

THE APPLICATION OF HACKMAN AND OLDDHAM'S JOB
CHARACTERISTIC MODEL TO PERCEPTIONS COMMUNITY MUSIC
SCHOOL FACULTY HAVE TOWARDS THEIR JOB

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Hackman and Oldham's Job Characteristic Model was applied to study of perceptions community music school faculty hold towards their job. The research questions addressed core job characteristics of skill variety, task identity, task significance, autonomy, and feedback, critical psychological states (experienced meaningfulness, experienced responsibility, and knowledge of results); personal and work outcomes of satisfaction and motivation; need for professional growth. The results were compared to the national norms for nine different job families provided by Oldham, Hackman, and Stepina. Thirty-three schools, all members of the National Guild of Community Schools of the Arts, located in every geographical region of the United States, yielded 437 faculty responses (64% return rate).

Of the core job characteristics, dealing with others and autonomy received the highest ratings; feedback and task significance received the lowest ratings. Of the

psychological states, experienced responsibility yielded the highest rating and experienced meaningfulness yielded the lowest ratings. Of the personal/work outcomes, personal development and colleague relations received the highest ratings; pay satisfaction and overall general satisfaction received the lowest ratings. A comparison to the professional job family norms, using a one-sample t-test, found significant differences in 16 out of the 18 variables measured by the Job Characteristic Model. Strong positive feelings for growth combined with less than strong feelings for the core job dimensions yielded a low motivating potential score of 96.18.

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CHAPTER ONE

RATIONALE, BACKGROUND, PURPOSE AND PROBLEMS, DEFINITION OF TERMS, DELIMITATIONS

Rationale

Statistics produced by the National Guild of Community Schools of the Arts (1999) suggests that: (a) the oldest community music school was founded in 1894 and the youngest is just a few years old; (b) 300,000 students, ranging in age from infants to senior citizens, participate in regular weekly instruction; (c) tens of thousands of people attend over 2,500 community music school performances, exhibitions and lectures each year; (d) community music schools employ more than ten thousand professional artists and staff members and nearly sixty percent have ongoing partnerships with public schools; (e) annual budgets range from fifty thousand to four million; (f) combined expenditures total more than one hundred million each year; and (g) the mission of these schools is to foster and promote broad access to high quality arts education designed to meet community needs. These statistics are impressive and suggest that community music schools are thriving educationally and economically. However, there are only

three studies that have examined systematically the economic, physical, and staffing conditions, as well as the overall effectiveness of the community music school environment.

In the 1960's, Max Kaplan was invited by president Robert Fields of the National Guild of Community Music Schools to prepare an assessment of the condition of community music schools and to offer recommendations for administrative and academic improvement. After visiting many of the community music schools throughout the United States, Kaplan (1966) completed his study and offered many recommendations, which included improving the working conditions of employed music educators by providing better compensation packages. He proposed to offer music educators full-time employment status that would be supported by salaries instead of part-time positions with hourly rates.

Alexander (1997) examined the relationship between forty community music school programs and their affiliation with collegiate music schools. Like Kaplan, he provided recommendations that stressed the importance of improving the working conditions of music educators. Alexander also pointed to the need of developing standards for evaluating the teaching performance of music educators through a

review of administrative and peer evaluations.

Additionally, he encouraged community music schools to explore medical and pension benefit programs in order to retain qualified music educators with attractive and competitive employment packages.

In a study on the members of the National Guild of Community Schools of the Arts, Evans, Klein, and Delgado (1992) recommended to improve faculty working conditions through an increase in the hourly rate of pay by providing new and improved benefits, creating opportunities for professional development, and by establishing faculty councils.

All three studies, which span a thirty-year period, call for a job redesign to improve faculty working conditions. All three studies also suggest by inference that insufficient compensation and benefit packages are the job characteristics that cause inadequate working conditions, poor faculty morale, and retention. However, the results of several studies conducted in various educational settings outside of music suggest that there are various job characteristics in addition to compensation and benefits that significantly contribute to overall

teacher effectiveness and satisfaction (Pasi, 1995; Gibbons, 1996; Morton, 1991; Barnabe and Burns, 1994).

The job characteristics receiving the most research attention to date have been those described by the Job Characteristics Model and Job Diagnostic Survey developed by Hackman and Oldham (Nicholson, 1998). According to Hackman and Oldham (1980), the Job Diagnostic Survey was designed to diagnose job characteristics prior to any effort to redesign a job (p. 103). Using Hackman and Oldham's Job Characteristic Model, the purpose of this study was to investigate the perceptions community music school faculty hold towards their job. Made operational by the Job Diagnostic Survey, the model includes various core job dimensions, psychological states, personal/work outcomes, and growth-need strength variables that are explained in the following section.

Background of Study

The Job Characteristics Model has its roots in the pioneering works of Herzberg (1966), Turner and Lawrence (1965), Blood and Hulin (1967) and Hulin and Blood (1968), all of who examined the relationship between certain objective attributes of tasks and employees' reactions to

their work. On the basis of these works, Hackman and Oldham developed the theory that the job itself should be designed to possess fundamental characteristics needed to create conditions for high work motivation, satisfaction and performance. The concepts of their Job Characteristics Theory are diagrammed in Figure 1.

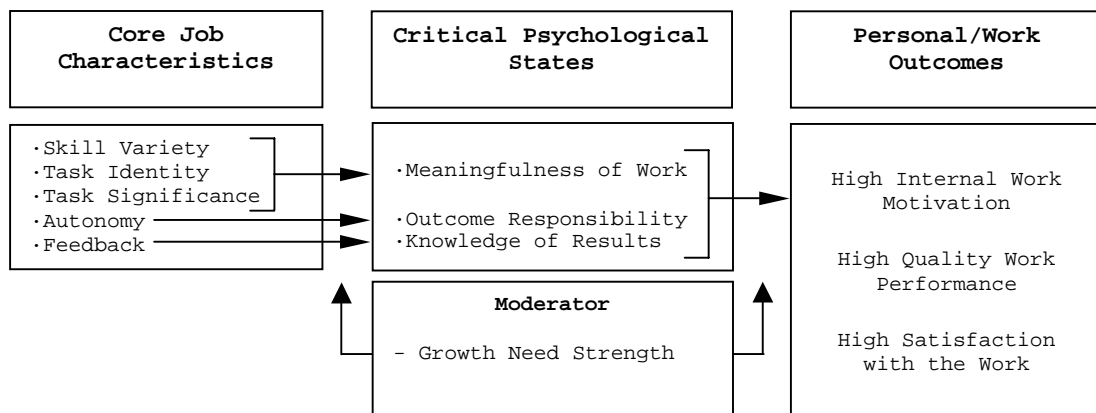


Figure 1. The Relationships Among the Core Job Dimensions, the Critical Psychological States, Personal/Work Outcomes, and Moderators as illustrated by Hackman and Oldham (1974).

Hackman and Oldham began by searching for the basic psychological states that promote high-performance motivation and satisfaction at work. The three conditions they suggested were: (a) a person must experience the work as meaningful, as something which is generally valuable and worthwhile; (b) a person must experience responsibility for

the results of the work, that is, he/she must feel personally accountable and responsible for the work results; (c) a person must have knowledge of the final results of the work being done, that is, he/she must understand the effectiveness of his/her job performance. For the development and maintenance of strong internal work motivation, Hackman and Oldham (1975) assert that it is necessary for all three critical psychological states of experienced meaningfulness, experienced responsibility, and knowledge of results to be present (p. 90).

Since the three critical psychological states are, by definition, internal to persons, they cannot be directly manipulated in managing work. Therefore, the authors began with the question of how the critical psychological states could be created. They identified five core job characteristics of skill variety, task identity, task significance, autonomy, and feedback as reasonably objective, measurable and changeable properties of work, and that foster the desired psychological states, which in turn motivate positive personal/work outcomes. They further suggested that skill variety, task identity, and task significance contributed to the experienced meaningfulness of the work while autonomy accounted for experienced

responsibility, and feedback established knowledge of work results.

A job high in motivating potential must be high on at least one of the three job characteristics that prompt experienced meaningfulness, and high on both autonomy and feedback, to create conditions which foster all three critical psychological states (Hackman and Oldham, 1980, p. 81). The overall motivating potential of a job can be determined by the computation of a motivating potential score, which is calculated as illustrated in Table 1:

Table 1

The Motivating Potential Score formula as computed by Hackman and Oldham (1974)

$$\text{Motivating Potential Score} = \frac{\text{Skill Variety} + \text{Task Identity} + \text{Task Significance}}{3} \times \text{Autonomy} \times \text{Job Feedback}$$

The motivating potential score provides a quantitative diagnosis of the job situation in question by means of the scores obtained from the Job Diagnostic Survey (Hackman and Oldham, 1975, p. 160).

Additionally, Hackman and Oldham have included in their Job Characteristics Model a factor of growth-need strength

as a moderator of both core job characteristics-critical psychological states relationships and the critical psychological states-personal/work outcome relationships. Growth-need strength refers to an individual's desire to be challenged and to grow on the job or one's need for personal accomplishment, learning, and development on the job (Hackman and Oldham, 1980, p.85). Hackman and Oldham believe that individuals with strong growth needs will respond more positively to jobs that are high on the core job dimensions because such jobs provide opportunities for professional advancement. On the other hand, individuals with weak growth needs will experience little internal motivation from complex jobs, either because they do not recognize or value, the opportunities present for professional development.

In summary, the Job Characteristics Theory of Hackman and Oldham asserts that a job will be meaningful to an employee to the extent that it requires a variety of skills, involves the completion of a whole and identifiable piece of work, and has significance for the lives of other people; it will foster feelings of personal responsibility to the degree that it provides the employee autonomy in selecting the methods for carrying out the work; and it

furnishes the employee knowledge on which to judge the effects of his or her efforts if it is arranged to allow such feedback. Thus, the motivating potential of a job, as elaborated by the five core job characteristics, are said to affect the three critical psychological states, which, in turn, are essential ingredients of the employee's internal work motivation and other positive personal/work outcomes.

The Job Diagnostic Survey

The principal assessment tool developed by Hackman and Oldham (1974) for purposes of measuring the overall motivating potential of a job in terms of the core job characteristics is the Job Diagnostic Survey. The instrument includes eighty-three items presented in the forms of questions or statements, and asks subjects to respond in terms of their job according to their perceptions. Items measuring the dimensions of the job characteristic model by using a seven-point response scale appear randomly throughout the instrument.

The original field research by Hackman and Oldham (1974) provided the initial support for the job characteristics theory and survey. The researchers collected data from six hundred and fifty eight different employees working on

sixty-two different jobs in seven organizations. Hackman and Oldham offer the following findings in their report:

The internal consistency reliabilities range from a high of .88 to a low of .56. The median off-diagonal correlations range from .12 to .28. In general, the results of the study suggest that both the internal consistency reliability of the scales and the discrimination validity of the items are satisfactory. (1974, p. 19)

Despite the supportive findings of Hackman and Oldham, some researchers have found only partial support for the theory (Evans, Kiggundu and House, 1979; Hogan and Martell, 1987), while Roberts and Glick (1981) have strongly criticized the theory. They argue that it treats perceptions as real data distinct from objective descriptions of the job characteristics and that perceptions do not truly represent the attributes of tasks. However, Griffin (1983) presents convincing arguments that perceptions are indeed a viable source of data about jobs and job design. Fried and Ferris (1987) in their meta-analysis of two hundred studies on the Job Characteristics Model conclude, "it is inappropriate to totally dismiss perceptual and correlational results as simply artifactual

in nature" (p.309). Perhaps Hackman and Oldham offer the best assessment of the theory:

In sum, while there is support in the research literature for the Job Characteristics Model, it would be inappropriate to conclude that the model provides a complete picture of the motivational effects of job characteristics. Instead, this model . . . is perhaps viewed as an aid in planning for changes in work systems. An especially important part of that planning process, and one for which a conceptual model of some kind is almost essential, is the pre-change diagnosis of a work system. (1980 p.97)

The Job Diagnostic Survey in Education

While the Job Characteristics Model and Job Diagnostic Survey have been used extensively, and supported by a number of studies in business and industry, recent research supports the utility of both in the teaching profession (Gibbons, 1996; Barnabe and Burns, 1994; Cleave, 1989; Morton, 1992).

Gibbons (1996) tested the model by using the Job Diagnostic Survey with 393 teachers employed in twelve elementary schools in Jeffersonville and St. Francois counties in Missouri. His investigation of the motivational

characteristics of job satisfaction for elementary school teachers revealed a relationship among their job dimensions, psychological states and personal/work outcome measures as predicted by Hackman and Oldham. Additionally, when comparing his findings to the national norms, he discovered that teachers scored higher in all categories of the Job Diagnostic Survey except with pay and growth need strength.

Barnabe and Burns (1994) tested the utility of the survey to diagnose factors affecting teachers' motivation and satisfaction. They collected data from 247 teachers in the province of Quebec. The following is a summary of their conclusions:

1. The Job Characteristics Model and the Job Diagnostic Survey instrument have utility for the teaching profession.
2. The Job Diagnostic instrument appeared to discriminate satisfactorily between Job Characteristics for the Quebec sample studied.
3. Proposed relationships between Job Characteristics and Psychological States, and between Psychological States and motivation and satisfaction outcomes were found to exist.

