability coefficient of .97 was calculated for the group used in the study.

The last instrument used was a demographic information questionnaire sent to the teachers at the pretest time (see Appendix D for complete form).

Population and Sample

The target population for this study was the vocational agriculture teachers in secondary institutions in Louisiana. The frame for the study was identified using the 1982-83 Louisiana State Department of Education Directory of Vocational Agriculture Programs and Teachers.

The sampling plan for selection of vocational agriculture programs and identification of teachers and principals included the following steps:

1. Draw a random sample of vocational agriculture programs. A total of 247 programs was used as the frame from which the sample was taken. A random sample of 50 programs and 50 alternates was drawn using a table of random numbers.

2. Take the first program drawn in the sample and contact the teacher to determine if the program and teacher were qualified for the study. This was done by answering the following questions: (a) Was the vocational agriculture program a production agriculture type program?
(b) Did the teacher teach Vocational Agriculture I in that program? If the answer was no in a multi-teacher department, the teacher was asked to identify the instructor for Vocational Agriculture I in that program.

3. If the answer to the previous questions was yes, the teacher was asked if he would participate in the study. If the answer to either question in step 2 was no, the researcher went to the next program in the sample. This procedure was followed until 50 vocational agriculture teachers were selected. A total of 75 teachers were contacted to obtain the required 50 teachers to participate in the study. Twenty-five teachers were eliminated from the study for a variety of reasons (see Appendix E for complete list of reasons).

4. The principal located at the school where the teacher selected for the study was employed was asked to evaluate the performance of the instructor. A total of 50 principals were used in the study.

Data sources, then, included the teacher, principal, and the students in the Vocational Agriculture I classes.

Data Collection

Phase I

The first phase of the study involved the administration of the pretest to the Vocational Agriculture I students, completion of the MSQ by the teachers and collection of selected demographic information concerning the teachers. This was done by sending a mailout to the teachers on September 14, 1983, which included a cover letter (see Appendix F for complete letter), the tests, National Computer Systems (NCS) 5-item Trans-Optic answer sheets (see Appendix G for copy of answer sheet), instructions for administration of the test (see Appendix H for complete instructions), the MSQ long form, and the
demographic form. A self-addressed, stamped envelope was also enclosed for the return mailing. They were asked to return the MSQ, the tests, the answer sheets, and the demographic form. Two weeks after the initial mailing, a telephone follow-up of non-respondents was conducted. As a result, all the teachers returned the data with the exception of one teacher who indicated that the information had already been returned. Data from this individual was never received by the researcher. Consequently, a 98 percent response rate was calculated with 49 of 50 teachers responding.

After receiving the first mailing from the teachers, the researcher checked all student tests to make sure that answers and student information had been properly marked on the answer sheet. In addition, teacher responses to the MSQ were coded onto the NCS 5-item answer sheets. Responses on the demographic form were coded onto the NCS 10-item answer sheet (see Appendix I for copy of answer sheet) to be scanned and put onto computer tape for future data analysis. The NCS answer sheets were scanned by the Measurement and Evaluation Center at Louisiana State University.

Each teacher was assigned an individual code number ranging from 1 to 50. This same number was used to help identify the teacher, the students in that teacher's class, and the principal located at the same school as the teacher for purposes of data analysis. A five-digit code number was assigned to each student after receiving the student tests following the pretest in the fall. The five-digit number included the two-digit teacher number and a three-digit student identification number. The respective numbers were put on the NCS answer sheets. A total of 1581 students participated in the pretest.
Phase II

The second phase of the study was conducted to obtain the principal's ratings of the vocational agriculture teachers. On March 15, 1984, a cover letter (see Appendix J for complete letter) and supervisory rating sheet was sent to the principal located at the school where the vocational agriculture teachers were employed. The rating sheets were sent to only 49 principals because data was never received from one teacher. That teacher's principal was not included in this mailing. An LSU vinyl brief was also enclosed in each envelope as an expression of thanks to the principals for their help. It was hoped that this would increase the response rate for the principals since it was essential that the teachers and principals at the same school respond. A self-addressed, stamped envelope was also sent in which the data was to be returned. Two follow-up letters (see Appendices K and L for complete letters) were sent to non-respondents on March 27 and April 9, 1984, respectively. A 98 percent response rate was achieved with 48 of 49 principals responding. However, one principal who returned the data did not complete the portion of the assessment that evaluated the vocational agriculture teacher. In addition, one principal indicated that the vocational agriculture teacher at his school had resigned. Consequently, the teacher was eliminated from the study. This left 46 usable supervisory assessments that had been returned to the researcher.

The supervisory ratings were coded onto a NCS 10-item Trans-Optic answer sheet for data analysis.

Phase III

Prior to mailing the posttest to the teachers, the students' names and assigned code numbers from the pretest were pre-coded on the answer
sheets. The teachers were asked to give the student the answer sheet that had his/her name on it. This was done so that the student pretest and posttest scores would be assigned to the same person. Gain scores for individual students could then be calculated by subtracting the pretest scores from the posttest scores.

The teachers were asked to give the posttest on April 25, 1984. This last mailing to the teachers, sent on April 19, 1984, included a cover letter (see Appendix M for complete letter), the posttest, the MSQ, and instructions for administering the test (see Appendix N for complete instructions). The mailing was sent to only 48 teachers since one did not respond to the first mailing and one teacher had resigned since the pretest. It should be noted here that the posttest was the same as the pretest. A telephone follow-up of non-respondents was conducted one week after the mailing. A second follow-up was done one week later. As a result, 46 teachers sent back all the student achievement tests.

Usable responses from all three phases of the study totaled 45. In addition, of the 1,581 students who took the pretest, 1,234 completed the posttest. This resulted in 1,234 matched scores for the pretest and posttest.

Data Analysis

The data collected in the study were analyzed in the following manner. Descriptive statistics were used to accomplish Objective One and Three.

Objective Two and Hypothesis Six were examined using a multiple regression analysis to identify significant explanatory models relative to the dependent variables. Neter and Wasserman (1974) state, "In
multiple regression analysis, one is often concerned with the nature and significance of the relations between the independent variables and the dependent variable" (p. 249). In this analysis, the dependent variable is seen as a linear combination or function of a set of independent variables. A model illustrating this statement has the following form:

\[ Y_j = B_0 + B_1 X_{1j} + B_2 X_{2j} + \ldots + B_k X_{kj} + E_j \]

where:

- \( Y_j \) = the dependent variable for the jth individual.
- \( B_0 \) = the y-intercept of the regression line.
- \( B_i \) = the partial regression coefficient indicating the change in the mean of the probability distribution of \( Y \) per unit change in the ith independent variable; \( i = 1, \ldots, k \).
- \( X_i,j \) = the value of the ith independent variable for the jth individual; \( i = 1, \ldots, k \).
- \( E_j \) = normally distributed random error term with mean = 0 and constant variance \( \sigma^2 \).
- \( j = 1, \ldots, n \)

Use of this method will offer a fuller explanation with respect to the dependent variable than a simple regression. In addition, Lewis-Beck (1980) states, "the effect of a particular independent variable is made more certain, for the possibility of distorting influences from the other independent variables is removed" (p. 47). Multiple regression using MAXR was employed in this study to identify a significant model of independent variables explaining a portion of the variance in the dependent variable. MAXR (SAS, 1982) attempts to find the best one-variable model, the best two-variable model, and so forth
until it has gone through all independent variables. It begins by finding the one-variable model giving the highest $R^2$. Another variable which adds the greatest increase in $R^2$ is added to the model. When this is done, comparisons are made with variables not in the model to determine if removing one variable and replacing it with other variables will increase $R^2$. This comparing-and-switching process is repeated to find the best model upon addition of another variable. MAXR is considered to be superior to the stepwise technique in that MAXR evaluates all alternatives before any particular switch is finally made.

When using multiple regression analysis, a problem arises when two independent variables are highly correlated. This problem is called multicollinearity. In social science research, variables are virtually always intercorrelated. A difficulty occurs, however, when this multicollinearity becomes extreme. When this exists, there is no way to perform a useful regression analysis with the given set of independent variables. Kim and Kohout (1975) offer the following solutions:

1. Create a new variable which is a composite of the set of highly correlated independent variables and use this variable in the equation in place of the highly correlated variables.

2. Use only one variable in the set to represent the dimension.

For this study, the researcher opted to use the second solution suggested above when multicollinearity was identified. PROC REG (SAS, 1982) was used to identify multicollinearity problems with a selected set of independent variables initially identified through MAXR (SAS, 1982), a stepwise regression procedure.

A least squares analysis of variance was employed to accomplish Objective Four. The least squares analysis allows one to identify
effects of certain variables with respect to the dependent variable when there is not an equal number of observations per cell. In many cases the researcher is required to work with a study in which the same number of observations per cell or category may not be available to him/her (Winer, 1971). The least squares analysis determines variable effects using least squares means which are calculated by finding the means of each cell for a given effect and the overall mean for that effect. The effect of each variable on the dependent variable is then found by holding constant all other variables in the model (SAS, 1982). The researcher employed a main effects only least squares analysis of variance with no interaction. The model for estimation of variation due to main effects only with no interaction is:

\[ Y_j = u + A_1 + A_2 + \ldots + A_k + E_j \]

where:

- \( Y_j \) = the response variable for the \( j \)th individual.
- \( u \) = the overall mean.
- \( A_i \) = the \( i \)th main effect; \( i = 1, \ldots, k \).
- \( E_j \) = normally distributed random error term with mean = 0 and constant variance \( \sigma^2 \).
- \( j = 1, \ldots, n \)

A Pearson product-moment correlation was used to test stated relationships in Hypotheses One, Two, Three, Four, and Five. The Pearson product-moment correlation yields a single number which identifies the relationship between two variables. It summarizes the strength of the relationship by indicating the degree to which change in one variable is related to variation in another (Nie, Hull, Henkins, Steinbrenner, & Bent, 1975). It also reflects the direction of the
relationship between two variables. This number is called a correlation coefficient and is denoted by $r$. This $r$ value may range from -1 to +1. It should be noted that a high correlation between two variables does not necessarily mean a cause and effect association (Schefler, 1969). The Pearson $r$ was selected to test these hypotheses because the researcher was only interested in determining relationships between selected variables.