4. Psychological States appeared to mediate between Job Characteristics and outcomes.
5. The differences in some of the correlations between the current findings and Hackman and Oldham's suggest that questions about specific factors may lead to modifying the model for future studies involving teachers in Quebec.
6. When compared to the national norms established by Oldham, Hackman, and Stepina, notable mean differences were found on task significance and experienced responsibility.

Cleave (1989) examined the applicability of the Hackman and Oldham survey to administrative positions in university physical education and sport. She collected data from 217 physical education, intramural/recreation, and intercollegiate directors and assistant directors at selected universities in Canada and the state of Illinois. Her analysis of the psychometric properties of the survey confirmed that the model was applicable to physical education and sport administrators in institutions of higher education. Using a t-test, she reported significant differences ($p < .05$) in all comparisons between the study sample and the normative sample of Oldham and Hackman

Morton (1992) tested the Job Characteristics Model in public schools by administering the survey to 554 elementary teachers employed in forty-eight public schools. He reported that the relationship among job dimensions, psychological states and personal/work outcome measures, as stated in the model, were supported. In addition, Morton compared his means with those of the national norms and concluded that teachers scored higher in all categories of the Job Diagnostic Survey except with pay and growth need strength.

Purpose and Problems of Study

The purpose of this study was to apply Hackman and Oldham's Job Characteristic Model to the perceptions community music school faculty hold towards their job.

Questions of Study

1. How do community music school faculty feel about their core job characteristics of skill variety, task identity, task significance, autonomy, and feedback, all of which determine the motivating potential of the job?

2. How do community music school faculty feel about their critical psychological states of experienced meaningfulness, experienced responsibility, and knowledge of results?
3. How do community music school faculty feel about their personal and work outcomes of satisfaction and motivation?
4. How do community music school faculty feel about their need for growth and advancement?
5. How do the mean scores of community music school faculty compare to the national norms established by Oldham, Hackman, and Stepina?

Definition of Terms

Hackman and Oldham provide the following definitions.

(1974, pp. 5-6)

1. Job Diagnostic Theory proposes the interactive relationships between Core Job Characteristics, Critical psychological states, and Personal/Work Outcome.
2. Core Job Characteristics refers to objective properties of Skill Variety, Task Identity, Task Significance, Autonomy, and Feedback that contribute

to the work effectiveness and satisfaction of employees.

3. Critical psychological states refer to the Experienced Meaningfulness of Work, Experienced Responsibility for Work Outcomes, and the Knowledge of Work Results.
4. Personal Work/Outcomes refer to the personal, affective reactions or feelings a person obtains from performing a job.
5. Affective Reactions refers to the general and specific satisfactions, and internal work motivation experienced as a result of doing a job.
6. Internal Work Motivation refers to the degree to which the employee is self-motivated to perform effectively on the job.
7. General Satisfaction refers to the overall measure of the degree to which the employee is satisfied and happy with the job.
8. Specific Satisfactions refers to a number of short scales which provide separate measures of satisfaction with job security, pay and other compensation, peers and co-workers, supervision, opportunities for personal growth and development on the job.

9. Motivating Potential Score refers to a single summary index of the degree to which the objective characteristics of the job will prompt high internal work motivation.
10. Growth-Need Strength refers to the desire of the individual to obtain professional growth and achievement.
11. Skill Variety is the degree to which a job requires a variety of different activities in carrying out the work, which involve the use of a number of different skills and talents of the employee
12. Task Identity is the degree to which the job requires the completion of a "whole" and identifiable piece of work (i.e.; doing a job from beginning to end with a visible outcomes).
13. Task Significance is the degree to which a job has a substantial impact on the lives or work of other people whether in the immediate organization or in the external environment.
14. Autonomy is the degree to which the job provides substantial freedom, independence, and discretion to the employee in scheduling his or her work and in

determining the procedures to be used in carrying it out.

15. Feedback refers to the degree to which carrying out the work activities required by the job results in the employee obtaining information about the effectiveness of his or her performance.
16. Meaningfulness of Work refers to the degree to which the employee experiences the job as one which is generally meaningful, valuable and worthwhile.
17. Experienced Responsibility refers to the degree to which the employee feels accountable and responsible for the results of the work he or she does.
18. Knowledge of Results refers to the degree to which the employee knows and understands, on a continuous basis, how effectively he or she is performing his or her job.

Delimitations

This study concerns itself with independent community schools which teach only music and who are members of the National Guild of Community Schools of the Arts.

CHAPTER TWO

Related Literature

Job enrichment and motivation in an organization have been the focus of attention for behavioral scientists since the early part of the twentieth century. As a result, the last century has produced an abundance of literature on job design and enrichment. Organizations have become aware of the effect job designs have on perceived working conditions, which is believed to shape employee motivation and satisfaction.

Historical Background of Job Design and Motivation

The job enrichment movement began as a reaction to Taylor's (1911) "scientific management" approach. His theory, which was formulated at the beginning of the twentieth century, was based on the assumption that jobs should be specialized, simplified, and standardized so that organizations could function as rationally and efficiently as possible. Two underlying assumptions were the basis for Taylor's scientific management theory. First, simplifying jobs would result in increased worker efficiency, reduced

skill requirements, and increased managerial control, all of which would aid in the increase of profits. Second, workers would be motivated by increased economic rewards, which would be possible because of the increased productivity.

Underlying Taylor's ideas was a hypothesis now referred to as "Theory X" which asserts that people are alienated from their work, wish to avoid high levels of effort, are motivated solely or largely by pay, and distrust management (Nicholson, 1998). Taylor (1911) claimed that the advantages of scientific management were: (a) minimized labor costs, (b) standardized work procedures to simplify administrative control, and (c) increased work efficiency through specialization.

Because the scientific management approach did not prove to increase employee productivity, researchers continued their inquiry, which led to the now famous Hawthorne studies. These studies, a series of human relation studies conducted at the Hawthorne plant of the Western Electric Company in Chicago, Illinois from 1927 to 1933, initiated the concern of industrial psychologists with the measurement, interpretation and implications of job attitudes. The results of these studies, as reported by

Mayo (1946) and his colleagues at the graduate school of business administration at Harvard University, suggested that psychological and sociological factors were of major importance in determining worker behavior, effectiveness, and satisfaction; the mere act of management showing people that they are concerned about them usually spurs them to better job performance.

In contrast to the scientific management system, the human relations approach proclaimed that social and psychological factors were most important in influencing worker productivity, satisfaction and motivation. As a result of the Hawthorne studies, organizations began concentrating efforts on improving employee job satisfaction with the belief that by improving employee attitudes, their overall performance would improve. The Hawthorne studies can undoubtedly be considered a benchmark in the evolution of job design research.

Herzberg (1966) and his associates contributed to the job enrichment movement with the intentions of creating a means of increasing motivation, satisfaction, and productivity of people at work. After conducting a review of relevant literature between 1920 and 1954, they concluded that there probably was some relationship between

job attitudes and productivity. To investigate their hypothesis, they asked workers to describe times when they felt good or bad about their jobs. They discovered that the factors associated with satisfying experiences were different from ones associated with negative experiences. To explain this phenomenon, they proposed a two-factor theory of motivation called the motivation-hygiene theory.

The theory states that satisfaction and dissatisfaction are not opposite ends of a single continuum, but rather two separate continua. The theory states that satisfaction is primarily determined by factors intrinsic to work (i.e., achievement, recognition, advancement, the work itself) while dissatisfaction stems from factors extrinsic to the work (i.e., salary, job security, interpersonal relations). The first set of factors is called motivators because they only have the potential for increasing employee satisfaction. The second set is called hygiene because the improvements of these factors can only result in less dissatisfaction.

Despite heavy criticism, the two-factor theory remains a mainstay in the job satisfaction literature. The theory provides an important distinction between physical and psychological needs, and ties work to psychological well-

being and growth by stressing the idea that job satisfaction is associated with the nature of work (Locke, 1976).

Vroom (1964) presented a theory of worker motivation, which focused on motivational dynamics as a force within employees. His theory, called the "Expectancy Theory", included three concepts, which contributed to the force of motivation: (a) valence, (b) expectancy, and (c) instrumentality. Valence represents the importance or value that a particular outcome or result has for the individual. Expectancy refers to the extent that an individual feels his or her efforts will lead to a particular outcome. Instrumentality reflects the individual's perception of the relationship between direct outcomes and indirect outcomes.

Vroom believed that motivation occurs when: (a) outcomes or rewards being offered are perceived by the worker as being desirable; (b) the worker knows what needs to be done to obtain desired outcomes; (c) the worker is confident that he or she is able to do what is necessary to perform adequately. Individual motivation is viewed as a function of a person's perception that his or her increased performance will result in certain rewards, which ultimately aids the pursuit of personal goals. In short, to

be motivated, the worker must believe that it is possible to succeed and that he or she will be rewarded for being successful (Vroom, 1964; Silver, 1983).

Turner and Lawrence (1965) initiated the research on objective characteristics of jobs as applied to work design. They examined the relationship between certain attributes of tasks and employees' reactions to their work. They devised measures of six requisite task attributes: variety, autonomy, required interaction, optional interaction, knowledge and skill required, and responsibility. These attributes were predicted to relate positively to employee satisfaction, effectiveness, and attendance.

A summary measure, the Requisite Task Attributes Index, was derived from the six measures and used to test relationships between the design of jobs and employee reactions to them. Turner and Lawrence expected that the higher a job's standing on these attributes, the more satisfaction jobholders would experience. Positive relations were found between the Requisite Task Attributes Index and employee satisfaction for workers from factories located in rural towns. The researchers concluded that reactions to jobs high on the Requisite Task Attributes

Index were moderated by differences in the cultural backgrounds of employees.

Support for the research of Turner and Lawrence was provided by ensuing investigations by Blood and Hulin (1967) and Hulin and Blood (1968). Hackman and Lawler (1971), however, suggested that previously found differences in how members in groups responded to their jobs might be explained in terms of employees' personal need for professional growth and development rather than cultural background differences. They suggested that employees should react positively to four core dimensions adapted from those used by Turner and Lawrence: variety, autonomy, task identity, and feedback. Additionally, a measure was developed to reflect the level of employee desire for the satisfaction of higher-order needs. Hackman and Lawler (1971, p. 273) discovered that when jobs are high on the four core dimensions, employees report having higher intrinsic motivation to perform well. Furthermore, the researchers provided evidence that key characteristics of the job itself can directly affect employee attitudes and behavior.

Spawned by the basis of these previous works, Hackman and Oldham (1975) developed the Job Characteristics Model

and the Job Diagnostic Survey. Their theory proposes that the job itself should be designed to possess certain characteristics that create conditions for high work motivation, satisfaction, and performance.

Description of the Job Diagnostic Survey

The Job Diagnostic Survey consists of eighty-three items presented in the forms of questions or statements, and asks subjects to respond in terms of their job according to their perceptions. Using a seven-point response scale (1 = low, 7 = high), items measuring the core job characteristics, critical psychological states, internal work motivation, growth need strength, and general and specific satisfactions, appear randomly throughout the instrument.

Job characteristics. Scores on the five core job characteristics measured are obtained from items in sections one and two of the Job Diagnostic Survey. In section one, a single item is provided for each job characteristic, in the format illustrated in Table 2. Respondents circle the number that best reflects their assessment of the amount of variety in their jobs.

Table 2

Question from section one of the Job Diagnostic Survey of
Hackman and Oldham (1974)

1. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work using a variety of your skills and talents?

1	2	3	4	5	6	7
Very little: the job requires the same routine things over and over			Moderate Variety	Very much: the job requires me to do many different things, using a number of different skills and talents		

In section two, two items are provided for each of the five core job characteristics, one of which is phrased in direct or positive terms, and one of which is phrased in reversed or negative terms. Respondents are asked to indicate how accurate versus inaccurate each statement listed is in describing the objective characteristics of the job. A seven-point scale is used, ranging from "very inaccurate" through "uncertain" to "very accurate". A sample statement in reversed format for skill variety is illustrated in Table 3:

Table 3

Question from section two of the Job Diagnostic Survey of Hackman and Oldham (1974)

1	2	3	4	5	6	7
Very Accurate	Mostly Accurate	Slightly Accurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

_____ The job is quite simple and repetitive.

Critical psychological states. Scores for experienced meaningfulness of work, experienced responsibility for work outcomes, and knowledge of results are obtained from section three and five of the Job Diagnostic Survey. In section three, respondents indicate their agreement or disagreement with a number of statements about their work experience. A seven-point scale is used ranging from "disagree strongly" through "neutral" to "agree strongly". Figure 2 illustrates sample statements.