The computer programs used in analyzing the data were selected from Statistical Analysis System (SAS, 1982).
Chapter IV

RESULTS

The findings in this chapter present information pertaining to the relationship between job satisfaction and performance of vocational agriculture teachers in Louisiana. The discussion first includes the demographic characteristics of the teachers and principals. Following this discussion, the findings concerning objectives and hypotheses are presented.

Description of Respondents

Vocational Agriculture Teachers

Data in Table 1 indicate the number of years of vocational agriculture the respondents completed in high school. Thirty-one teachers had completed four years of vocational agriculture in high school. This comprised 72% of the total number of teachers responding. Six respondents indicated having no vocational agriculture in high school.

Annual income level of the teachers is presented in Table 2. The income levels ranged from $15,000 to $30,000 or more per year. None of the respondents indicated they earned less than $15,000 annually. Most teachers (68.7%) earned $20,000-$30,000 per year. Only 13.3% indicated they were making more than $30,000 annually.

Only 28.9% (13) of the teachers had more than 50% of their students who were considered to be rural. The remaining 32 teachers were
Table 1

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<tr>
<td>0</td>
<td>6</td>
<td>14.0%</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2.3%</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>7.0%</td>
</tr>
<tr>
<td>4</td>
<td>31</td>
<td>72.0%</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>4.7%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 2

<table>
<thead>
<tr>
<th>Income</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $15,000</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>$15,000-$19,999</td>
<td>8</td>
<td>17.8%</td>
</tr>
<tr>
<td>$20,000-$24,999</td>
<td>19</td>
<td>42.2%</td>
</tr>
<tr>
<td>$25,000-$29,999</td>
<td>12</td>
<td>26.7%</td>
</tr>
<tr>
<td>$30,000 or greater</td>
<td>6</td>
<td>13.3%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
teaching primarily urban or suburban students.

Total school enrollment varied widely from less than 199 to more than 1,000. Data in Table 3 show that the largest percentages of teachers were in the categories of student enrollments of less than 199 and 200-399. Only five teachers indicated they taught in schools with enrollment greater than 1,000 students.

Data pertaining to distance from home community is presented in Table 4. Few teachers were located over 75 miles from the community in which they were reared. In fact, the majority of respondents (71.1%) indicated that they taught less than 25 miles from their home community. Only two teachers taught over 375 miles from their home.

An equal number of respondents (21 or 46.7%) held bachelor's and master's degrees as shown in Table 5. Three teachers had received degrees beyond the master's level.

Table 3
Student Enrollment of the Participating Schools

<table>
<thead>
<tr>
<th>Enrollment</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 200</td>
<td>13</td>
<td>28.9%</td>
</tr>
<tr>
<td>200-399</td>
<td>12</td>
<td>26.7%</td>
</tr>
<tr>
<td>400-599</td>
<td>8</td>
<td>17.8%</td>
</tr>
<tr>
<td>600-799</td>
<td>4</td>
<td>8.9%</td>
</tr>
<tr>
<td>800-999</td>
<td>3</td>
<td>6.7%</td>
</tr>
<tr>
<td>1,000 or more</td>
<td>5</td>
<td>11.0%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
### Table 4

**Distance of Vocational Agriculture Teachers From Home Community**

<table>
<thead>
<tr>
<th>Distance (miles)</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 25</td>
<td>32</td>
<td>71.1%</td>
</tr>
<tr>
<td>25-49</td>
<td>5</td>
<td>11.1%</td>
</tr>
<tr>
<td>50-74</td>
<td>2</td>
<td>4.4%</td>
</tr>
<tr>
<td>75-149</td>
<td>1</td>
<td>2.3%</td>
</tr>
<tr>
<td>150-224</td>
<td>2</td>
<td>4.4%</td>
</tr>
<tr>
<td>225-299</td>
<td>1</td>
<td>2.3%</td>
</tr>
<tr>
<td>300-374</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>375 or more</td>
<td>2</td>
<td>4.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>45</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

### Table 5

**Highest Degree Completed by the Vocational Agriculture Teachers**

<table>
<thead>
<tr>
<th>Degree</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's</td>
<td>21</td>
<td>46.7%</td>
</tr>
<tr>
<td>Master's</td>
<td>21</td>
<td>46.7%</td>
</tr>
<tr>
<td>Ed. Spec.</td>
<td>2</td>
<td>4.4%</td>
</tr>
<tr>
<td>Doctorate</td>
<td>1</td>
<td>2.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>45</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>
Table 6

Teaching Experience of the Vocational Agriculture Teachers

<table>
<thead>
<tr>
<th>Years</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 8</td>
<td>13</td>
<td>28.9%</td>
</tr>
<tr>
<td>8-14</td>
<td>20</td>
<td>44.4%</td>
</tr>
<tr>
<td>15 or more</td>
<td>12</td>
<td>26.7%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The number of years the respondents have been teaching vocational agriculture is presented in Table 6. Twenty of the forty-five respondents reported having taught 8-14 years. This was the largest response to any one category with 44.4% of the respondents.

About an equal number of respondents had attended land-grant institutions as opposed to non-land-grant colleges. Twenty-one teachers reported having attended a land-grant institution to receive teacher training while 24 went to non-land-grant institutions.

Most teachers were tenured, with 43 (96%) indicating that category. Only two teachers reported that they were not tenured.

Principals

Data showing the respondent's years of administrative experience in education are found in Table 7. Eighteen principals indicated having 11 or more years experience. However, a majority (27) had 10 or less years of experience in administration.

Regarding their total years of experience in the field of education, almost all (97.8%) of the principals had eleven or more years
Table 7

Principals' Years of Administrative Experience in Education

<table>
<thead>
<tr>
<th>Years</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>12</td>
<td>26.7%</td>
</tr>
<tr>
<td>6-10</td>
<td>15</td>
<td>33.3%</td>
</tr>
<tr>
<td>11 and over</td>
<td>18</td>
<td>40.0%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Table 8

Principals' Years in Present Administrative Position

<table>
<thead>
<tr>
<th>Years</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>20</td>
<td>44.4%</td>
</tr>
<tr>
<td>6-10</td>
<td>16</td>
<td>35.6%</td>
</tr>
<tr>
<td>11 and over</td>
<td>9</td>
<td>20.0%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Of experience as an educator. Only one principal reported being in education 10 years or less.

Of those reporting, 20 (44.4%) had been in their present position 5 years or less (see Table 8). Nine principals (20%) had been in their present position 11 years or more.

Forty-four respondents indicated that their position was that of principal. One reported being the acting principal. Of these 45
principals, 41 were male and 4 were female.

Data in Table 9 present information regarding the respondent's academic background. Nine principals had a science background while only one had a background in the performing arts. Four respondents were from a vocational education background. A large number of the principals (19) had experience in a combination of two or more discipline areas. Examination of the data indicated that these were mostly coaches who had taught in a science or social science discipline. In addition, those respondents marking "other" were predominantly from an elementary background.

Most of the principals were between the ages of 40 and 49 as shown in Table 10. There were no principals 29 years of age or younger nor any 60 years of age or older.

Table 9

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sciences</td>
<td>9</td>
<td>20.0%</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>4</td>
<td>8.9%</td>
</tr>
<tr>
<td>Fine or Performing Arts</td>
<td>1</td>
<td>2.2%</td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
<td>6.7%</td>
</tr>
<tr>
<td>Vocational Education</td>
<td>4</td>
<td>8.9%</td>
</tr>
<tr>
<td>Combination of two or more</td>
<td>19</td>
<td>42.2%</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>11.1%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
A majority of the principals (71.1%) indicated that they observed the vocational agriculture teacher more than twice. Thirteen principals (28.9%) observed the teacher in their school at least once or twice. A majority of the principals reported that the state supervisory staff in agricultural education and the university agricultural education staff had visited the vocational agriculture teacher during the past three years. Thirty-eight teachers had been visited by the state supervisory staff in the last three years while 23 had been visited by university agricultural education personnel.

Table 10
Age of Principals

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 or under</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>30-39</td>
<td>8</td>
<td>17.8%</td>
</tr>
<tr>
<td>40-49</td>
<td>25</td>
<td>55.5%</td>
</tr>
<tr>
<td>50-59</td>
<td>12</td>
<td>26.7%</td>
</tr>
<tr>
<td>60 or over</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Objective One—Determine the Job Satisfaction of Vocational Agriculture Teachers

Job satisfaction of the vocational agriculture teachers was measured using the MSQ. Data in Table 11 indicate that 40% of the teachers reflected satisfaction scores falling in the 70s. Most teachers (33 or 73.3%) reflected a general satisfaction score between 70
Table 11

Categories of General Job Satisfaction Score

<table>
<thead>
<tr>
<th>Score category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-59</td>
<td>2</td>
<td>4.4%</td>
</tr>
<tr>
<td>60-69</td>
<td>7</td>
<td>15.6%</td>
</tr>
<tr>
<td>70-79</td>
<td>18</td>
<td>40.0%</td>
</tr>
<tr>
<td>80-89</td>
<td>15</td>
<td>33.3%</td>
</tr>
<tr>
<td>90-100</td>
<td>3</td>
<td>6.7%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

and 89. The mean general satisfaction score was 76.62. This score was compared to the percentile score for an established norm group entitled "Employed Non-disabled" (Weiss et al., 1967) which included skilled and unskilled blue collar workers, skilled and unskilled white collar workers, and professional employees. When compared to this group, the vocational agriculture teachers' general job satisfaction score fell into the 45th percentile. No teacher had a score lower than 58. Few teachers reflected a job satisfaction score of more than 90. Mean scale satisfaction scores are presented in Table 12. The highest score possible on each scale was 25. The teachers appeared to be least satisfied with advancement, company policies and practices, and compensation. The job facets they seemed to be most satisfied with were social service, moral values, and creativity.
Table 12