In section five, a projective format is used, in which respondents are asked to think of other people in the organization who hold the same job and to indicate how accurate each of a number of statements are in describing the feelings of those other people about the job. The scale is the same seven-point agree-disagree scale used in section three. The content of the items is very similar to

For Experienced meaningfulness of Work in reversed format:

_____ Most the things I have to do on this job seem useless or trivial.

For Experienced Responsibility for Work Outcomes:

_____ I feel I should take the credit or blame for the results of my work on this job.

For Knowledge of Results in reversed format:

_____ I often have trouble figuring out whether I'm doing well or poorly on this job.

Figure 2. Questions from section three of the Job Diagnostic Survey of Hackman and Oldham (1974).

those included in section three, except that most items are prefaced by a phrase such as "Most people on this job . . .". A sample item for experienced meaningfulness is documented in Figure 3:

_____ Most people on this job find the work very meaningful.

Figure 3. Question from section five of the Job Diagnostic Survey of Hackman and Oldham (1974).

In all, there are four items tapping experienced meaningfulness of the work, six items for experienced responsibility for work outcomes, and four items for knowledge of results. Eight of the items are directly stated and six of the items are in reversed format.

General satisfaction and work motivation. General satisfaction and internal work motivation are assessed in sections three and five; the items for these scales are intermixed with those for the critical psychological states. There are five items tapping general satisfaction and six items for internal work motivation. Two of the general satisfaction items and one of the internal motivation items are in reversed format. A sample item for general satisfaction in reversed format and a sample items for internal work motivation are illustrated in Figure 4:

- _____ My opinion of myself goes up when I do this job well.
- _____ People on this job often think of quitting.

Figure 4. Questions from section three and five of the Job Diagnostic Survey of Hackman and Oldham (1974).

Specific satisfaction. Scores for five specific satisfaction sub-scales are obtained from section four of the Job Diagnostic Survey. Subjects respond to the query "How satisfied are you with this aspect of your job?" for each item, using a seven-point scale ranging from "extremely dissatisfied" through "neutral" to "extremely

satisfied". Sample items for each of the five sub-scales are represented in Figure 5:

Job Security

_____ How secure things look for me in the future in this organization.

Pay and Compensation

_____ The amount of pay and fringe benefits I receive.

Social

_____ The chance to get to know other people while on the job.

Supervision

_____ The amount of support and guidance I receive from my supervisor.

Growth

_____ The amount of personal growth and development I get in doing my job.

Figure 5. Questions from section four of the Job Diagnostic Survey of Hackman and Oldham (1974).

Individual growth need strength. The desire to obtain professional growth and achievement is measured in sections six and seven of the survey. In section six, respondents are asked to indicate the degree to which they would like to have specific elements present in their job. Five of the items are not relevant to individual growth needs, and are not scored. A sample of a Growth Need item question is shown in Figure 6:

_____ Chances to exercise independent thought and action in my job.

Figure 6. A question from section six of the Job Diagnostic Survey of Hackman and Oldham (1974).

All eleven items refer to generally positive or desirable aspects of the work environment. To emphasize to the respondents that most items are seen as desirable to most people, the seven-point response scale ranges from "would like having this only a moderate amount", through "would like having this very much" to "would like having this extremely much". To further reinforce the fact that these items are to be marked differently from those encountered earlier in the instrument, the numerical values on the response range from four to ten. The item scores are transformed to a standard one to seven scale prior to analysis by subtracting a constant of 3.0 from each item.

In section seven, the need for professional growth and achievement is measured by asking respondents to indicate their relative preferences for pairs of hypothetical jobs. A sample item is diagramed in Table 4:

Table 4

A question from section eight of the Job Diagnostic Survey of Hackman and Oldham (1974)

<u>Job A</u>			<u>Job B</u>	
A job where you are often required to make important decisions			A job with many pleasant people to work with	
1	2	3	4	5
Strongly Prefer A	Slightly Prefer A	Neutral	Slightly Prefer B	Strongly Prefer B

Respondents circle the number that reflects their own relative preference between the two jobs. In each item, a job with characteristics relevant to growth-need satisfaction is paired with a job which has the potential for satisfying one of a variety of other needs. The twelve items in this section are split in half with a choice between jobs, both of which have positive characteristics, and with jobs that have both predominantly negative features. The growth-relevant job is presented in half of the items as "Job A" and in half as "Job B".

Norms of the Job Diagnostic Survey

The Job Diagnostic Survey (Hackman and Oldham, 1974) is an instrument designed to be useful both in the diagnosis of jobs prior to their redesign, and in research and

evaluation activities that attempt to assess the effects of redesigned jobs on the employees who perform them. The results presented in the Hackman and Oldham (1974) report were based on data from a relatively small sample of 658 employees who worked in sixty-two different jobs in seven organizations. Unfortunately, their data did not represent a cross section of organizations, jobs, or employees in the United States. Thus, any comparisons involving Job Diagnostic scores from any organization with those reported in the 1974 paper may be misleading. The report prepared by Oldham, Hackman and Stepina (1978) rectifies this problem.

The results reported by Oldham, Hackman and Stepina (1978) are based on data obtained from approximately 6,930 employees working on 876 jobs in fifty-six organizations. The jobs were highly heterogeneous, including professional, sales, clerical, and managerial work from governmental, service, and productive organizations; all organizations were located in all geographical regions of the United States.

Members of Roy W. Walters consulting firm collected approximately seventy-five percent of the data to use for organizational diagnoses, while academicians using the Job Diagnostic Survey for research purposes collected the

remaining twenty-five percent of the data. All subjects completed the Job Diagnostic Survey and were guaranteed anonymity. The results were reported in four sections. Section one provided the means, standard deviations, reliabilities, and intercorrelations among the Job Diagnostic scales and was presented for the sample as a whole. The Job Diagnostic Survey means and standard deviations were reported separately for various types of organizations in section two, and for various types of jobs in section three. Means and standard deviations for various demographic categories were presented in section four.

The reliabilities, presented in Table 5, ranged from a high of .88 to a low of .58. In general, the results are comparable to those reported in previous studies (Dunham, 1976; Hackman and Oldham, 1975; Katz, 1978; Pierce and Dunham, 1978).

Table 5

Internal consistency reliabilities of the Job Diagnostic Survey reported by Oldham, Hackman, and Stepina (1978)

JDS Scale	N(a)	Reliability(b)
Skill Variety	3	.68
Task Identity	3	.61
Task Significance	3	.58
Autonomy	3	.64
Feedback from Job	3	.68
Feedback from Agents	3	.75
Dealing with Others	3	.62
Experienced Meaningfulness	4	.71
Experienced Responsibility	6	.67
Knowledge of Results	4	.71
General Satisfaction	5	.77
Internal Motivation	6	.69
Pay Satisfaction	2	.86
Security Satisfaction	2	.73
Social Satisfaction	3	.64
Supervisory Satisfaction	3	.87
Growth Satisfaction	4	.84
Would Like GNS	6	.87
Job Choice GNS	12	.71
Total GNS	18	.88

Note: N throughout about 6930 with small variations due to missing data

(a) number of items composing each scale

(b) Reliabilities were calculated by obtaining the average interim correlation for all items which are scored on each scale and then adjusting median by Spearman-Brown procedures to obtain an estimate of the reliability of the scale score.

Table 6 presents the means and standard deviations of the Job Diagnostic Survey across the 876 jobs in the sample. The scale means obtained are across all employees and are very similar to those obtained when averages were computed across all jobs. This indicates that the different numbers of respondents who held the various jobs did not substantially affect the mean scale scores.

Means of several of the scales reported in Table 6 deviate from those presented in the 1974 report of Hackman and Oldham. The means of skill variety, feedback from agents, dealing with others, general satisfaction, internal motivation, and would-like growth-need strength were somewhat higher than originally reported, while the means for task identity feedback from job, knowledge of results, social satisfaction, and supervisory satisfaction were somewhat lower.

The patterns of the intercorrelations were similar to those reported by Hackman and Oldham (1974), although the overall level of relationship in the across-job analysis was higher than in the across-respondent analysis. The five core job dimensions of skill variety, task identity, task significance, autonomy, and feedback, were moderately intercorrelated, as had been found in previous research

Table 6

Job Diagnostic Survey Means and Standard Deviations Across
Respondents and Jobs

JDS Scale	Across Respondents		Across Jobs	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Skill Variety	4.53	1.57	4.66	1.15
Task Identity	4.65	1.44	4.72	.90
Task Significance	5.49	1.25	5.51	.79
Autonomy	4.78	1.39	4.87	.93
Feedback from Job	4.81	1.34	4.87	.79
Feedback from Agents	4.06	1.58	4.11	.95
Dealing with Others	5.46	1.31	5.58	.94
Motivating Potential Score	122.10	69.41	127.76	48.74
Experienced Meaningfulness	5.10	1.14	5.16	.74
Experienced Responsibility	5.40	.96	5.47	.59
Knowledge of Results	5.04	1.14	5.00	.68
General Satisfaction	4.65	1.27	4.70	.82
Internal Motivation	5.50	.89	5.58	.52
Pay Satisfaction	4.16	1.66	4.30	1.07
Security Satisfaction	4.76	1.48	4.86	.96
Social Satisfaction	5.31	1.02	5.36	.62
Supervisory Satisfaction	4.79	1.57	4.93	.90
Personal Development Satisfaction	4.74	1.33	4.83	.85
Would Like Growth Need Strength	5.64	1.22	5.70	.74
Job Choice Growth Need Strength	4.23	.81	4.32	.55
Total Growth Need Strength	4.93	.86	5.05	.59
N (approx.)	6930		876	

(Dunham, 1976; Hackman and Lawler, 1971; Hackman and Oldham, 1974). With the exception of task identity, there were substantial relationships between the core job dimensions and the corresponding psychological states. Additionally, the core dimensions and the psychological states were substantially and positively related to the outcome measures. Employees, who are paid on a salaried basis, see their jobs as higher on the core dimensions than do the individuals who are paid on an hourly basis. Individuals in salaried positions also have higher scores for motivation and growth-need strength and, for the most part, score higher on the satisfaction indices.

The Job Diagnostic Survey in Education

Utilizing the Job Diagnostic Survey, Cammarata (1984) designed a study to investigate the motivating potential of elementary and secondary teachers in Chester County, Pennsylvania. The focus of his study was to ascertain the motivating potential of the teaching job, as measured by the Job Diagnostic Survey, and to compare his findings with the norms reported by other studies using the Job Diagnostic Survey. He delivered 609 Job Diagnostic Surveys to a contact person who distributed the surveys to the teachers. Out of the 609 surveys administered, 349 surveys

were completed correctly for a return rate of fifty seven percent.

For each variable, the data were classified by: (a) entire population; (b) sex; (c) district; (d) district size; (e) type of teacher. The mean, standard deviation and range (including maximum and minimum score), were computed using the Statistical Package for the Social Sciences. For each of the response variables, a one-way analysis of variance was used to compare mean responses among groups. Cammarata reported that a significant difference in the mean scores was present when the F probability was below .05. Mean scores of the entire population of Chester County teachers were compared to mean scores of other jobs by comparing the results of this study with the results of normative data provided by Oldham, Hackman, and Stepina (1978, pp. 1-42); normative data was based on the results of studies involving 6,930 employees holding 876 heterogeneous jobs in fifty-six organizations. To summarize, this study attempted to:

1. Investigate the current state of motivation for elementary and secondary teachers in Chester County.
2. Investigate the relationship between the motivating potential of elementary and secondary teachers.

3. Investigate the relationship between the motivating potential of female and male teachers.
4. Investigate the relationship of motivating potential as found between large and small districts in Chester County.
5. Investigate the relationship of motivating potential among the twelve Chester County districts.
6. Compare the findings of this study with the norms provided by other studies using the Job Diagnostic Survey.

The findings of the Cammarata study indicated the average motivating potential score for the teachers to be 178.9. This was substantially higher than the reported national mean motivating potential score of 128. Teachers, as a whole, had a positive outlook toward their job as indicated by the high scores in skill variety, task significance, autonomy, and dealing with others. An extremely high task significance score indicated the degree of importance teachers place upon their work while a slightly above-average score for task identity indicated that teachers did not see themselves as having the opportunity to complete a whole piece of work with a clear beginning and end. The degree to which teachers receive

feedback about their performance from supervisors or colleagues was above the national average while the pay satisfaction variable mean score of 3.9 was well below the national average of 4.3; it was the lowest score found in this study. Finally, teachers were well below the recorded national norm for the supervisory satisfaction variable.

Despite a motivating potential score that was significantly higher than the reported national mean, the Cammarata study revealed certain problems in the teaching profession, which should be addressed. Specifically, the perceived inability to complete a whole piece of work, together with lower than average pay satisfaction and only average supervisory satisfaction, indicated that teachers felt some job redesign was necessary. Additionally, the findings of the Cammarata study seem to suggest that the application of the Job Characteristics Model and the Job Diagnostic Survey to a public school educational setting was useful.