Vocational Agriculture Teachers' Mean Score on Scales of the MSQ

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Service</td>
<td>21.93</td>
<td>2.22</td>
</tr>
<tr>
<td>Moral values</td>
<td>21.66</td>
<td>2.44</td>
</tr>
<tr>
<td>Creativity</td>
<td>21.24</td>
<td>2.72</td>
</tr>
<tr>
<td>Ability utilization</td>
<td>21.22</td>
<td>2.80</td>
</tr>
<tr>
<td>Activity</td>
<td>21.22</td>
<td>2.52</td>
</tr>
<tr>
<td>Achievement</td>
<td>21.09</td>
<td>2.43</td>
</tr>
<tr>
<td>Variety</td>
<td>20.96</td>
<td>2.52</td>
</tr>
<tr>
<td>Responsibility</td>
<td>20.95</td>
<td>2.41</td>
</tr>
<tr>
<td>Independence</td>
<td>20.68</td>
<td>2.49</td>
</tr>
<tr>
<td>Security</td>
<td>20.24</td>
<td>3.19</td>
</tr>
<tr>
<td>Authority</td>
<td>19.04</td>
<td>2.95</td>
</tr>
<tr>
<td>Social Status</td>
<td>19.04</td>
<td>2.64</td>
</tr>
<tr>
<td>Co-workers</td>
<td>18.93</td>
<td>3.39</td>
</tr>
<tr>
<td>Supervision—Human Relations</td>
<td>18.22</td>
<td>4.76</td>
</tr>
<tr>
<td>Recognition</td>
<td>17.28</td>
<td>4.57</td>
</tr>
<tr>
<td>Working conditions</td>
<td>17.22</td>
<td>4.93</td>
</tr>
<tr>
<td>Supervision—Technical</td>
<td>17.13</td>
<td>4.63</td>
</tr>
<tr>
<td>Company policies and practices</td>
<td>16.24</td>
<td>4.98</td>
</tr>
<tr>
<td>Advancement</td>
<td>15.44</td>
<td>4.72</td>
</tr>
<tr>
<td>Compensation</td>
<td>14.84</td>
<td>5.02</td>
</tr>
</tbody>
</table>
Objective Two—Determine the Factors that Significantly Affect Job Satisfaction of Vocational Agriculture Teachers

The variables or scales comprising a significant model accounting for a portion of the variance in the job satisfaction score are displayed in Table 13. This table presents the partial regression coefficients, F values and significance levels with respect to each variable's contribution to the model. The model reflected a $R^2 = .96$, $p < .01$. There were only seven of the 20 job facets included in the model. The resulting model was placed into PROC REG (SAS, 1982) to determine if multicollinearity problems existed among any of the independent variables. Upon examination of the multicollinearity diagnostics, no problems were observed. Therefore, the variables identified in the model were considered to have explained 96% of the variance in the general job satisfaction score.

Table 13
Multiple Regression Analysis of General MSQ Score by Scales of the MSQ

<table>
<thead>
<tr>
<th>Job factor</th>
<th>B</th>
<th>F</th>
<th>Prob &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authority</td>
<td>.64</td>
<td>18.39</td>
<td>0.0001</td>
</tr>
<tr>
<td>Responsibility</td>
<td>1.03</td>
<td>26.03</td>
<td>0.0001</td>
</tr>
<tr>
<td>Security</td>
<td>.33</td>
<td>4.03</td>
<td>0.0518</td>
</tr>
<tr>
<td>Compensation</td>
<td>.35</td>
<td>18.39</td>
<td>0.0001</td>
</tr>
<tr>
<td>Co-workers</td>
<td>.58</td>
<td>19.70</td>
<td>0.0001</td>
</tr>
<tr>
<td>Supervision—Technical</td>
<td>.59</td>
<td>42.54</td>
<td>0.0001</td>
</tr>
<tr>
<td>Working conditions</td>
<td>.32</td>
<td>17.64</td>
<td>0.0002</td>
</tr>
</tbody>
</table>
Objective Three—Determine the Teacher Performance of Vocational Agriculture Teachers

Teacher performance was determined using a performance assessment instrument completed by the school principal, and student achievement on a 50-item multiple-choice test.

Data presented in Table 14 show the mean performance ratings of the teachers on the various items of the performance assessment instrument. The highest mean performance assessment rating for all teachers on any one item was 84.08 regarding the teacher's involvement in the FFA. The lowest mean value was 49.64 on the item relative to the teachers' participation in vocational instruction for adults. The mean for the overall assessment of the teacher's knowledge in agricultural subject matter was 84.06. In addition, the mean for the overall teaching effectiveness assessment of these teachers was 78.20.

On the student achievement assessment, the mean pretest and posttest scores on a scale of 100 points were 36.80 and 48.46, respectively. The mean student gain from pretest to posttest was 11.66. A t test was conducted to determine if there was a significant gain score for the entire sample. A significant difference was found between pretest scores and the scores on the posttest, $t(44) = 7.88, p < .01$.

Objective Four—Determine the Relationship of Selected Demographic Variables to Job Satisfaction and Teacher Performance

Demographic data were collected from the vocational agriculture teachers and their respective principals. A total of eight demographic variables from the teachers and three from the principals were used to determine if there was a significant relationship to job satisfaction and teacher performance. This made a total of 11 variables to be
<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-The teacher's work with the FFA</td>
<td>84.08</td>
<td>14.33</td>
</tr>
<tr>
<td>15-The enthusiasm of the teacher</td>
<td>81.42</td>
<td>17.54</td>
</tr>
<tr>
<td>18-The teacher's classroom control</td>
<td>80.60</td>
<td>21.29</td>
</tr>
<tr>
<td>25-The teacher's knowledge and skills in animal science</td>
<td>80.20</td>
<td>18.78</td>
</tr>
<tr>
<td>24-The teacher's knowledge and skills in ag. mechanics</td>
<td>78.97</td>
<td>20.48</td>
</tr>
<tr>
<td>26-The teacher's knowledge and skills in crop production</td>
<td>78.66</td>
<td>19.44</td>
</tr>
<tr>
<td>16-The teacher's ability to plan lessons</td>
<td>78.00</td>
<td>16.97</td>
</tr>
<tr>
<td>23-The teacher's knowledge and skills in horticulture</td>
<td>77.97</td>
<td>19.01</td>
</tr>
<tr>
<td>27-The teacher's knowledge and skills in natural resources and conservation</td>
<td>77.35</td>
<td>19.09</td>
</tr>
<tr>
<td>28-The teacher's knowledge and skills in farm management</td>
<td>77.04</td>
<td>24.78</td>
</tr>
<tr>
<td>14-The teacher's ability to use a variety of teaching methods</td>
<td>75.64</td>
<td>18.64</td>
</tr>
<tr>
<td>12-The teacher's ability to relate to students</td>
<td>75.35</td>
<td>22.70</td>
</tr>
<tr>
<td>22-The teacher's management and housekeeping in the ag. lab.</td>
<td>75.31</td>
<td>20.94</td>
</tr>
</tbody>
</table>

*(table continues)*
<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-The teacher's supervision of SOEP's</td>
<td>74.42</td>
<td>23.14</td>
</tr>
<tr>
<td>17-The teacher's ability to hold the</td>
<td>74.20</td>
<td>23.17</td>
</tr>
<tr>
<td>attention of the class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-The teacher's ability to motivate</td>
<td>73.86</td>
<td>22.96</td>
</tr>
<tr>
<td>students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13-The teacher's ability to use questions while teaching</td>
<td>73.80</td>
<td>21.73</td>
</tr>
<tr>
<td>19-This teacher's participation in</td>
<td>72.86</td>
<td>27.73</td>
</tr>
<tr>
<td>professional activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29-The teacher's participation in</td>
<td>49.64</td>
<td>35.57</td>
</tr>
<tr>
<td>vocational instruction for adults</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-The teacher's overall knowledge and</td>
<td>84.06</td>
<td>13.07</td>
</tr>
<tr>
<td>skills in agricultural subject matter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-The overall teaching effectiveness</td>
<td>78.20</td>
<td>19.67</td>
</tr>
<tr>
<td>of this teacher</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Items 30 and 31 were not included in the rank order of the means because they were overall summary items.

aThe scale used on the assessment form for each item was 1 to 99.

analyzed. Some demographic variables were not used in the analysis because there were either not enough observations in each category or no categorical combinations could be made that would yield interpretable and meaningful results.
The teacher demographic variables used in the analysis were:

1. Income level
2. School setting
3. School enrollment
4. Marital status
5. Distance from hometown
6. Type of degree
7. Years of vocational agriculture teaching experience
8. Type of institution from which teacher training was received.

Principal demographic variables used were years of administrative experience, age, and the number of times the principal observed the teacher.

The least squares analysis technique using main effects only with no interactions was used to test the relationship of these demographic variables to job satisfaction as measured by the MSQ. This technique was selected for analysis because of unbalanced data due to sampling. In addition, the relationship involving multi-categorical variables could not best be tested using one-way analysis of variance with job satisfaction or performance as the dependent variable. This would require the researcher to assume that these variables were independent of each other.

A general job satisfaction score, as measured by the MSQ, was used as the dependent variable in the first analysis. Data in Table 15 show that a significant difference in job satisfaction with respect to school enrollment was found, $F(1,29) = 3.92, p < .05$. In addition, data in Table 16 indicate that a significant difference in teacher job satisfaction was found regarding years of teaching vocational
agriculture, $F(1,29) = 4.09, p < .05$. An examination of the least squares means indicated that teachers teaching at smaller schools tended to be more satisfied than teachers at large schools. Furthermore, teachers with more experience tended to be more satisfied with their jobs.

The relationship of demographic variables to teacher performance was also established through use of least squares analysis of main effects only. The same variables were used as independent variables and Table 15

<table>
<thead>
<tr>
<th>Enrollment</th>
<th>n</th>
<th>Least squares means</th>
<th>Prob &gt; t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 200</td>
<td>12</td>
<td>71.59</td>
<td></td>
</tr>
<tr>
<td>200-599</td>
<td>20</td>
<td>79.51</td>
<td>.0297</td>
</tr>
<tr>
<td>600 or more</td>
<td>13</td>
<td>81.05</td>
<td>.0173</td>
</tr>
</tbody>
</table>

Note. Pair-wise comparisons were made between "Less than 200" and the other two enrollment categories. The probabilities are placed with the categories compared to "Less than 200".

The principals' ratings of teacher performance were identified as dependent variables in the analysis. The teacher performance rating form completed by the principals included an assessment of the teacher's knowledge of the subject, teaching skills, involvement in the total program, overall knowledge, and overall teaching effectiveness.