In a study exploring the relationships among job design, supervisory behavior, and teacher motivation, Ellis (1987) found that teachers who perceived a high degree of presence of the core job dimensions, were more internally motivated than those who did not. Using a sample of 425 classroom

teachers randomly selected from 8,484 public elementary and secondary schools in the twenty-four districts of Fairfield County, Connecticut, she collected 207 Job Diagnostic Surveys that represented a fifty-three percent return rate. Responses to the Job Diagnostic Survey were tabulated as suggested by Hackman and Oldham (1974). In addition to computing a Motivating Potential Score, scores were compiled for each of the job characteristics, and for the affective outcomes. Scores were also compiled for context satisfactions such as satisfaction with job security, compensation, co-workers, and supervision; and for individual growth need strength. All scores were compared to national norms and to the norms of specific job families as established by Oldham, Hackman, and Stepina (1978) to see how the job of teaching compared with others in the categories measured by the survey. Finally, an analysis of variance was calculated to see if significant differences existed in the responses of: (a) male and female respondents, (b) elementary, middle, and secondary level respondents, (c) respondents in high, average, and low socio-economic districts, and (d) respondents holding and not holding enriched jobs.

The findings of the Ellis study were significant. She found that for teachers, teaching had the potential to be intrinsically motivating. In the sample, the motivating potential scores ranged from 25.33 to 343. The mean for the sample compared favorably with scores for national norm groups (Oldham, Hackman, and Stepina, 1978), indicating that the job of teaching was potentially more intrinsically motivating than other professions. There was a relatively high degree of autonomy, indicating that teachers believed to have the freedom of setting their own goals, determining their own curriculum and methodologies, and selecting their own materials. However, relatively low scores for feedback and for quality supervision, indicated that laissez-faire leadership was perceived as the prevailing style.

Additional findings indicated that in general, teachers were more internally motivated and more satisfied with their jobs than were people in other professions. However, examination of the data revealed that teachers with high growth and achievement needs were significantly less satisfied with their jobs than were their counterparts with lower growth needs. Finally, like the Cammarata study, the findings of the Ellis study appear to support the application of the Job Characteristics Model and Job

Diagnostic Survey to public school educational environments.

The design of the administrative positions and the nature of the work experiences of physical education and sport administrators was Cleave's (1989) focus. Using the Job Diagnostic Survey, she investigated administrators' perceptions of their positions and their reaction to these positions. She then compared these perceptions and reactions to those of the general working population as reported by Hackman and Oldham. Additionally, she examined the appropriateness of the Job Characteristics Model and the Job Diagnostic Survey for this sample of administrators.

The primary sample for this study was drawn from forty Canadian universities consisting of 196 administrators in physical education and from twenty-two state of Illinois universities consisting of 130 administrators in physical education. Replies were received from 151 individuals, or 77.04%, from the universities in Canada and from ninety-eight persons, or 75.38%, from Illinois. Several analyses were conducted to compare this sample with the normative data reported by Oldham, Hackman, and Stepina (1978, pp. 1-42). Using t-tests for significant differences with

independent means ($p < .05$), significant differences in all comparisons were detected.

The study also investigated the effects various demographic, organizational, and positional factors had on physical education and sport administrators' perceptions of the variables included in the Job Characteristics Model. To assess the impact of these factors on the respondents' perceptions, the sample was divided into several sub samples. One-way analyses of variance were used to test for significant differences among sub samples on each factor. Tukey's Significant Difference test ($p < .05$) was used to identify where the differences lay.

Three major conclusions were drawn from the results of the Cleave study and were reported as follows:

1. Physical education and sport administrators perceived their positions as more complex, experienced higher psychological states, exhibited more positive affective responses, had stronger growth needs and were more satisfied with the context of their positions than the general working population.
2. Physical education and sport administrators were more homogeneous in their perceptions of, and reactions to, their positions than members of the general

working population are with respect to their jobs.

The main effects of demographic, organizational, and political factors exerted very little influence on the perceptions and reactions of physical education and sport administrators with respect to their administrative positions.

3. In general, the Job Characteristics Model proposed by Hackman and Oldham appeared to be applicable to this homogeneous sample of physical education and sport administrators. For the most part, the relationships hypothesized by the model were found in this sample of physical education and sport administrators.

The effectiveness of the Job Characteristics Model and the Job Diagnostic Survey with this sample of physical education and sport administrators was assessed using many of the same statistical analyses employed by Hackman and Oldham (1976) in the initial validation of their model. The relationships that were hypothesized to exist in the Job Characteristics Model by Hackman and Oldham were examined by considering the correlations that were found between the various components of the model. Cleave reports that the results for this study reconfirmed the positive

relationships among these variables that are proposed by the Job Characteristics Model.

Rooney (1990) investigated the job satisfaction of all educators teaching in the thirty-one elementary schools and four high schools in the Catholic Diocese of Wichita. She collected data using the Job Diagnostic Survey and compared her findings to the norms compiled by Oldham, Hackman, and Stepina (1978). In order to detect interaction effects, an analysis was conducted using a three-way analysis of variance and in order to examine the data for statistical significance, the Bonferroni (Dunn) T Test and Duncan Multiple Range Test were used.

Of the 503 surveys distributed, 341 were usable giving Rooney a sixty-seven percent return ratio. Summaries of her findings are:

1. Administrators reported greater salary satisfaction, autonomy, and a motivating potential score than teachers.
2. Educators with fifteen to twenty-five years of experience reported greater growth satisfaction than educators with less than fifteen years or more than twenty-five years of experience.

3. Educators with more than twenty years of experience reported greater salary satisfaction than educators with less experience.
4. Educators with ten to twenty-five years of experience indicated greater satisfaction with feedback from the job itself than those educators with less than ten years of experience.
5. Overall job satisfaction was reported to be greater for educators with sixteen to twenty years of experience than for educators with eleven to fifteen years of experience.
6. Religious educators reported greater salary satisfaction, security, and feedback than lay educators while the motivating potential score was higher for lay educators.
7. Educators in schools with more than 300 students indicated that they experienced greater autonomy than did educators in schools with fewer than 100 students, whereas job security was greater for educators in schools with 300 to 400 students.
8. Male educators reported greater overall job satisfaction than female educators.

Using the Job Characteristics Model and Job Diagnostic Survey as the conceptual framework of her study, Rodriguez (1992) examined the content and the context of the jobs of academic library cataloger and their reactions to these job-contents and job-contexts. The nine state universities of Florida were selected for the study because they were considered to be fairly homogeneous. The subjects studied were people occupying a post-entitled "cataloger" who held a master's degree in library science. In all, a total of fifty catalog librarians were identified, and forty-eight participated in the study.

Descriptive data was collected through the use of Job Diagnostic Survey and the raw scores for every variable were determined as well as the median, mean, and standard deviation. To test the null hypothesis, two-tailed t tests and z test at the .05 level of significance for the means were computed. The data was analyzed on three separate levels:

1. The score for the variables of each respondent was analyzed on an individual basis;
2. The scores for the respondents were analyzed to determine if any pattern or groups might be distinguished; and

3. The scores of the group as a whole were compared to the national norms.

In the first level, the assessment was focused on the core job characteristics, psychological dimensions, affective responses to the job, context satisfactions, and the individual growth need strength. In the second level of analysis an attempt was made to identify similarities or differences, and the magnitude of those differences, if any, within the group as a whole and within the sub-groups. The third level of analysis compared the scores of the individuals, sub-groups, and the group as a whole to the national norms reported by Oldham, Hackman, and Stepina (1978).

The Rodriguez study exposed two patterns in the data: one for those catalogers in the larger institutions and one for those catalogers in the smaller institutions. Specifically, the motivating potential score for those in the smaller institutions was significantly above the national norm for governmental institutions while that of the catalogers in the larger institutions was significantly lower than the national norms for both government institutions and professional jobs. In seven of the eighteen variables the means of the catalogers in the

larger institutions were significantly lower than the national norms for government institutions. When the means of this group were compared with the national norms for professional jobs, fourteen of the eighteen variables were significantly lower than the national norms.

Although the Job Characteristic Model and Job Diagnostic Survey were used as the conceptual framework of the earlier studies, Morton (1992) professed to have executed the first study to actually test the job characteristics model of motivation in public schools. Seven hypotheses were tested with the first three relating to the casual core of the model. The four remaining hypotheses tested the modifying effects of growth need strength and context satisfaction. Basically, the purpose of this study was to retest each hypothesis tested originally by Hackman and Oldham in a business and industrial settings in the school setting. The seven hypotheses tested and the findings were:

1. The outcome measures of internal motivation, general satisfaction and growth satisfaction, will be maximized when all three psychological states are high.
2. The psychological states mediate the relationship between job dimensions and the outcome variables.

3. Specific job dimensions relate to specific psychological states.
4. Teachers with high growth need strength will show significantly stronger effects of high motivating potential on the psychological states.
5. Teachers with high context satisfaction will show significantly stronger effects of high motivating potential on the psychological states.
6. Teachers with high growth need strength will show significantly stronger effects of high job characteristics on job satisfaction, involvement and motivation.
7. Teachers with high context satisfaction will show significantly stronger effects of high job characteristics on job satisfaction, involvement, and motivation.

Hypothesis one was tested using regression analysis for predicting the outcome measures of the three psychological states, and with the three psychological states taken together. Hypothesis two was tested by statistically controlling the mediating psychological state, using partial correlation to determine the relationship between each job dimension and the outcome measure. The

relationship was also tested using multiple regression analysis. The three psychological states were introduced into a multiple regression equation to serve as primary predictors. Then, the five job dimensions were added to the equation, forming an eight-variable equation. Hypothesis three was tested using multiple regression analysis. A regression equation was computed for the model-specific casual relationship between the job dimensions and each psychological state. Then, the remaining job dimensions were introduced into the regression equation.

Hypotheses four and five were tested in an identical fashion by computing the statistical significance of the difference between the correlations for high and low growth need strength and context satisfaction teachers, comparing the top and bottom quartiles. Correlations were computed between each job dimension and its related psychological state. Likewise, hypotheses six and seven were tested in an identical fashion by computing the statistical significance between correlations for high and low growth need strength and context satisfaction teachers, comparing the top and bottom quartiles. Correlations were computed between the job characteristics and each outcome. Morton's findings indicated that all three psychological states were needed

to maximize prediction, thereby validating the proposed model.

To test the utility of the Job Characteristic Model as a diagnostic tool in the field of education, Barnabe and Burns (1994) used the Job Diagnostic Survey to diagnose factors affecting teachers' motivation. Data was collected from 247 teachers in four different boards in Quebec. Of the teachers, seventy-one percent were women, sixty-seven percent were between the ages of forty and fifty-nine years of age and forty-three percent had twenty-one or more years of teaching experience. Using the same statistical analyses procedures employed by Hackman and Oldham (1976), correlations were computed to verify the relationships of the job dimensions and the psychological states with the outcome variables, and to test the degree to which the psychological states mediate between job characteristics and outcome variables as predicted. Since this study was the first attempt to test the usefulness of the job characteristics theory as a diagnostic tool for teaching in Quebec, the overall means and standard deviations of the Quebec sample were compared to norms reported by Hackman and Oldham (1980, p. 317). Barnabe and Burns explain further:

Two business job family groupings for which norms have been established, professionals and service job families, were considered most near equivalent to teaching as a job family since teaching is both a profession and a service occupation. There are some limitations since Hackman and Oldham did not define these job family groupings in their publications. Therefore, it was assured that business professionals and business personnel would hold many values in common with teacher-professionals and would compare relatively well to teachers in level of education and concern for people. (p. 177)

The results of this study reported support for the job characteristics theory and the use of the Job Diagnostic Survey. Although the means on the Job Diagnostic Survey scales for the Quebec sample are quite similar to Hackman and Oldham's norms, most of the correlation coefficients are lower than those reported by the authors of the theory. However, the job dimensions are positively related to the measures of the psychological states, while the latter are more strongly related to measures of personal outcomes.

The findings of Barnabe and Burns support the intervening effect of the psychological states that, job

characteristics relate more strongly to the three psychological states than to outcomes in terms of motivation and satisfaction; exceptions were task identity and experienced meaningfulness of work, and feedback from the job and knowledge of results. The researchers suggested that the reported low correlations of the first three job characteristics of skill variety, task identity, and task significance, with the experienced meaningfulness of the work might be interpreted as lending support for the concept of job design, they may well have resulted from the actual design of the teacher's job in Quebec. Brassard (1989, p. 6) asserts, teaching in Quebec is progressively taylorized and teachers are confined in an executant role. The Provincial Ministry of Education has developed a host of bureaucratic controls over teaching in the past decade; teachers are less free to design their own work, having to meet well-defined objectives and to simplify instruction.

Barnabe and Burns discovered an interesting and perplexing linkage between the autonomy and experienced responsibility of Quebec teachers. They reported a 5.4 mean score for autonomy, which appears high when compared with the 5.0 mean score for experienced responsibility. This linkage is particularly interesting because it raises

questions about the perception Quebec teachers have regarding their autonomy. The researchers offer the following explanation:

This may indicate that teachers feel more autonomous within the classroom, but not in regard to the general design of work. The very weak correlation found might be due to the executant role mentioned by Brassard.

Moreover, teachers in Quebec have gained more collective bargaining power through syndical activity, and that may be at the expense of their sense of personal responsibility for the conduct of their work. (p. 182)

The relationships between the psychological states and the personal outcomes, namely internal work motivation, growth satisfaction, and general satisfaction, found in this study are in the directions predicted by the job characteristics theory. To summarize, the following are the conclusions drawn from the study as reported by Barnabe and Burns:

1. The Job Characteristics Model and the Job Diagnostic Survey instrument have utility for the teaching profession.

2. The Job Diagnostic Survey instrument appears to discriminate satisfactorily between job characteristics for the Quebec sample studied.
3. Proposal relationships between job characteristics and psychological states, and between psychological states and motivation and satisfaction outcomes, were found to exist, although the correlations were lower than those found in the much larger samples tested by Hackman and Oldham.
4. Psychological states appeared to mediate between job characteristics and outcomes.
5. The differences in some correlations between the findings of this study and Hackman and Oldham's suggest that questions about specific factors may lead to modifying the model for education (1994, p. 182).

Barnabe and Burns (1994) recommended further study of the usefulness of the model and the Job Diagnostic Survey instrument for education. Additionally, they suggested that the model should be tested in other areas of North America and other countries within various educational settings.

Gibbons (1996) investigated the organizational work characteristics that predict teachers' career

dissatisfaction by testing the Job Characteristics Model of motivation in public schools. Using the same conceptual framework of the Morton (1992) study, Gibbons tested the same seven hypotheses. In order to test these hypotheses, the Job Diagnostic Survey was used to collect information from 393 teachers in twelve elementary schools located in two eastern Missouri counties of Jefferson and St. Francois.

Pasi (1995) examined the relationship between certain job dimensions of Catholic parochial high school principals and their level of job satisfaction, and the effect of school governance structure on these relationships. A stratified random sample was drawn from a population of parochial high principals in grades nine through twelve, with student populations ranging from 600 to 1000, from the following states: New England (Connecticut, Massachusetts, New Hampshire, Rhode Island), and New York, New Jersey, Delaware, Maryland and Pennsylvania. These states, chosen because of their relative geographic proximity, provided Pasi with a sample of adequate size.

The emphasis of this research, in part, was on the perceived relationship between the five core job characteristics and the overall job satisfaction levels for

Catholic parochial secondary school principals. Job satisfaction was measured with data collected using the Job Diagnostic Survey. The data analysis involved the following procedures:

1. The comparison of all scores to the national norms reported by Oldham, Hackman, and Stepina (1979).
2. Computing the reliabilities by obtaining the median correlation for all items, which were scored on each variable, and then adjusting the median by Spearman-Brown procedures to obtain an estimate of the reliability for the summary score.
3. A regression model was used to examine all five job characteristics in a multiple regression procedure. A stepwise progression model was used to examine the relationship between the five job characteristics. This allowed for the researchers to determine which variables contributed significantly to the variance in job satisfaction. Additionally, it indicated which variables accounted for the greatest and least contributions to job satisfaction.
4. To look for group differences between groups, a one-way Analysis of Variance procedure was performed over each of the five job characteristics.

Of the 186 Catholic parochial secondary school principals surveyed, 119 responded for a return rate of approximately sixty-four percent. The findings Pasi reported suggest that although each job dimension influenced the variance in job satisfaction, job feedback provided the greatest contribution and accounted for eighty percent of the total variance. The second highest correlation between the overall job satisfaction score exists between autonomy and job satisfaction, which accounted for eleven percent of the variance. The lowest mean score on the Job Diagnostic Survey was on the dimension of Task Identity and the least significant correlation between a particular job characteristic and overall job satisfaction score existed between Skill variety and job satisfaction. The mean scores on the dimension of Task Significance were high (6.58) while principals, overall, indicated high levels of job satisfaction.

Among a variety of recommendations offered by Pasi, which illustrate the effectiveness of the model in predicting job satisfaction of Catholic parochial high school principals, was a call to conduct similar studies

with various populations in education utilizing the Job Diagnostic Survey, a call this study heeds.

CHAPTER THREE

Methodology

This chapter documents the methodology that was described to and approved by the Office of Research Services at the University of North Texas through a Human Subjects Application. The chapter outline is as follows: (a) instrumentation and data collection procedures; (b) population, sample, and subjects; (c) data analysis techniques.

Instrumentation and Data Collection Procedures

The Job Diagnostic Survey developed by Hackman and Oldham (1974) is a non-copyrighted instrument that can be administered without permission of the authors (Hackman and Oldham, 1980 p. 275). The survey is useful in measuring the perceptions of employees regarding the core job characteristics, critical psychological states, and personal/work outcomes. A copy of the instrument can be found in Appendix A.

The Job Diagnostic Survey is taken by employees who work on any given job, and provides measures of each of the

concepts in the Job Characteristics Theory and their dimensions. Additionally, the survey instrument provides specific measures of the respondent's reactions to his or her work, and produces a score that reflects the overall "motivating potential" of a job relative to its core job characteristics.

Core Job Characteristics

Five core job dimensions, in addition to two supplemental dimensions, are measured in sections one and two. In section one, respondents identify how much of each job dimension they perceive to be present in their current jobs. In section two, they indicate the accuracy of a number of statements relative to their jobs. All items are direct-scored and the score for each job dimension is determined by averaging the values of the items shown in Table 7.

Critical Psychological States

The three critical psychological states are measured by using self-descriptive items in section three and section five. The self-descriptive items ask respondents how strongly they agree or disagree with a number of statements, which describe work experiences. The self-projective items ask how accurately they believe a series

of statement describes the feelings of other people who hold positions similar to their own. The score for each critical psychological state is the average of the appropriate items from sections three and five as identified in Table 8.

Personal/Work Outcomes

General job satisfaction and internal work motivation are measured by both self-descriptive and projective items, which are intermixed with those assessing the critical psychological states. The overall scores for these responses are obtained by averaging the appropriate items as identified in Table 8. Satisfaction with personal development is measured only in section four using three short items, which ask the respondent directly how satisfied he or she is with the opportunities for personal growth on the job. The growth satisfaction score is calculated by averaging the values of these three items, which are also identified in Table 9.

Table 7

Job Diagnostic Survey Items Used to Measure Job Dimensions

Variables	Section One	Section Two
Skill variety	#4	#1, #5
Task Identity	#3	#11, #3
Task Significance	#5	#8, #14
Autonomy	#2	#13, #9
Feedback from Job	#7	#4, #12
Feedback from Agent	#6	#10, #7
Dealing with Others	#1	#2, #6

Note: # = item number from the Job Diagnostic Survey in Appendix A

Table 8

Job Diagnostic Survey Items Used to Measure Critical

Psychological State

Variable	Section Three	Section Five
Experienced meaningfulness	#7, #4	#6, #3
Experienced Responsibility	#8, #12, #15, #1	#4, #7
Knowledge of Work Results	#5, #11	#5, #10

Note: # = item number from the Job Diagnostic Survey in Appendix A

Table 9

Job Diagnostic Survey Items Used to Measure Personal/Work Outcomes

Affective Responses to the Job	Section Three	Section Five
General Job Satisfaction	#3, #13, #9	#2, #8
Internal Work Motivation	#2, #6, #10, #14	#1, #9
Specific Satisfaction	Section Four	
Pay Satisfaction	Average items #2 and #9 of section four	
Security Satisfaction	Average items #1 and #11 of section four	
Co-workers Satisfaction	Average items #4, #7, #12 of section four	
Supervision Satisfaction	Average items #5, #8, #14 of section four	
Personal Development Satisfaction	Average items #3, #6, #10 of section four	

Note: # = item number from the Job Diagnostic Survey in Appendix A.

Individual Growth Need Strength

The desire to obtain professional growth and achievement is measured in sections six and seven. In section six of the survey, respondents identify how much they "would-like" various characteristics present in their job. In section seven, the subjects are presented with various "job-choices" by which they identify their preferences. The survey yields two separate measures of individual growth need strength, one is calculated by averaging the values of five items in section six, and one is calculated by averaging the twelve items in section seven as shown in

Table 10. Individuals scoring high on Individual Growth Need Strength have been shown to respond positively to complex, challenging, and enriched jobs; individuals low on this measure tend not to find such jobs satisfying or motivating.

Table 10

Job Diagnostic Survey Items Used to Measure Individual Growth Need Strength

Variables	Section Six	Section Seven
"Would-Like" Format	Average #2, #3, #6, #8, #10, #11	
"Job Choice" Format		Average #1, #2, #3, #4, #5, #6, #7, #8, #9 #10, #11, #12

Note: # = item number from the Job Diagnostic Survey in Appendix A

Growth-need strength was measured in section six using a seven-point Likert scale ranging from four to ten that was converted to a standard one to seven scale prior to analysis by subtracting a constant of three from each score, and in section seven using a five-point scale that was converted to a seven point scale using the following formula provided by Oldham, Hackman, and Stepina (1978):

$$[1.5 \times \text{five-point scale score}] - 0.5.$$

Motivating Potential Score

A score reflecting the potential of a job for eliciting positive internal work motivation on the part of employees, especially those with high desire for growth need satisfactions, is determined using the formula illustrated in Table 11.

Table 11

The Motivating Potential Score Formula of the Job

Diagnostic Survey of Hackman and Oldham (1974)

$$\text{Motivating Potential Score} = \frac{\text{Skill variety} + \text{Task Identity} + \text{Task Significance}}{3} \times \text{Autonomy} \times \text{Job Feedback}$$

Data Collection

A Human Subjects Application for this study was submitted to and approved by the Office of Research Services at the University of North Texas. Data for this investigation was collected using a mailed survey attached to a stamped IRB approval consent letter following the steps outlined below:

1. The director of each independent community music school in the population was contacted by phone in order to adequately explain the research project and

to receive permission to use the faculty of the institution as subjects for the study.

2. A letter was sent to each director that documented the details of the conversation regarding the purpose of the study and requested their signature as confirmation of permission to use their faculty as subjects. Additionally, a biographical information form designed to collect descriptive data about the school was completed by the director and returned with the confirmation letter.
3. Upon the return of the confirmation letter and the biographical information form, an administrative assistant was contacted to appoint a faculty liaison for the distribution of the survey packets.
4. The faculty liaison was contacted by phone in order to adequately explain the purpose of the research project and to determine the number of survey packets needed for the school.
5. All survey packets containing the following were mailed to the faculty liaison in January of 2001:
 - a. Stamped IRB approval consent letter
 - b. Biographical information form
 - c. The Job Diagnostic Survey

- d. Self-addressed, stamped return envelope
- 6. A follow-up phone call was made to the faculty liaison one week after the initial mailing to confirm receipt of the survey packets. In case of need, additional survey packets were sent to the faculty liaison.
- 7. A follow-up letter was mailed, after an additional week, as a final reminder to faculty to complete the survey.

The deadline to complete and return the survey was February 28, 2001, which was communicated to all faculty liaisons and was clearly notated on every survey packet. Of the 686 surveys sent to faculty of community music schools, 437 were completed for a return rate of 64 percent.

Population, Sample, and Subjects

The population for this study was limited to and comprised of faculty in independent community music schools teaching only music with active membership in the National Guild of Community Schools for the Arts. An independent community music school, unlike a divisional school, is not affiliated with any city, collegiate or professional orchestral program. Membership in the guild requires an

organization to be committed to providing high quality education and exposure in either the visual, literary, or performing arts to all persons, regardless of age, race, religion, financial means or level of ability (National Guild of Community Schools of the Arts, 2000).

Using demographical data published in the 1999/2000-membership directory of the National Guild, 79 schools initially qualified for participation in this study. After further investigation and conversations with the director of each institution, 46 schools were eliminated from the study for various reasons.

Twenty-six schools taught art disciplines other than music, were divisional schools or referral sources, or were not currently operational. Directors of nine schools denied participation in the study because they felt it would "open a can of worms", that would create labor/management struggles and poor faculty morale. Seven directors felt that the teachers were too busy to complete the survey due to participation in other school events, such as fund raising campaigns and student recitals. Six directors indicated that it was the school's board of trustees that rejected the invitation to participate in the study. Two schools were currently conducting their own internal study

regarding job satisfaction and two other directors felt that the survey was inappropriate for the community music school environment. The 26 schools excluded from the study were comprised of 546 teachers while the 33 schools participating consisted of 686 teachers.

The thirty-three schools that agreed to participate in this study were located in all geographical regions of the United States and consisted of 686 faculty members. Table 12 shows the geographical distribution of the thirty-three schools:

Table 12

Geographical distribution of schools participating in study

Geographical Region	Number of Participating Schools
Northeast	17
Southeast	5
Midwest	6
Northwest	4
Southwest	1

Four hundred thirty seven surveys were returned, suggesting a return rate of 64 percent. Several graphs are provided in the following figures in order to best describe the sample.

Figure 7 graphically illustrates the division of gender. The majority of the subjects, 318 or 73%, were female while 119 or 27% were male.