A Pearson $r$ was calculated to determine the relationship of the categories labeled "Knowledge of Subject Matter" and "Teaching Skills"
to the respective summary statements of "Overall Knowledge" and "Overall Teaching Effectiveness." If a high correlation was found, the summary statements were used in this and future analyses in this study. It was discovered that a highly significant relationship ($r = .95$) existed between "Teaching Skills" and "Overall Teaching Effectiveness". A highly significant relationship ($r = .83$) was also found between "Knowledge of Subject Matter" and "Overall Knowledge."

As a result of these findings, the summary statements were used in the analysis. The "Involvement in the Total Program" category had no summary statement with which to determine a relationship. Therefore, the summary of all the items in this category was used as a score of involvement for the analysis.

The least squares analysis was used to determine the relationship of demographic variables on these three areas of the principal's
assessment of teacher performance, independently. In addition, student achievement in terms of gain scores was used as a measure of teacher performance to be used in the analysis. The findings indicated that the demographic variables had no significant relationship to "Overall Knowledge", "Involvement in the Total Program", or "Overall Teaching Effectiveness." However, a significant relationship was found with respect to student achievement. Results in Table 17 indicate that the mean student gain score (M = 16.62) of students who had teachers that attended non-land-grant institutions was significantly greater than the mean gain score (M = 8.47) of those students who had teachers who had attended land-grant colleges, F(1,29) = 4.61, p < .05.

Hypothesis One—There will be a Positive Relationship Between Job Satisfaction and Job Performance

A Pearson r was used to determine the relationship between job satisfaction and job performance. No significant relationships were found between job satisfaction and "Knowledge of Subject Matter", r = .24, p > .05, and "Involvement in the Total Program", r = .25, p > .05. However, job satisfaction was significantly related to the "Teaching Skills" assessment of the vocational agriculture teachers, r = .26, p > .05.

Hypothesis Two—There will be a Positive Relationship Between Job Satisfaction and Student Achievement

A Pearson r was used to determine the relationship between job satisfaction and student achievement as defined by the gain score on the achievement test. Following the analysis, no significant relationship was found, r = .06, p > .05.
Hypothesis Three—There will be a Positive Relationship Between Intrinsic Job Satisfaction and Teacher Performance

A Pearson $r$ was employed to determine the relationship between intrinsic job satisfaction and teacher performance in terms of the three categories identified on the teacher assessment form. Results in Table 18 indicate that no significant relationships were found with respect to "Involvement in the Total Program", $r = .13, p > .05$, "Knowledge of the Subject Matter", $r = .13, p > .05$, or "Teaching Skills", $r = .24, p > .05$. There was also no significant correlation between intrinsic job satisfaction factors and student gain score, $r = .11, p > .05$.

Table 17
Least Squares Analysis of Student Achievement by Status of College

<table>
<thead>
<tr>
<th>Type of institution</th>
<th>n</th>
<th>Least squares means</th>
<th>$F$</th>
<th>Prob $&gt; F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land-grant</td>
<td>21</td>
<td>8.47</td>
<td>4.61</td>
<td>.0402</td>
</tr>
<tr>
<td>Non-land-grant</td>
<td>24</td>
<td>16.62</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis Four—There will be a Positive Relationship Between Extrinsic Job Satisfaction and Teacher Performance

Determination of the relationship between extrinsic job satisfaction and teacher performance was made through use of the Pearson product-moment correlation. As indicated in Table 19, no significant relationships were found between extrinsic satisfaction and "Knowledge of the Subject Matter", $r = .28, p > .05$, "Teaching Skills", $r = .26, p > .05$, or "Involvement in the Total Program", $r = .25, p > .05$. In
Table 18
Correlations Between Intrinsic Job Satisfaction and Teacher Performance

<table>
<thead>
<tr>
<th>Teacher performance</th>
<th>Knowledge^a</th>
<th>Skills^b</th>
<th>Involvement^c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic Score</td>
<td>.13^d</td>
<td>.24^d</td>
<td>.13^d</td>
</tr>
</tbody>
</table>

^aThis refers to the category titled "Knowledge of the Subject Matter."
^bThis refers to the category titled "Teaching Skills."
^cThis refers to the category titled "Involvement in the Total Program."
^d\(p > .05\)

Table 19
Correlations Between Extrinsic Job Satisfaction and Teacher Performance

<table>
<thead>
<tr>
<th>Teacher performance</th>
<th>Knowledge^a</th>
<th>Skills^b</th>
<th>Involvement^c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extrinsic score</td>
<td>.28^d</td>
<td>.26^d</td>
<td>.25^d</td>
</tr>
</tbody>
</table>

^aThis refers to the category titled "Knowledge of the Subject Matter."
^bThis refers to the category titled "Teaching Skills."
^cThis refers to the category titled "Involvement in the Total Program."
^d\(p > .05\)

In addition, no significant relationship was found between extrinsic job satisfaction and student gain score, \(r = .07, p > .05\).
Hypothesis Five—There will be a Positive Relationship Between Supervisory Ratings and Student Achievement

A Pearson $r^2$ was calculated to determine the relationship between student gain scores on the student achievement test and the three categories of the supervisory assessment form used to assess teacher performance. The correlations found between these variables is presented in Table 20. Results indicated that there was little or no correlation between student achievement and teacher performance ratings on the three categories of the supervisory assessment form. No correlation was significant.

Table 20
Correlations Between Student Gain and Teacher Performance

<table>
<thead>
<tr>
<th>Teacher performance</th>
<th>Knowledge $^a$</th>
<th>Skills $^b$</th>
<th>Involvement $^c$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain score</td>
<td>.07$^d$</td>
<td>.06$^d$</td>
<td>.07$^d$</td>
</tr>
</tbody>
</table>

$^a$This refers to the category titled "Knowledge of the Subject Matter."

$^b$This refers to the category titled "Teaching Skills."

$^c$This refers to the category titled "Involvement in the Total Program."

$^d$ $p > .05$

Hypothesis Six—Job Satisfaction Factors, as Measured by the MSQ, will Yield a Significant Model Explaining a Portion of the Variance in Teacher Performance

A multivariate multiple regression using the three measures of teacher performance assessed on the teacher assessment form as dependent
variables was calculated to determine the influence of the 20 scales of
the MSQ on teacher performance. No model significantly explaining the
variance in the dependent variable was identified in the analysis using
Wilk's Lambda.

However, an independent multiple regression analysis was conducted
on each dependent variable (Knowledge of the Subject Matter, Teaching
Skills, and Involvement in the Total Program) to determine if a
significant model explaining a portion of the variance in teacher
performance could be identified.

Several analyses were conducted to arrive at the best models. The
first step was to place all 20 scales of the MSQ into a multiple
regression analysis for each of the three dependent variables.
Significant models were found by examining $R^2$, Mallow's $C_p$, and the
significance level. If significant models were found, the independent
variables were placed into a model in PROC REG (SAS, 1982) to analyze
multicollinearity of the independent variables. If multicollinearity
problems existed, adjustments were made by selecting the one variable
that added the most explanation of the variance in the dependent
variable and maintained a significant model.

Significant models were found which explained a portion of the
variance in all three dependent variables. Data in Table 21 display the
model explaining a portion of the variance in "Involvement in the Total
Program." This model explained 30.69% of the variance in this measure
of teacher performance. The model associated with "Knowledge of the
Subject Matter" is shown in Table 22. This model explained 28.62% of
the variance in "Involvement in the Total Program." Finally, results
shown in Table 23 present information regarding the model identified
with "Teaching Skills." This model explained 14.62% of the variance in this dependent variable.

Most of the variables selected in the significant models were extrinsic factors relative to job satisfaction. These were also the variables with which the vocational agriculture teachers were least satisfied. The intrinsic factors identified in the significant models were Ability Utilization, Independence, Social Status, and Authority. The extrinsic factors were Advancement, Company Policies and Practices, Compensation, Supervision—Technical, Work Conditions, and Security.

Table 21

Multiple Regression Analysis of Involvement in the Total Program by MSQ Scales

| Scales                        | B    | t     | Prob>|t| |
|-------------------------------|------|-------|------|
| Ability utilization           | 8.31 | 1.49  | .1449|
| Company policies and practices| 4.30 | 1.54  | .1324|
| Compensation                  | -1.99| -.76  | .4505|
| Independence                  | -10.88| -1.64| .1093|
| Security                      | 6.15 | 1.15  | .2565|
| Social status                 | -8.96| -1.69 | .0986|
| Co-workers                    | 3.60 | .89   | .3780|

Note. Total $R^2 = .3069, p < .0439$

Note. $B =$ partial regression coefficient for each job factor
Table 22

Multiple Regression Analysis of Knowledge on the Subject Matter by MSQ Scales

<table>
<thead>
<tr>
<th>Scales</th>
<th>B</th>
<th>t</th>
<th>Prob &gt; t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advancement</td>
<td>-.74</td>
<td>-1.40</td>
<td>.1684</td>
</tr>
<tr>
<td>Authority</td>
<td>2.07</td>
<td>1.99</td>
<td>.0538</td>
</tr>
<tr>
<td>Company policies and practices</td>
<td>1.52</td>
<td>2.55</td>
<td>.0150</td>
</tr>
<tr>
<td>Independence</td>
<td>-1.35</td>
<td>-1.26</td>
<td>.2159</td>
</tr>
<tr>
<td>Social status</td>
<td>-2.03</td>
<td>-1.99</td>
<td>.0530</td>
</tr>
<tr>
<td>Supervision--Technical</td>
<td>.36</td>
<td>.64</td>
<td>.5272</td>
</tr>
</tbody>
</table>

Note. Total $R^2 = .2862, p < .0364$

Note. $B = $partial regression coefficient for each job factor

Table 23

Multiple Regression Analysis of Teaching Skills by MSQ Scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>B</th>
<th>t</th>
<th>Prob &gt; t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-workers</td>
<td>1.13</td>
<td>1.09</td>
<td>.2806</td>
</tr>
<tr>
<td>Supervision--Human Relations</td>
<td>.96</td>
<td>1.32</td>
<td>.1952</td>
</tr>
</tbody>
</table>

Note. Total $R^2 = .1462, p < .0362$

Note. $B = $partial regression coefficient for each job factor
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study was designed to determine the relationship between job satisfaction and teacher performance of vocational agriculture teachers in Louisiana. It was also the intent of the study to identify factors that significantly affect teacher job satisfaction.

The target population for the study was vocational agriculture teachers in secondary institutions in Louisiana. A simple random sample of 50 programs and 50 alternates was selected. From this sample, 50 teachers consented to participate in the study. Principals located at the same school as the teachers were used to assess teacher performance. Performance measures included a supervisory assessment form and student achievement on a 50-item multiple choice test. The MSQ was used to assess teacher job satisfaction. A 90% usable return rate was attained in the study.

SAS was employed to conduct the data analysis regarding the following objectives and hypotheses.

Objective:

1. Determine the job satisfaction of vocational agriculture teachers in Louisiana.
2. Determine the factors that significantly affect job satisfaction of vocational agriculture teachers in Louisiana.
3. Determine the teacher performance of vocational agriculture teachers in Louisiana.

4. Determine the relationship of selected demographic variables to job satisfaction and teacher performance of vocational agriculture teachers in Louisiana.

Hypothesis:

1. There will be a positive relationship between job satisfaction and job performance ratings of vocational agriculture teachers in Louisiana.

2. There will be a positive relationship between job satisfaction of vocational agriculture teachers and student achievement.

3. There will be a positive relationship between intrinsic job satisfaction and teacher performance of vocational agriculture teachers.

4. There will be a positive relationship between intrinsic job satisfaction and teacher performance of vocational agriculture teachers.

5. There will be a positive relationship between supervisor ratings and student achievement.

6. Job satisfaction factors, as measured by the MSQ, will yield a significant model explaining a portion of the variance in teacher performance of vocational agriculture teachers.

Summary

Demographic data regarding the vocational agriculture teachers indicated that 72% of the teachers had completed four years of vocational agriculture in high school. Most of the teachers earned
$20,000-$30,000 annually and a majority of the teachers (32) taught at non-rural schools. In addition, 71.1% of the teachers reported that they taught within 25 miles of the community in which they were reared. Most of the teachers either had a bachelor's (21) or a master's (21) degree.

The number of respondents indicating that they had received training as a vocational agriculture teacher at a land-grant institution (21) was almost the same as those indicating completion of a degree at a non-land-grant college (24). Forty-three teachers (96%) reported that they were tenured.

Demographic information regarding the principals revealed that even though 27 indicated having less than 11 years experience in administration, 97.8% had eleven or more years of experience as an educator. Of the 45 principals responding, 41 were male and four were female. Information regarding the age of the principals revealed that 82.2% were over 40 years of age. A majority of the principals (82.2%) had observed the vocational agriculture teacher more than twice during the school year.

The mean job satisfaction score for the vocational agriculture teachers in the study was 76.62. The teachers were most satisfied with the job factors of social service, moral values, and creativity. They were least satisfied with advancement, company policies and practices, and compensation.

Seven factors explaining 96% of the variance in job satisfaction were identified as the following:

1. Authority
2. Responsibility
3. Security  
4. Compensation  
5. Co-workers  
6. Supervision—Technical  
7. Working Conditions  

Teacher performance ratings as given by the school principals indicated that the teachers were rated highest on their involvement in FFA activities (84.08). The lowest mean rating was associated with the teachers' participation in vocational instruction for adults (49.64).

An examination of the relationship of demographic variables to job satisfaction and teacher performance indicated that teachers teaching at smaller schools tended to be more satisfied than teachers at large schools. In addition, more experienced teachers were more satisfied with their jobs than those with less experience. The selected demographic variables used in the analysis revealed no relationship to teacher performance based on principal assessment. It was also discovered that there was no relationship between teacher job satisfaction and student gain score, nor between teacher performance and student gain score. However, students in classes with teachers who had attended non-land-grant colleges had significantly higher gain scores than students who were taught by teachers from land-grant institutions.

Multiple regression analysis identified significant models of job satisfaction factors that explained a portion of the variance in the three teacher performance categories. The significant model identified as explaining 28.62% of the variance in "Knowledge of the Subject Matter" were:

1. Advancement
2. Authority
3. Company Policies and Practices
4. Independence
5. Social Status
6. Supervision--Technical

An additional model, explaining 30.69% of the variance in "Involvement in the Total Program", contained the following job factors:

1. Ability Utilization
2. Company Policies and Practices
3. Compensation
4. Independence
5. Security
6. Social Status
7. Co-workers

A third model, explaining 14.62% of the variance in "Teaching Skills", was comprised of the following:

1. Co-workers
2. Supervision--Human Relations

Conclusions and Discussion

Based on the findings of the study, the following conclusions regarding the vocational agriculture teachers' job satisfaction and teacher performance were made:

1. Vocational agriculture teachers in Louisiana appear to be moderately satisfied with their jobs (45th percentile). Satisfaction was higher with intrinsic job factors while lower satisfaction levels were associated with extrinsic job factors. The intrinsic factors (satisfiers) were related to the job itself, while extrinsic factors
(dissatisfiers) were related to conditions surrounding the job. This conclusion is supported by the findings relative to Objective One which reflects agreement with Herzberg's definition of the dichotomous nature of job factors in the M-H Theory.

2. Findings relative to Objective Two indicate that overall job satisfaction level is influenced by satisfaction with both intrinsic and extrinsic factors. That is, both satisfying and dissatisfying factors do appear to impact on job satisfaction of these teachers. This disagrees with Herzberg's M-H theory that suggests that job satisfaction is positively correlated with job satisfier (intrinsic) factors and not correlated with job dissatisfiers (extrinsic). It should be noted that four of the seven factors identified as explaining 96% of the variance in job satisfaction were extrinsic factors (security, compensation, supervision—technical, working conditions). The remaining three intrinsic factors were authority, responsibility, and co-workers.

It seems to be a common assumption that teacher satisfaction with the job comes from satisfaction with the intrinsic elements of the job and is not influenced by extrinsic factors such as pay and working conditions. This is not the case when one examines the findings in this study. Extrinsic factors did indeed have a significant influence on the job satisfaction responses of these teachers.

The teachers seem to be concerned about comfortable working conditions, competent supervision, job security, and the amount of pay received. Intrinsically, they prefer to have control over their job and have the freedom to use their own judgment on the job. Moreover, the relationships between them and other teachers as well as among the
co-workers themselves are important to these vocational agriculture teachers.

3. Teacher performance, as perceived by school principals, reflected that teachers appeared to have a general knowledge of the subject matter relative to teaching vocational agriculture. They appeared to have a better knowledge of animal science, agricultural mechanics, and crop production than they did relative to horticulture, conservation, and farm management. This may be expected since the teachers in the study taught in primarily production agriculture programs. These programs typically emphasize the three subject matter areas with which the teachers seemed most knowledgable. The teachers were less adept at exercising teaching skills in the classroom. Ability to motivate students and ability to use questions while teaching seemed to be the teaching skills with which the teachers were less skillful. Teacher involvement was strong in FFA activities. However, they were less participative in other aspects of the total program such as supervision of SOEP's, participation in professional activities, and working with adults. From this discussion, it seems that emphasis may need to be placed on continued development of teaching skills and added participation in the total program.

4. For whatever reason, satisfaction, which does effect turnover, is higher for more experienced teachers than for less experienced ones. This may be due to the fact that more experienced teachers have less anxiety and pressure to perform than new, first-year teachers. In addition, as one becomes more familiar with the job, it seems likely that he/she would better adjust to characteristics, interpersonal relationships, and requirements peculiar to teaching vocational
agriculture. Moreover, values and expectations may well change as the teacher grows older. This, in turn, could impact on the job satisfaction of that teacher. This suggests that we in agricultural education may need to develop some specific types of programs to assist new teachers in adjusting to teaching vocational agriculture so they will want to continue working in the profession.

In addition, teachers teaching in smaller schools are more satisfied with teaching vocational agriculture. This statement may be revealing an advantage of teaching vocational agriculture in a small school. Many would say this is no surprise due to their assumption that smaller schools have less disciplinary problems, better co-worker relations, and less pressures. Regardless of the possible reasons for the teacher satisfaction in this case, this finding warrants exploration of teacher satisfaction in other subject matter areas in small schools to determine if the same is true of other teachers.

5. Total scores for satisfaction with intrinsic and extrinsic job factors were not associated with teaching performance. However, when satisfaction level of all factors were considered, certain intrinsic and extrinsic factors were found to explain a portion of variance in teacher performance as indicated by findings of Objective Five. This tends to be congruent with the model suggested by Lawler and Porter (1975) which proposes that satisfaction is influenced by both intrinsic and extrinsic rewards or factors. Job satisfaction, in turn, impacts on performance in an imperfect relationship being moderated by several variables. Consequently, it is not surprising that job satisfaction does not account for a large amount of the variation in teacher performance explained by the Lawler and Porter model. One would not expect a
perfect relationship when other variables in the model are also defined as explaining a portion of the variance in performance. It would seem that from the model, the 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. Both relationships are important in defining and explaining the range of experiences on the job relative to these two variables.

It seems that these teachers may not fit the traditional concept of the teacher who willingly sacrifices extrinsic benefits for an internal satisfaction due to participation in a worthy and honorable occupation. Rather, they seem to be interested in receiving benefits such as compensation and security, as are other employees in other occupations. The teaching profession, however, does not normally offer extrinsic rewards for outstanding performance. This may be reflected in the fact that a lower satisfaction level with respect to the extrinsic variables does appear to influence performance.

6. Findings regarding Objective Three indicate that even though a significant student gain was found between the pretest and posttest, students appeared to correctly answer only about 50% of the items on the 50-item multiple choice test. Two questions seem to rise out of this conclusion. First, did the student test address the material taught by the teachers during the school year? Second, are the teachers teaching the subject matter assumed to be taught in Vocational Agriculture I?