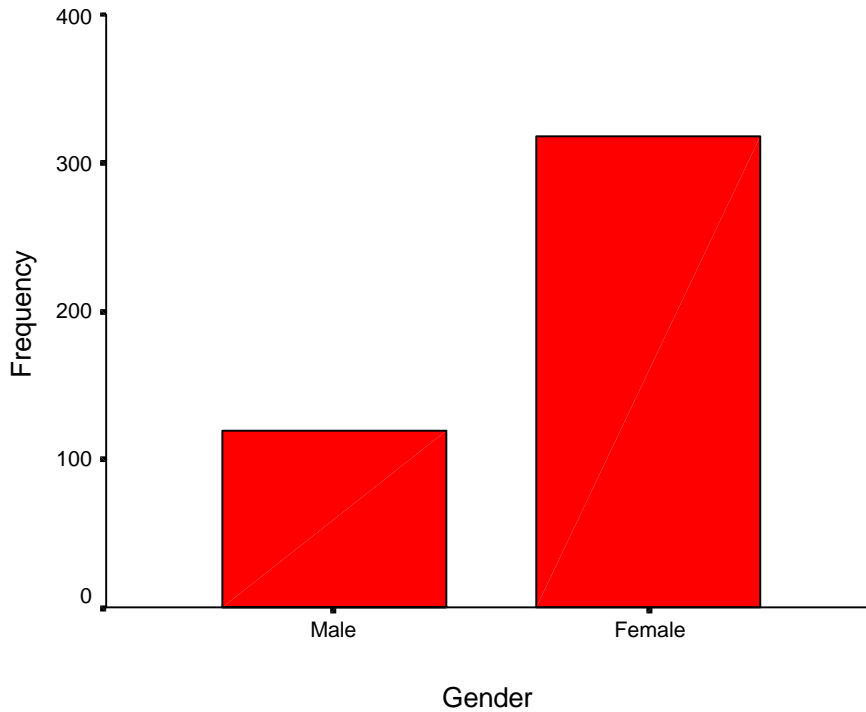


Figure 7. Gender distribution of subjects; male (n = 119, 27%), female (n = 318, 73%) subjects.

The youngest faculty member participating in the study was 20 years of age while the oldest was 82; the mean age of the sample was 41 years of age. There were 103 subjects between the ages of 20 and 29, 116 were 30 to 39, 87 were 40 to 49, 79 were 50-59 and 40 were over the age of 60; 12 elected not to disclose their age. Figure 8 provides a

graph that represents the age distribution of the subjects by decade.

The distribution of music degrees held by faculty is shown in Figure 9 while Figure 10 illustrates how many of the degrees are in the field of music education.

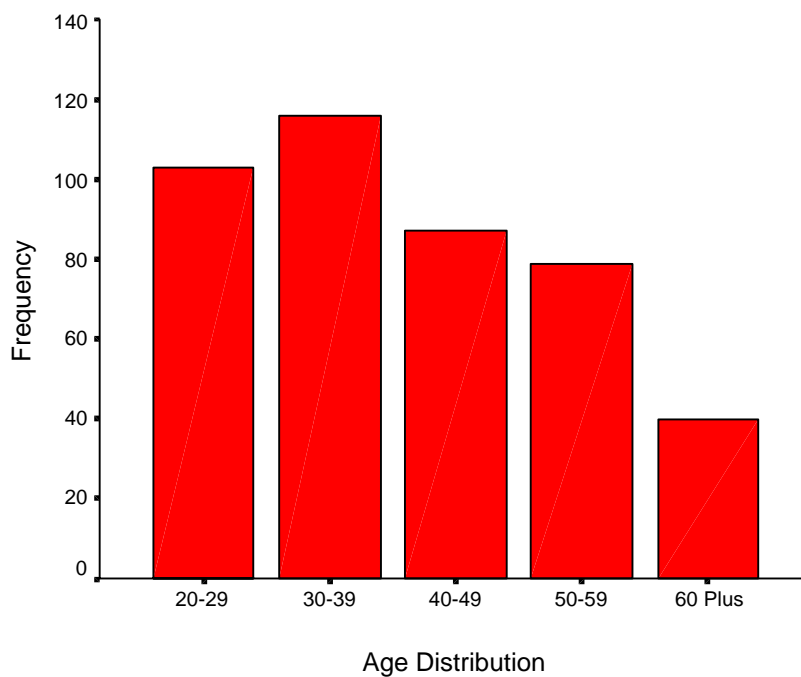


Figure 8. Age distribution of sample; 20-29 (n = 103, 24%), 30-39 (n = 116, 27%), 40-49 (n = 87, 20%), 50-59 (n = 79, 18%), 60 Plus (n = 40, 9%).

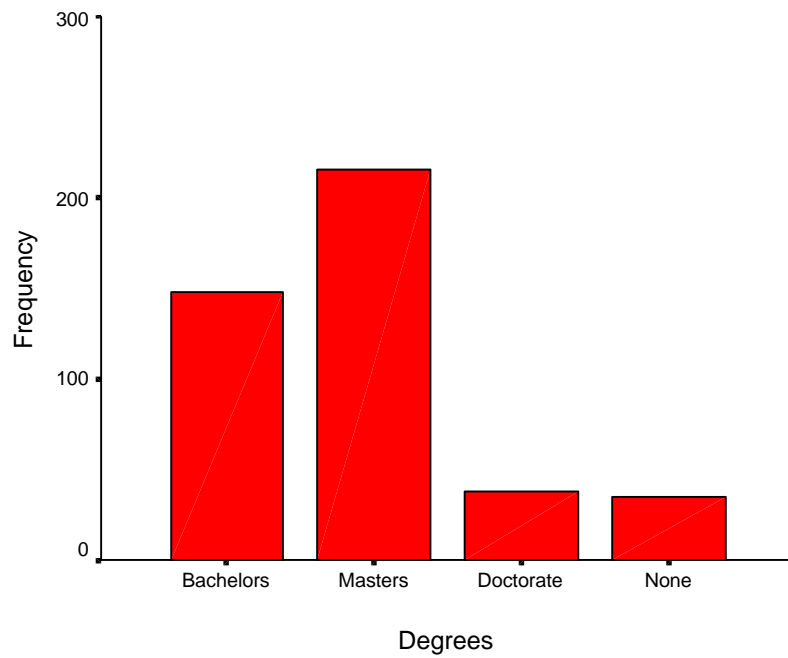


Figure 9. Distribution of degrees held by subjects; bachelors (n = 148, 34%), masters (n = 216, 49%), doctorate (n = 38, 9%), none (n = 35, 8%).

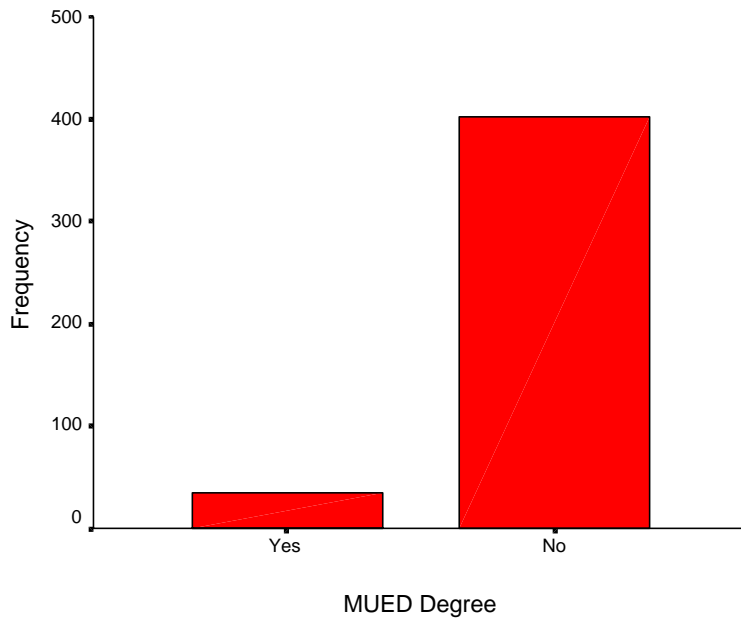


Figure 10. Music Education degrees held by subjects; MUED degree (n = 34, 8%), no MUED degree (n = 403, 92%).

Faculty having earned a masters degree in music were 216 or 49% while 38 or 9% had acquired a doctorate. A bachelors degree was held by 148 or 34% of the subjects and 35 or 8% had no music degree. Even though a majority of the sample had degrees in music, 403 or 92% did not have a degree in music education. Additionally, 378 or 87% of the teachers were not certified to teach music in the public school system as illustrated in Figure 11.

Figure 12 shows that the sample was comprised of 155 pianists, 77 string teachers consisting of violinists, violists, and cellists, 67 musicians who taught flute,

clarinet, or saxophone, 65 vocalists, 22 brass instructors of trumpet, horn, or trombone, 38 guitarists, and 13 percussionists.

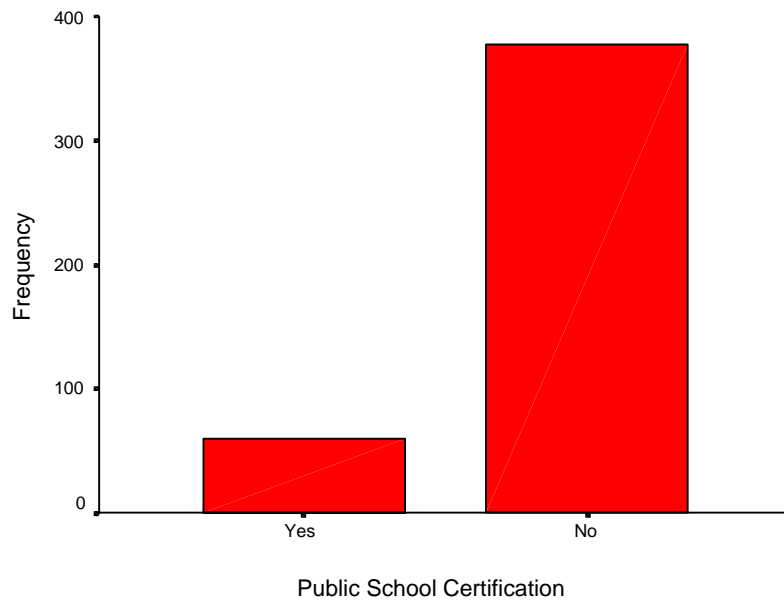


Figure 11. Public school certification; certification (n = 59, 13%), no certification (378, 87%).

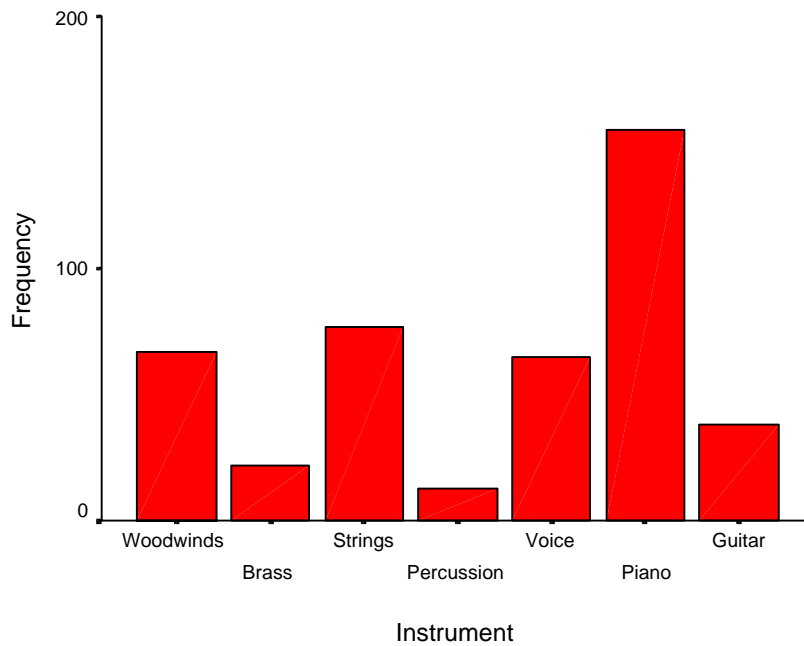


Figure 12. Distribution of instrument families; woodwinds (n = 67, 15%), brass (n = 22, 5%), strings (n = 77, 18%), percussion (13, 3%), voice (65, 15%), piano (n = 155, 35%), guitar (n = 38, 9%).

The maximum years of professional teaching experience within the sample was 50 years with the least amount of experience being 5 months; the mean was 16. Figure 13 shows the teaching experience in 5-year increments. Likewise, the years of teaching service at the school is displayed in Figure 14.



Figure 13. Professional teaching experience; 0-5 (n = 96, 22%), 6-10 (n = 84, 19%), 11-15 (n = 80, 18%), 16-20 (n = 32, 7%), 21 Plus (n = 143, 32%).

The majority of the teachers, 282 or 64%, have taught at their current school 5 or less years. Teachers with 6 to 10 years of service totaled 64 or 15% while 54 or 12% had 11 to 15 years service. The number of teachers with 16-20 and 21 plus years of service diminished to 19 or 4% and 16 or 3% respectively.