7. Findings relative to Objective Six suggest that teacher job satisfaction level has little or no impact on how much students learn, as measured by a student achievement test.
8. Teacher performance, as perceived by principals, has little or no relationship to how much students learn, as measured by a student achievement test. This conclusion may create concerns regarding the validity of measuring instruments used in educational research regarding teachers. It is very important that an instrument used to measure certain variables does indeed measure what it is designed to measure. It would be beneficial to replicate this study using other measures of teacher performance such as teacher educator assessments and student evaluations of teacher performance. In addition, one might question the principals' knowledge of what the vocational agriculture teacher is actually doing.

Recommendations

Based on the findings of the study, the following recommendations are suggested:

Recommended Practices:

1. Administrators should examine the forthcoming summary of the study to become aware of the factors impacting on vocational agriculture teacher satisfaction and performance.

2. Students preparing for careers as vocational agriculture teachers should examine the summary of this study to become aware of the factors that influence the job satisfaction of these teachers.

3. In future studies, the student achievement tests should be personally administered by the researcher to each class rather than mailing the tests to be administered by the teacher. This is suggested to minimize the variation in test administration among teachers.

Recommended Research:

1. Future research should be conducted to determine if the job
satisfaction of vocational agriculture teachers in the nation is similar to that of vocational agriculture teachers in Louisiana.

2. Future research should be designed to determine the amount of variance explained by the remaining variables such as value of reward, perceived effort to reward probability, and effort impacting on the satisfaction to performance feedback loop as suggested in the Porter-Lawler model.

3. Further research is suggested to:
   
a. Discover other job factors that may impact on job satisfaction of teachers.
   
b. Determine if similar findings would be found if different measures of job satisfaction and performance were used.

4. In future research dealing with this subject, cross-lagged and dynamic correlations should be used in an attempt to better identify causal relationships among variables. This would necessitate taking measures of both job satisfaction and teacher performance at two different times.

5. It is advised that when future researchers measure job satisfaction and teacher performance, they should address component parts of both variables to obtain complete information. This is consistent with the recommendations made by Wanous and Lawler (1972).
REFERENCES


See Appendix 0 for permission to use the copyrighted instrument (p. 171).
Confidential
Your answers to the questions and all other information you give us will be held in strictest confidence.

Name ____________________________ Today's Date ________________ 19____

1. Check one:  ☐ Male ☐ Female

2. When were you born? ______________ 19____

3. Circle the number of years of schooling you completed:

   4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
   Grade School High School College Graduate or Professional School

4. What is your present job called? ____________________________________________

5. What do you do on your present job? __________________________________________

6. How long have you been on your present job? _____________ years _____________ months

7. What would you call your occupation, your usual line of work? ________________________

8. How long have you been in this line of work? _____________ years _____________ months
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 following pages 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 . . .

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<tr>
<td>2.</td>
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<tr>
<td>3.</td>
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<td>4.</td>
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<td>5.</td>
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<tr>
<td>6.</td>
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<tr>
<td>7.</td>
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**On my present job, this is how I feel about . . .**

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<td>51. The way my job provides for steady employment.</td>
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<td>52. How my pay compares with that for similar jobs in other companies.</td>
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<td>53. The pleasantness of the working conditions.</td>
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<td>56. The friendliness of my co-workers.</td>
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<td>58. The recognition I get for the work I do.</td>
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<td>59. Being able to do something worthwhile.</td>
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<td>60. Being able to stay busy.</td>
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<td>62. The chance to develop new and better ways to do the job.</td>
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<td>63. The chance to do things that don't harm other people.</td>
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<td>65. The chance to do something different every day.</td>
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<td>67. The chance to do something that makes use of my abilities.</td>
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<td>71. How steady my job is.</td>
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<td>72. My pay and the amount of work I do.</td>
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<td>75. The way my boss provides help on hard problems.</td>
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<td>76. The way my co-workers are easy to make friends with.</td>
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<td>77. The freedom to use my own judgment.</td>
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<td>79. The chance to do my best at all times.</td>
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<td>83. The chance to do the job without feeling I am cheating anyone.</td>
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<td>85. The chance to do many different things on the job.</td>
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<td>88. The chance to have a definite place in the community.</td>
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<td>89. The way the company treats its employees.</td>
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<td>92. How my pay compares with that of other workers.</td>
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<td>95. The way my boss trains his/her employees.</td>
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<td>97. The responsibility of my job.</td>
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<td>98. The praise I get for doing a good job.</td>
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<td>99. The feeling of accomplishment I get from the job.</td>
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<td>100. Being able to keep busy all the time.</td>
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APPENDIX B
VOCA TIONAL AGRICULTURE I

1. A term which refers to the percentage of sand, silt, and clay in soil is:
   a. organic matter
   b. structure
   c. texture
   d. subsoil

2. The smallest soil particle is:
   a. sand
   b. silt
   c. clay
   d. loam

3. Legumes add _________ to the soil.
   a. magnesium
   b. nitrogen
   c. phosphorus
   d. potassium

4. The period of pregnancy in animals is called:
   a. estrus
   b. gestation
   c. insemination
   d. ovulation

5. The breed of cattle known for heat tolerance is:
   a. Simmental
   b. Brahman
   c. Angus
   d. Hereford

6. Most livestock producers plan for their cows to calve in the:
   a. winter
   b. fall
   c. spring
   d. summer

7. The letters "WG" on romex electrical wiring mean:
   a. with ground
   b. white ground
   c. without ground
   d. with glass

8. A single pole switch has:
   a. two terminals
   b. one terminal
   c. three terminals
   d. four terminals
9. When using a crosscut saw, the blade should be held at a ______ degree angle to the surface of the lumber.
   a. 30
   b. 15
   c. 60
   d. 45

10. Which of the following is not a common type of wood screw:
    a. flathead
    b. round head
    c. hexagon head
    d. none of the above

11. The FFA officer station corresponding to the symbol of the bust of Washington is the:
    a. Reporter
    b. Sentinel
    c. Secretary
    d. Treasurer

12. In vocational agriculture, CAE means:
    a. Career Agricultural Education
    b. Complementary Agricultural Exercises
    c. Cooperative Agricultural Education
    d. Complete Agricultural Environment

13. The main purpose of the SOEP is to:
    a. earn an award
    b. relate classroom work to real application
    c. earn extra money
    d. none of the above

14. A 2/3 majority vote is required to pass the motion to:
    a. suspend the rules
    b. lay on the table
    c. amend
    d. reconsider

15. The Future Farmers of America was established in:
    a. 1938
    b. 1930
    c. 1926
    d. 1928

16. The largest portion of jobs in agriculture are in:
    a. on-farm production
    b. agri-business
    c. government jobs
    d. none of the above

17. Information about careers in agriculture can best be obtained from:
    a. the school counselor.
    b. the vocational agriculture teacher.
    c. the parish cooperative extension agent.
    d. all of the above.
18. A plant that completes its life cycle in two years is called a:
   a. biennial
   b. perennial
   c. weed
   d. surfactant

19. Students in cooperative programs must spend a minimum of ________ hours per week at work stations.
   a. 15
   b. 25
   c. 30
   d. 10

20. Which of the following is not a training option in the vocational agriculture program?
   a. Production agriculture
   b. Occupational experience
   c. Off-farm agriculture
   d. Pre-college preparation

21. Twelve equal segments of a foot on a standard ruler are called:
   a. centimeters
   b. inches
   c. twelfths
   d. millimeters

22. Cost for electricity is measured in:
   a. watts per hour
   b. milliwatts
   c. kilowatt-hours
   d. watts per day

23. A disease-causing organism is called a:
   a. disinfectant
   b. contaminant
   c. serum
   d. pathogen

24. A female calf born twin to a bull calf and unsuitable for breeding is called a:
   a. wether
   b. freemartin
   c. ewe
   d. heifer

25. A good protein supplement to feed beef cattle is:
   a. urea
   b. soybean meal
   c. cottonseed meal
   d. all of the above
26. Plant pollination is aided by:
   a. wind
   b. birds and animals
   c. a and b
   d. none of the above

27. Application of herbicides prior to planting crops aids in:
   a. crop fertilization
   b. preventing loss of soil moisture
   c. weed control
   d. changing soil pH

28. A fertilizer is labeled 10-20-10. One-hundred pounds of the fertilizer will contain ___________ pounds of nitrogen.
   a. 10
   b. 20
   c. 5
   d. 30

29. Which of the following is not considered to be agriculturally related work?
   a. Horticulture
   b. Fish and wildlife management
   c. Turf and landscape management
   d. none of the above

30. There are _____________ areas in the FFA program of activities.
   a. 7
   b. 11
   c. 12
   d. 10

31. When cutting circles and curves in lumber, a _____________ saw is commonly used.
   a. rip
   b. keyhole
   c. crosscut
   d. coping

32. Before changing a table saw blade, the first thing to do is:
   a. unplug power cord from source.
   b. lower the blade below table surface
   c. wear protective goggles
   d. loosen arbor nut

33. Feeding roughages to ruminant animals is essential for:
   a. providing carbohydrates and starches.
   b. providing vitamins.
   c. maintaining bacterial life in the rumen.
   d. nutrient absorption in the intestine.
34. An example of a major plant nutrient is:
   a. potassium
   b. zinc
   c. manganese
   d. iron

35. The length of a nail is indicated in the hardware business by:
   a. the number per pound
   b. the diameter of the head
   c. the number of centimeters in length
   d. the number of "pennys"

36. The total number of board feet in 5 pieces of lumber 1"x 6"x 14'
    is:
   a. 54
   b. 5
   c. 420
   d. 35

37. One example of an external parasite is a:
   a. mite
   b. tapeworm
   c. roundworm
   d. fluke

38. An underground stem which produces roots and extends leaves above
    ground is a:
   a. node
   b. nematode
   c. rhizome
   d. bulb

39. Farmers should cultivate crops ________________.
    a. after planting and the crop has broken the ground
    b. immediately before planting
    c. while planting
    d. after the soil has dried following a rain

40. The main function of the ____________ is plant reproduction.
    a. root
    b. flower
    c. stem
    d. leaf

41. If a beef cattle producer wanted to introduce good milk production
    in mother cows in his herd, he could crossbreed the beef cattle
    with the ____________ breed.
    a. Holstein
    b. Angus
    c. Hereford
    d. Longhorn
42. Soil fertility is increased by the addition of:
   a. mineral
   b. organic matter
   c. water
   d. lime

43. An excess of soil acidity can be corrected by adding:
   a. sulfur
   b. lime
   c. fertilizer
   d. phosphate

44. Most plants grow best on soil with a pH of:
   a. 3-4
   b. 7-8
   c. 10-11
   d. 6-7

45. Soil erosion can be prevented by:
   a. strip cropping
   b. cover cropping
   c. contour plowing
   d. all of the above

46. Which of the following is not a degree of membership in the FFA?
   a. Greenhand
   b. Superior
   c. Chapter
   d. State

47. Which of the following is not a type of membership in the FFA?
   a. Honorary
   b. Alumni
   c. Active
   d. Associate

48. The motion to ______________ cannot be amended.
   a. withdraw a motion
   b. refer to committee
   c. amend
   d. rescind

49. The FFA colors are:
   a. Blue and gold
   b. Corn yellow and blue
   c. National blue and corn gold
   d. National blue and gold

50. The first item in the order of business for FFA chapter meetings is:
   a. officer reports
   b. opening ceremony
   c. new business
   d. committee reports
APPENDIX C
SUPervisory Assessment of Vocational Agriculture Teachers

Section I - Background of school principal. Please check the appropriate response for each item.