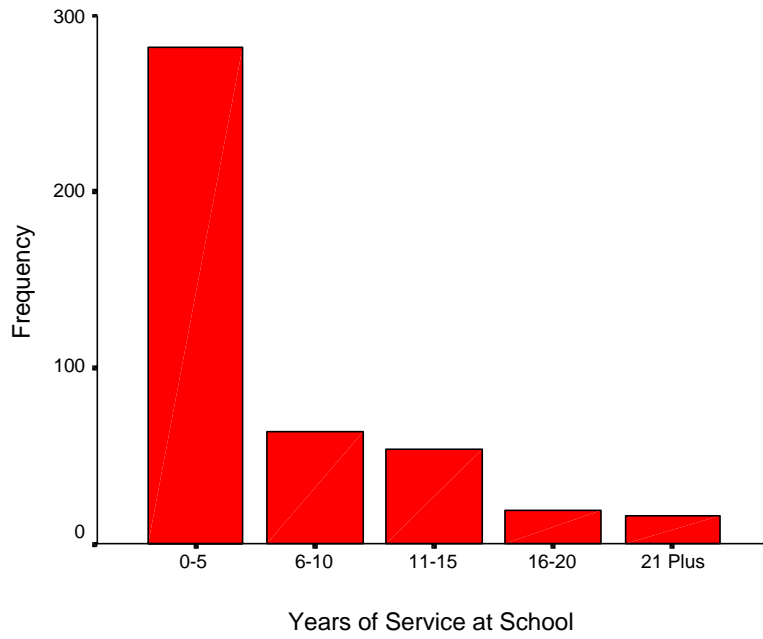


Figure 14. Years of service at school; 0-5 (n = 282, 64%), 6-10 (n = 64, 15%), 11-15 (n = 54, 12%), 16-20 (n = 19, 4%), 21 Plus (n = 16, 3%).

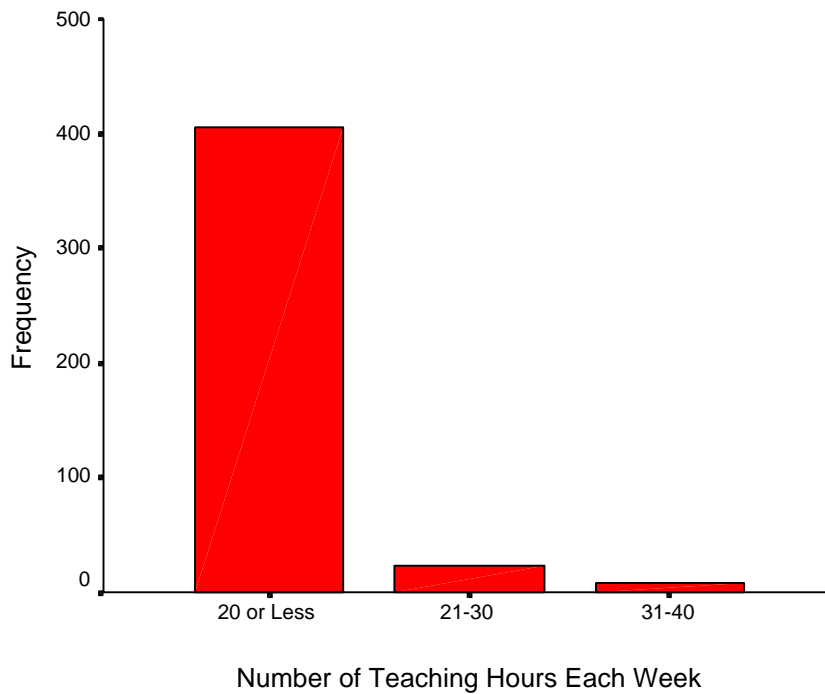


Figure 15. Number of weekly teaching hours; 20 or Less (n = 405, 93%), 21-30 (n = 23, 5%), 31-40 (n = 9, 2%).

Figure 15 shows that most of the teachers in the sample work less than 20 hours a week at the school teaching music, 405 or 93%. The teachers working between 21 and 30 hours per week totaled 23 or 5% and 9 or 2% work 31 to 40 hours per week. The maximum hours taught by an instructor was 40 hours and the minimum was 1. The mean number of hours spent teaching was 9. Despite the majority of teachers working 20 or less hours a week most teachers, 304 or 70%, indicated that teaching was their sole source of

income; 133 or 30% had other sources of revenue as illustrated in Figure 16.

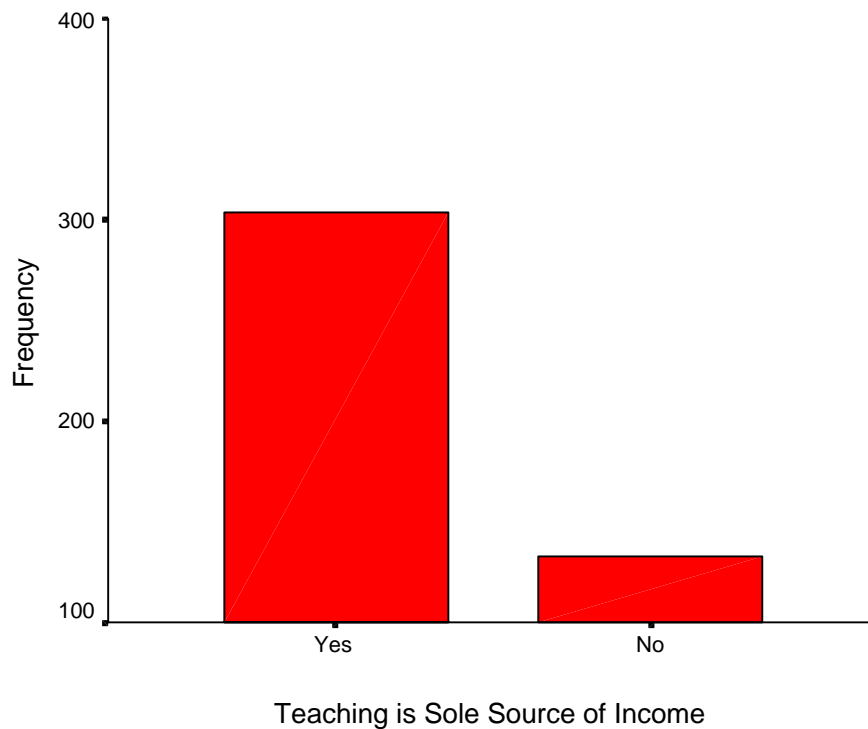


Figure 16. Teaching is sole source of income; yes (n = 304, 70%), no (n = 133, 30%).

The teaching responsibilities of most teachers required teaching children who were 1 to 18 years of age, and adults who were 19 years of age and older as shown in Figure 17. The majority of the teachers, 318 or 73%, solely teach while 119 or 27% have administrative responsibilities in addition to their teaching as displayed in Figure 18.

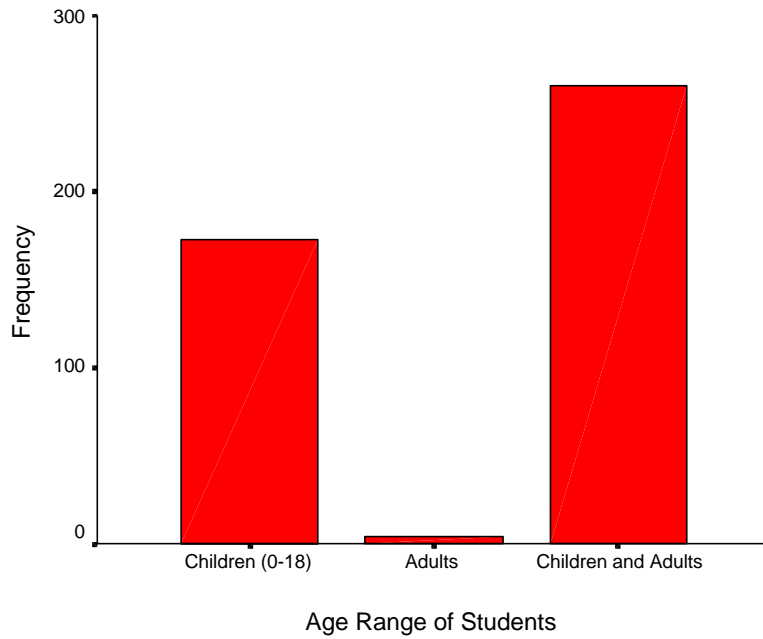


Figure 17. Age range of students; children (n = 173, 40%), adults (n = 4, 1%), children and adults (n = 260, 59%).

Finally, Figure 19 indicates that 240 teachers or 55% of the sample provide both private and group instruction at the school while 178 or 41% teach only private lessons and 19 or 4% teach only in the group environment.

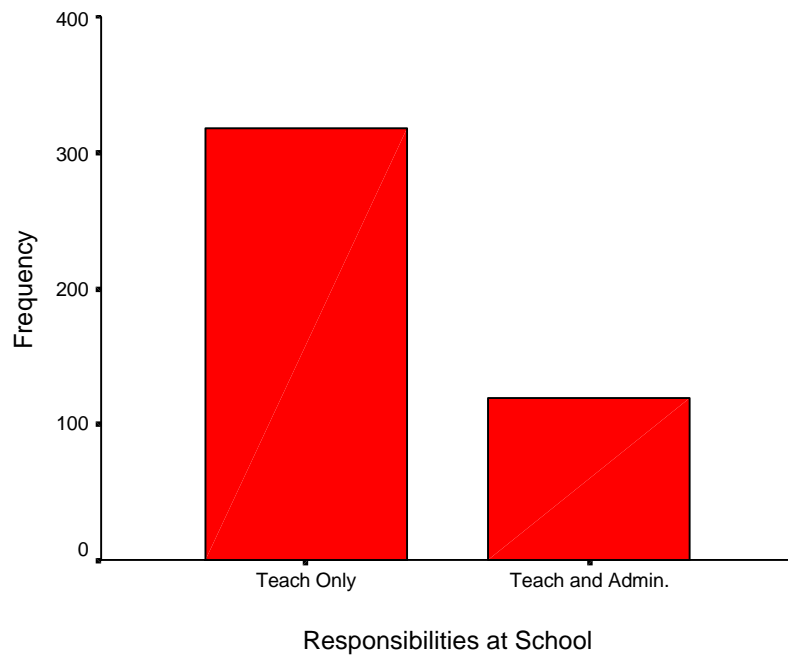


Figure 18. Responsibilities at school; Teach Only (n = 318, 73%), Teach and Admin. (119, 27%).

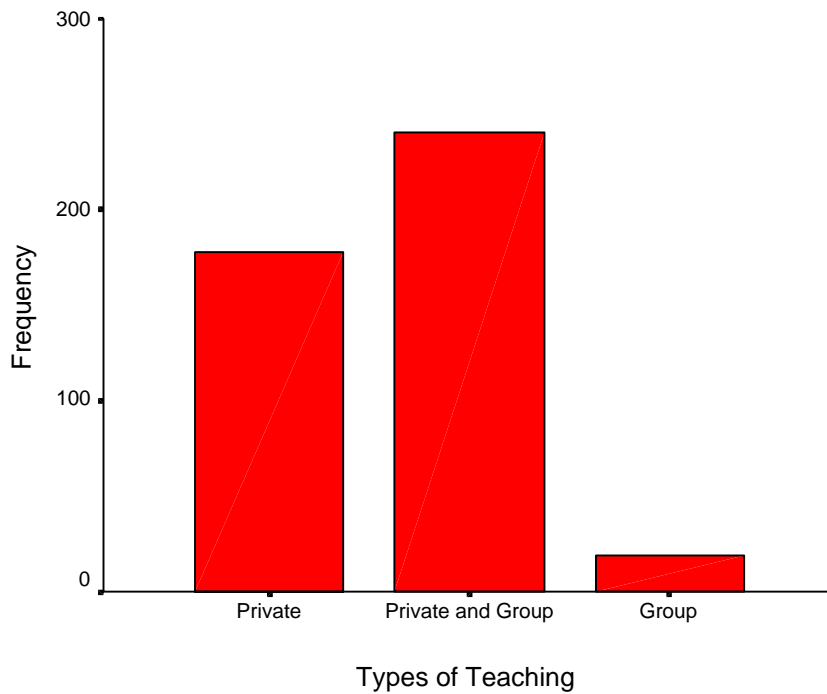


Figure 19. Types of teaching; Private (n = 178, 41%), Private and Group (n = 240, 55%), Group (n = 19, 4%).

In summary, of the 437 respondents the majority was female with an average age of forty-one years. Although most of the teachers held at least a bachelors degree in music, only 8% had earned any type of music education degree or were certified to teach music in their respective states. One may thus assume that: (a) the majority of college music education graduates tend not to consider or pursue community music school teaching positions as a career choice; and (b) The majority of teachers in a

community music school wish not to teach in a public school environment and therefore did not choose music education as an area of concentration during their formal years of training in college.