1. How many years of administrative experience in education do you have?
   _____ 1-5     _____ 6-10     _____ 11 and over

2. How many years of experience do you have as an educator?
   _____ 1-5     _____ 6-10     _____ 11 and over

3. How long have you been in your present position?
   _____ 1-5     _____ 6-10     _____ 11 and over

4. What is the title of your present position?
   _____ Principal     _____ Vocational supervisor
   _____ Other (please specify) ____________________________________________

5. What kind of academic background did you have before becoming an administrator?
   _____ Sciences (Math, Biology, Chemistry, etc.)
   _____ Social Sciences/Humanities (History, English, Government, etc.)
   _____ Fine or Performing Arts (Band, Art, Drama, etc.)
   _____ Physical Education or Drivers Education
   _____ Vocational Education or Industrial Arts
   _____ Other (please specify) ____________________________________________

6. I am a _____ male _____ female.

7. My age is:
   _____ 29 or under
   _____ 30-39
   _____ 40-49
   _____ 50-59
   _____ 60 or over

8. During the past year, I observed this teacher:
   _____ once or twice
   _____ more than 2 times
   _____ I did not observe this teacher

9. Was this teacher visited by the state supervisory staff in Ag. Ed. during the past three years?  _____ Yes  _____ No

10. Was this teacher visited by the university Ag. Ed. staff during the past three years? _____ Yes  _____ No

   (Please continue on the back)
Section II - The following items are concerned with the characteristics, knowledge, and classroom skills of __________________. Please answer each item as it relates to this teacher. Your response will be confidential.

Directions: For each statement please respond with a numerical rating of from 1 to 99. The number 1 is extremely low while a rating of 99 is extremely high. A rating of 50 would be average. You may select any number between 1 and 99. If you are not in a position to respond to a particular item, please mark NA. Thank you.

Examples: This teacher's skill in counseling students is 55. (slightly above average.)
This teacher's knowledge of swine production is 12. (low)
This teacher's knowledge of floral arranging is 91. (high)

11. This teacher's ability to motivate students is _____.
12. This teacher's ability to relate to students is _____.
13. The ability of this teacher to use questions while teaching is _____.
14. This teacher's ability to use a variety of teaching methods is _____.
15. The enthusiasm of this teacher is _____.
16. This teacher's ability to plan lessons is _____.
17. This teacher's ability to hold the attention of the class is _____.
18. This teacher's classroom control is _____.
19. This teacher's participation in professional activities is _____.
20. This teacher's work with the FFA is _____.
21. This teacher's supervision of student farm projects or job placement is _____.
22. This teacher's management and housekeeping in the ag. lab is _____.
23. This teacher's knowledge and skills in horticulture are _____.
24. This teacher's knowledge and skills in agri. mechanics are _____.
25. This teacher's knowledge and skills in animal science are _____.
26. This teacher's knowledge and skills in crop production are _____.
27. This teacher's knowledge and skills in natural resources and conservation are _____.
28. This teacher's knowledge and skill in farm management are _____.
29. This teacher's participation in vocational instruction for adults is _____.
30. This teacher's overall knowledge and skills in the agricultural subject matter is _____.
31. The overall teaching effectiveness of this teacher is _____.
32. This person's teacher preparation program was _____.

Is the above named teacher still employed by your school? _________
If not, why did the teacher leave? ________________________________
INFORMATION SHEET

1. How many years of vocational agriculture did you complete in high school? ___________

2. What is your present annual income?
   __ Less than $15,000   __ $25,000—29,999
   __ $15,000—19,999   __ $30,000 or greater
   __ $20,000—24,999

3. Approximately what percent of your students come from each of the following settings? Your percentages should add up to 100 percent.
   _____ Urban       _____ Suburban       _____ Rural

4. How many students are there in the high school in which you teach?
   _____ Less than 199   _____ 600—799
   _____ 200—399   _____ 800—999
   _____ 400—599   _____ 1,000 or more

5. Marital status
   _____ single       _____ married

6. How far are you live from the community in which you were reared?
   _____ less than 25 miles   _____ 150—224 miles
   _____ 25—49 miles   _____ 225—299 miles
   _____ 50—74 miles   _____ 300—374 miles
   _____ 75—149 miles   _____ 375 miles or more

7. What degrees do you now hold?
   _____ B.S.       _____ B.A.       _____ M.Ed.
   _____ M.S.       _____ Ph.D.       _____ Ed.D.
   _____ Ed. Spec.       _____ Other (please state)

8. How many years have you been teaching vocational agriculture, including this year? _________________
9. From what institution did you receive your training to be a vocational agriculture teacher?

____ Louisiana Tech University       ____ Southern University

____ Louisiana State University      ____ University of Southwestern Louisiana

_________________________ Other (please state)

10. Are you now tenured?  ____ Yes  ____ No
**Reasons Given by Vocational Agriculture Teachers for not Participating in the Study**

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Started school early in the year</td>
<td>2</td>
</tr>
<tr>
<td>Class schedule problems</td>
<td>1</td>
</tr>
<tr>
<td>Not teaching Vocational Agriculture I</td>
<td>6</td>
</tr>
<tr>
<td>Teachers rotate classes</td>
<td>2</td>
</tr>
<tr>
<td>Candidate for Sheriff</td>
<td>1</td>
</tr>
<tr>
<td>Work at night</td>
<td>1</td>
</tr>
<tr>
<td>Teach Horticulture</td>
<td>2</td>
</tr>
<tr>
<td>Refused</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
</tr>
</tbody>
</table>
Dear:

Thank you again for agreeing to participate in the research project we discussed earlier on the telephone. We certainly appreciate your willingness to assist us in this effort.

Enclosed are the tests and answer sheets to be administered to your Vo. Ag. I classes. Instructions for administration of the tests are also included. We are asking that you give these tests to each class on Wednesday, September 21, 1983. If a situation occurs that prevents giving the tests on this day, please try to give them on the day before or the day after this date.

In addition, we have changed our plans to send the questionnaire in mid-October as stated on the telephone. Instead, we are sending it in this mailing. We are asking that you complete the attached questionnaire during the time period that the students will be taking the test. This will assist you in minimizing the time you will have to spend outside of class completing the questionnaire. We hope this will be beneficial to you in assisting us in the study. Also, please fill out the short information sheet you will find enclosed in the envelope.

When you finish all the testing and have completed the questionnaire and information sheet, simply put all the items in the envelope provided and mail.

Thanks again for your assistance in this matter.

Sincerely,

Tom Grady
Research Assistant

Dr. Michael F. Burnett
Assistant Professor
# IMPORTANT DIRECTIONS FOR MARKING ANSWERS

Use black lead pencil only (#2½ or softer)
Make heavy black marks that fill the circle completely.
Erase clearly any answer you wish to change.
Make no stray marks on this answer sheet.

--- REFER TO THESE EXAMPLES BEFORE STARTING PRACTICE EXERCISES ---
DIRECTIONS FOR THE INSTRUCTOR

Please read these instructions carefully prior to administering the tests.

1. Please do not assist the students with the test. Treat it as a normal classroom activity.

2. Please allow the students to have the full class period to complete the test.

3. Prior to testing, locate the spaces on the answer sheet that the students are to use for marking their name, sex, and grade level. This will assist you in helping the students find these locations if they have trouble doing so during the testing period.

4. Give each student one test and one answer sheet. There should be enough tests for your largest class. Therefore, you should collect all the test papers and redistribute them to the next class for testing. There should be enough answer sheets for everyone.

5. It would be helpful to encourage the students to bring #2 lead pencils on the day you will administer the test. They will need these in marking the answer sheets. (I have enclosed a few pencils for those students who may not have one for the test.)

6. Please emphasize to the students not to mark on the tests. They are to mark on the answer sheets only.

7. Only the first 50 items will be used on the answer sheet. There are only four possible answers per question on the test (A, B, C, D). Therefore, the students should not mark "E" as an answer on the answer sheet.

8. On side two of the answer sheet, the students will be asked to give information regarding "sex" and "grade level". In addition, please ask them to write their name as instructed in the boxes provided. This will be done to make the test as realistic as possible. I must emphasize here that no specific student, school, or teacher will be mentioned or referenced in the study.
AT THE BEGINNING OF THE TESTING PERIOD, PLEASE READ THE FOLLOWING INSTRUCTIONS TO THE STUDENTS.

This multiple choice test is designed to test your knowledge of material taught in Vocational Agriculture I. It is important that you do your best on this exercise.

There are 50 questions on this test. Therefore, you will use only the first 50 items on the answer sheet. You will notice that there are 5 possible answers on the answer sheet (A,B,C,D,E). When selecting the proper answer from the test, disregard the fifth circle labeled "E".

To properly mark your answer, make heavy black marks to fill the circle that corresponds to the answer you select from the test. For example, if you think "b" is the correct answer to question 1, then blacken the circle labeled "b" for that item on the answer sheet. Make sure that the number on the answer sheet matches the number of the test item. For example, if you are answering question 10 on the test, be sure you are marking the answer on item 10 on the answer sheet. Erase clearly if you wish to change any answer. Make no stray marks on the answer sheet.

Please turn the answer sheet to side two.

1. Find the space for your name. Please write your name properly in the blanks provided; last name first. Be sure to blacken the circles under your name. Leave one space between your last name and your first name.

2. Locate the space for indicating your sex. Please indicate whether you are male or female by blackening the appropriate circle.

3. Find the area for identifying your grade level. Please darken the circle that corresponds to your present grade level in school.

When you have finished marking these items, turn the answer sheet to side one.

1. Find item "51". Please darken A,B,C, or D in response to the following choices:
   A. I had no agricultural instruction in the 7th or 8th grade.
   B. I had agricultural instruction in the 7th grade.
   C. I had agricultural instruction in the 8th grade.
   D. I had agricultural instruction in both the 7th and 8th grade.

You will have the full class period to finish the test. Are there any questions?

You may now begin.
APPENDIX I
GENERAL PURPOSE
NC
ANSWER SHEET
FOR USE WITH ALL NCS - SENTRY OPTICAL MARK READERS

EXAMPLES

1. O O O O
   WRONG
2. O O O O
   ERROR
3. O O O O
   RIGHT
4. O O O O
   RIGHT

IMPORTANT DIRECTIONS
FOR MARKING ANSWERS

- Use black lead pencil only (No. 2½ or softer)
- Do NOT use ink or ballpoint pens
- Make heavy black marks that fill the circle completely
- Erase cleanly any answer you wish to change
- Make no stray marks on the answer sheet

DO NOT WRITE
IN THIS SPACE
March 15, 1984

Dear :

With the recent emphasis on "excellence in education", the Department of Vocational Agricultural Education is conducting a thorough review of the teacher training in agricultural education in Louisiana. We need your help. As a part of our review, we are trying to identify the strengths and weaknesses of vocational agriculture teachers. If we know the areas in which vo. ag. teachers are weak, we can change our curriculum to prepare better teachers. To begin this improvement thrust, we have randomly selected a group of vocational agriculture teachers to be assessed. __________, a vocational agriculture teacher at your school, was selected in this group.

In order to assist us in this effort, we are requesting that you complete and return the enclosed form which asks you to assess the skills possessed by the vocational agriculture teacher at your school. This assessment will in no way adversely affect the school or the teacher involved. It should take you no more than 5-10 minutes to complete the assessment form. Please return the form by March 23, 1984.

Enclosed is a LSU vinyl brief given as an expression of our appreciation to you in advance for your help in the collection of this information. Thank you, again.

Sincerely,

Dr. Gary Moore
Associate Professor
Dear:

About 10 days ago, we sent a form asking you to assess the skills and knowledge of _________________, a vocational agriculture teacher at your school. This assessment will be used to assist us in improving our teacher training program in agricultural education. We need your help in this matter. Your judgment is important to us as we attempt to identify program areas that need improvement.

With a busy schedule, it is easy to put such a request aside with the intent to complete it later. As a reminder, we are enclosing another assessment form to be completed. It should take no more than 5-10 minutes to respond to all the items. Please complete this form and return it by April 3, 1984. Thank you for assisting us in this endeavor.

Sincerely,

Dr. Gary Moore
Associate Professor
APPENDIX L
Dear :

About three weeks ago, we sent a questionnaire to you requesting your assessment of the skills and knowledge of the vocational agriculture teacher at your school. Your opinion is very important to us as we determine curriculum areas in our teacher preparation program that may need improvement.

We are sending another questionnaire for your consideration. Please take a few minutes and use the enclosed pen to complete the items on the instrument. This should take 5-10 minutes and would greatly benefit us in this matter. Please return the questionnaire by Friday, April 13, 1984. The pen is yours to keep. This information will remain confidential and have no adverse effect on anyone at your school. Thank you, again.

Sincerely,

Dr. Gary E. Moore
Associate Professor
Dear [Name],

Time has passed so quickly since you administered the first Vocational Agriculture I test to your students last fall. The time for the second testing is here. We have enclosed the materials for the second testing. This test will be given only to the Vocational Agriculture I students.

Please note that we have put the students' names on the answer sheets. In addition, code numbers have been assigned to each student and placed on the answer sheet prior to sending them to you. These code numbers will assist us in our analysis of the data. It is very important that the student receive the answer sheet that has his/her name on it. There are extra answer sheets enclosed for the individuals in the class whose names may not appear on the answer sheets sent to you. Please give them an answer sheet and allow them to take the test. Every student in the class should take the test.

We request that the students be tested during their regular Vocational Agriculture I class period on Wednesday, April 25, 1984. If you have a conflict, please try to give the test on the day before or the day after this date. It is important that you read the enclosed test instructions. While the students are taking the test, please complete the enclosed Minnesota Satisfaction Questionnaire (MSQ). You should have plenty of time to complete the MSQ during the time the students are taking the test. This will eliminate the need for you to spend time outside of class completing the questionnaire. When testing is complete, simply place the tests, answer sheets, and the MSQ in the self-addressed, stamped envelope provided and mail.

We deeply appreciate your help in this study. Thank you, again.

Sincerely,

Dr. Michael Burnett
Department Head
Vocational Agricultural Education

Tom Grady
Graduate Associate
DIRECTIONS FOR THE INSTRUCTOR

Please read these instructions carefully prior to administering the tests.

1. Please do not assist the students with the test. Treat it as a normal classroom activity.

2. Please allow the students to have the full class period to complete the test.

3. Please note that we have put the students' names on the answer sheets. In addition, code numbers have been assigned to each student and placed on the answer sheet prior to sending them to you. These code numbers will assist us in our analysis of the data. It is very important that the student receive the answer sheet that has his/her name on it. There are extra answer sheets enclosed for the individuals in the class whose names may not appear on the answer sheets sent to you. Please give them an answer sheet and allow them to take the test during the testing period. Every student in the class should take the test.

4. You will also notice that item 52 "B" is darkened on the answer sheet. This identifies this testing as the post-test.

5. If you have more than one section of Vo. Ag. I, you will need to sort the individual answer sheets as to the class in which the student belongs. By sorting the answer sheets prior to testing, the job of handing out the answer sheets to the students in each class will be easier.

6. Give each student one test and one answer sheet. There should be enough tests for your largest class. Therefore, you should collect all the test papers and redistribute them to the next class for testing.

7. It would be helpful to encourage the students to bring #2 lead pencils on the day you will administer the test. They will need these in marking the answer sheets.

8. Only the first 50 items will be used on the answer sheet. There are only four possible answers per question on the test. Therefore, the students should not mark "E" as an answer on the answer sheet.

9. Please emphasize to the students not to mark on the tests. They are to mark on the answer sheets only.

10. When the students have completed the testing period, please collect all tests and answer sheets. You do not have to score or grade any of the tests. Please put the tests, answer sheets, and the MSQ in the large self-addressed envelope and mail.

(please continue on back)
AT THE BEGINNING OF THE TESTING PERIOD, PLEASE READ THE FOLLOWING INSTRUCTIONS TO THE STUDENTS.

This multiple choice test is designed to test your knowledge of material learned in Vocational Agriculture I. It is important that you do your best on this exercise.

There are 50 questions on this test. Therefore, you will use only the first 50 items on the answer sheet. You will notice that there are 5 possible answers on the answer sheet (A, B, C, D, E). When selecting the proper answer from the test, disregard the fifth circle labeled "E" on the answer sheet.

To properly mark your answer, make heavy black marks that fill the circle that corresponds to the answer you select from the test. For example, if you think "b" is the correct answer to question 1, then blacken the circle labeled "b" for that item on the answer sheet. Erase clearly if you wish to change any answer. Make no stray marks on the answer sheet.

Please turn the answer sheet to side two:

Find the space for your name. Notice that your name has already been written in the name blocks. Be sure to blacken the circles under each letter in your name as it appears on the answer sheet.

When you have finished marking these items, turn the answer sheet to side one. You will have the full class period to finish the test. Are there any questions?

You may now begin.
July 30, 1984

Thomas L. Grady
3650 Nicholson #1164
Baton Rouge, LA 70802

Dear Mr. Grady:

Thank you for expressing interest in the materials published by Vocational Psychology Research. We are pleased to grant you permission to use the Minnesota Satisfaction Questionnaire in your research. This letter also serves to grant you permission to include a copy of the instrument in your thesis. We ask only that upon publication of your research, or any reports, articles, or summaries that result from your use of the MSQ, you send a copy to Vocational Psychology Research for inclusion in our research archives. We attempt to maintain a bibliography of research related to Vocational Psychology and would value your contribution to our listing.

Congratulations on the completion of your thesis. If there is any service we can provide for you in the future, please do not hesitate to contact us.

Sincerely,

Ellen Stewart
Assistant Director,
Vocational Psychology Research
VITA

Thomas Lewis Grady, son of Zelma Grady and the late Lewis Whitford Grady, was born on May 14, 1950 in Bryan, Texas. He graduated from Stephen F. Austin High School in Bryan in 1968.

Following high school, he enrolled at Texas A&M University and was awarded a B.S. degree in Animal Science in 1973. He immediately began graduate studies in Agricultural Education at Texas A&M University and received a M.Ed. in 1974.

In 1977, he was employed to teach vocational agriculture at Beedeville, Arkansas. During his tenure there, he initiated the vocational agriculture program and the Future Farmers of America chapter at Beedeville.

In 1981, Thomas enrolled at Louisiana State University in Baton Rouge to pursue studies toward a Doctor of Philosophy in Vocational Agricultural Education and was awarded a graduate assistantship. While serving as a graduate assistant, he was involved in curriculum development, teaching undergraduate classes, coordination of workshops, and assistance with area and state FFA judging contests.

The author holds membership in various professional and honorary associations.

He is married to Sandra Kaye Gibbard and is the father of two daughters, Sharon Elizabeth and Shawna Michelle.
Candidate: Thomas Lewis Grady

Major Field: Vocational Agricultural Education

Title of Thesis: The Relationship Between Job Satisfaction and Teacher Performance of Vocational Agriculture Teachers in Louisiana

Approved:

Michael J. Burnett
Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

Joe H. Kell
Kenneth E. Koone
Robert J. Delisio
Charlie W. Custer
Harry E. Morey
O. Jeff Harris

Date of Examination:

July 19, 1984