The largest portion of the sample was comprised of piano teachers with twenty-one or more years of professional teaching experience. Ironically, the majority of the teachers had less than five years of service with the school in which they currently teach. However, before one may suggest that the faculty of a community music school tend to possess a transient job commitment, the finding that 93% of the teachers average nine hours of teaching each week must be considered. In other words, an assertion could be made that the schools simply do not provide enough work to sustain a teacher's commitment. This may be an alarm for concern considering that 70% of the participants in this study expressed that teaching is their sole source of income. Additionally, little responsibilities outside of teaching as indicated in the biographical data may be a cause of limited faculty tenure.

Data Analysis Techniques

Biographical data pertaining to gender, age, degrees, years of experience and service, certification, sources of income, students, teaching, and responsibilities were compiled for each subject. Responses to the survey were tabulated as suggested in the scoring key provided in Appendix B. To determine the answer to the first research question, scores were compiled for each core job characteristic needed to determine the motivating potential of a community music school job. Scores for the critical psychological states determined the answer to the second research question while the answer for the third research question was determined with scores for the personal/work outcomes. Scores for individual growth-need strength were used to answer research question four. One sample t-tests were computed using the national norms to satisfy research question five.

CHAPTER FOUR

RESULTS

The purpose of this study was to apply Hackman and Oldham's Job Characteristic Model to the perceptions community music school faculty hold towards their job. The research questions were:

1. How do community music school faculty feel about their core job characteristics of skill variety, task identity, task significance, autonomy, and feedback, all of which determine the motivating potential of the job?
2. How do community music school faculty feel about their critical psychological states of experienced meaningfulness, experienced responsibility, and knowledge of results?
3. How do community music school faculty feel about their personal and work outcomes of satisfaction and motivation?
4. How do community music school faculty feel about their need for growth and advancement?

5. How do the mean scores of community music school faculty compare to the national norms established by Oldham, Hackman, and Stepina?

The findings of this study are reported as they relate to each of the research questions.

Core Job Characteristics and their Relationship to Motivating Potential

Table 13 presents the minimum and maximum scores, means and standard deviations for each of the core job dimensions. The scores were determined using a composite of two different Likert scales with a range of one to seven. The first scale, in section one of the survey, assessed the degree to which the job dimensions were present (1 = very little, 4 = moderate, 7 = very much). The second scale, in section two of the survey, assessed the accuracy of statements in describing the job (1 = very inaccurate, 4 = uncertain, 7 = very accurate).

Table 13

Means and Standard Deviations of Job Dimensions for
Community Music School Faculty

Job Dimensions	<u>N</u>	<u>Min</u>	<u>Max</u>	<u>M</u>	<u>SD</u>
Skill Variety	437	2	6	4.59	.60
Task Identity	437	2	7	4.42	.78
Task Significance	437	2	7	4.31	.85
Autonomy	437	3	7	4.71	.62
Feedback from Job	437	2	7	4.56	.64
Feedback from Agent	437	1	7	3.96	.80
Dealing with Others	437	1	7	5.25	.89
Valid N (listwise)	437				

Note. N = number of subjects, Min = minimum score, Max = maximum score, M = Mean, SD = standard deviation.

As indicated in the table, mean scores for all but one dimension were slightly higher than four, thus indicating moderate presence of the dimension and/or that they were uncertain about the accuracy of the statements. The degree in which the job required them to work closely with others (M = 5.25) and provided freedom in determining how the work was done (M = 4.71) received the highest faculty agreement. Faculty were neutral or uncertain regarding the degree to which the job provided feedback (M = 3.96) and impacted the lives of others (M = 4.31).

None of the faculty felt the job required very much utilization of their various skills and talents as indicated by the range of scores (high score = 6). There was also less variability in faculty responses for this item compared to the others as the smaller standard deviation suggests (.60). Table 14 shows the motivating potential score of the community music school job (96.16) as calculated using the formula developed by Hackman and Oldham (1974).

Table 14

Motivating potential score of the community music school teaching job

Skill Variety	Task Identity	Task Significance	Autonomy	Feedback	MPS
4.59	4.42	4.31	4.71	4.56	96.16
$\frac{4.59 + 4.42 + 4.31}{3} \times 4.71 \times 4.56 = 96.16$					

Note. MPS = Motivating Potential Score

Critical Psychological States

The range of scores, the minimum and maximum scores, means and standard deviations for each of the critical psychological states are presented in Table 15. The scores were determined using a Likert scale with a range of one to

seven (1 = disagree strongly, 4 = neutral, 7 = agree strongly).

Table 15

Means and Standard Deviations of the Three Psychological States for Community Music School Faculty

Psychological States	<u>N</u>	<u>Min</u>	<u>Max</u>	<u>M</u>	<u>SD</u>
Experienced Meaningfulness	437	2	6	3.90	.41
Experienced Responsibility	437	3	7	5.05	.64
Knowledge of Work Results	437	3	7	4.17	.78
Valid N (listwise)	437				

Note. N = number of subjects, Min = minimum score, Max = maximum score, M = Mean, SD = standard deviation.

As indicated in the table, scores remained close to a neutral response for each psychological state. The faculty agreed most regarding their perceptions that the job instilled a sense of responsibility for the results of one's work (M = 5.05). The lowest mean, but close to neutral, pertained to their feelings toward the meaningfulness and significance of their job (M = 3.90). Both the range of scores and the standard deviation (.41) suggests that there was less variability in faculty responses regarding this item than the other two psychological states.

Personal/Work Outcomes

Table 16 presents the range of scores, the minimum and maximum scores, means and standard deviations for the respondents' views on the outcome of their work. The scores were determined using a composite of two different Likert scales with a range of one to seven. The first scale, used in sections three and five of the survey, assessed the affective outcomes (1 = disagree strongly, 4 = neutral, 7 = agree strongly). The second scale, in section four of the survey, assessed context satisfactions (1 = extremely dissatisfied, 4 = neutral, 7 = extremely satisfied).

As indicated in the table, scores for all but one personal/work outcome were between four and six suggesting a neutral to moderate agreement or satisfaction response. The faculty responded most strongly to the degree to which they felt the job provided them with opportunity for personal development ($M = 5.88$) and offered them encouraging relationships with colleagues ($M = 5.78$). Faculty felt neutral to slight dissatisfaction regarding pay ($M = 3.77$) and slight to neutral feelings of general job satisfaction. However, the standard deviation of 1.62 suggests a wider variability of responses for pay satisfaction than was the case for general job

Table 16

Personal/Work Outcomes Obtained from a Community Music
School Teaching Job

Personal/Work Outcomes	<u>N</u>	<u>Min</u>	<u>Max</u>	<u>M</u>	<u>SD</u>
General Job Satisfaction	437	3	6	4.47	.43
Internal Work Motivation	437	3	7	5.23	.53
Development Satisfaction	437	2	7	5.88	.93
Pay Satisfaction	437	1	7	3.77	1.62
Security Satisfaction	437	1	7	4.99	1.65
Coworkers Satisfaction	437	2	7	5.78	.94
Supervision Satisfaction	437	1	7	5.36	1.21
Valid N (listwise)	437				

Note. N = number of subjects, Min = minimum score, Max = maximum score, M = Mean, SD = standard deviation.

satisfaction. As indicated by a maximum score of six none of the faculty expressed very strong feelings of general job satisfaction.

Growth Need Strength

Table 17 presents the minimum and maximum scores, means and standard deviations for the respondents' desire to obtain growth from their job. Two separate scales, developed and labeled by Hackman and Oldham as "would like"

and "job choice", assessed the degree to which each faculty member had a strong or weak desire to experience a challenging and stimulating work environment that promoted creative and independent thought. The "would like" measure refers to how much each faculty member would prefer to have growth characteristics present in their job. The "job choice" measure refers to the type of job each faculty member would prefer: one with or without growth characteristics. Once again, the scores were determined using two different Likert scales with a range of one to seven. The first scale, in section six of the survey, assessed how much each faculty member "would like" to have growth characteristics present in their job (1 = moderate amount, 4 = very much, 7 = extremely much). The second scale, in section seven of the survey, determined the type of job or "job choice" of each faculty member: one with or without growth characteristics (1 = strongly prefer "job A", 4 = neutral, and 7 = strongly prefer "job B").

Table 17

Growth Need Strength of Community Music School Faculty

Growth Need	<u>N</u>	<u>Min</u>	<u>Max</u>	<u>M</u>	<u>SD</u>
"Would Like" Format	437	1	7	6.21	.41
"Job Choice" Format	437	3	6	4.10	1.04
Valid N (listwise)	437				

Note. N = number of subjects, Min = minimum score, Max = maximum score, M = Mean, SD = standard deviation.

As indicated in the table, scores for both measures of growth ranged from neutral to high. The faculty felt strongly about wanting a challenging and stimulating work environment that promoted creative and independent thought (M = 6.21). However, when asked to choose between a job with or without growth characteristics, the faculty were neutral as to the type of job characteristics they preferred. The smaller range of response choices and larger standard deviation (1.04) also suggest larger variability on this item.

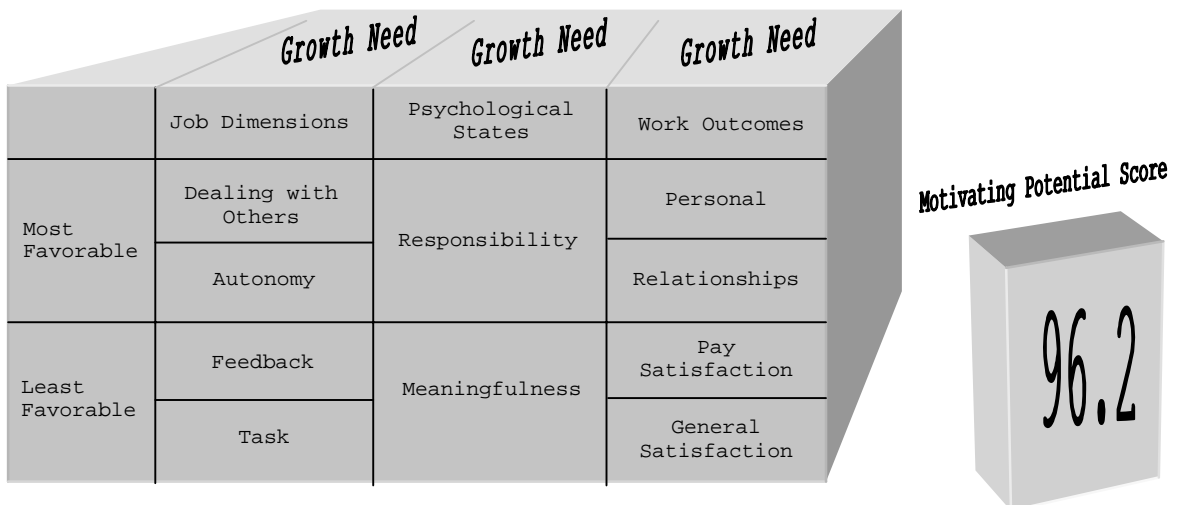
Diagram of Results

As predicted by the Job Characteristics Model, a higher score for the psychological state of responsibility was the result of a higher score for the core job dimension of autonomy. The lower score of for the psychological state of

meaningfulness was the result of little feedback and moderate significance present in the community music school job. A strong desire for professional growth (6.21) combined with moderate feelings towards the core job dimensions produced a relatively low motivating potential score (96.2) as discussed later in this chapter. A diagram of the Job Diagnostic Survey results obtained from the faculty of community music schools may be illuminated as shown in Figure 20.

Figure 20

Diagram of Job Diagnostic Survey Results Obtained from Community Music School Faculty



Note. The degree to which the job dimensions shape the psychological states, which determine the work outcomes, depends upon the respondents' need to experience growth in their job.

Comparison to National Norms

In an effort to establish a meaningful perspective of the data collected for this study, the means for the community music school job were compared to normative data established by Oldham, Hackman, and Stepina (1979). The normative data are based on the results of studies involving 6,930 employees holding 876 jobs in 56 organizations. The jobs included in those studies were highly heterogeneous and divided into nine job groups established by the Equal Employment Opportunity Commission (EEOC) and defined in the Dictionary of Occupational Titles (DOT) published by the U.S. Department of Labor. In establishing the national norms, Oldham, Hackman, and Stepina (1979) placed the teaching occupation in the group labeled "professional job family" and therefore it was chosen from the nine job groups to test for significant differences when compared to the results of this study.

Table 18 presents the core job dimensions and motivating potential score means for the community music school job and the nine job groups proposed by Oldham, Hackman, and Stepina as normative data. Figure 21 graphs the community music school job and professional job family means as presented in Table 18. Professional job family means are

represented with a solid line and the community music school means are symbolized with a dashed line. Each of the core job dimensions are represented on the X-axis while the Y-axis portrays the 7-point Likert scale used to measure each job dimension.

Figure 22 graphically compares the motivating potential score of the professional job family to the motivating potential score of the community music school job. The scores were computed using the formula provided by Hackman and Oldham (1974) and illustrated in Table 14 on page 73.

Table 18

Means for the Job Dimensions of the Community Music School Job and the Nine Job Families used to establish the National Norms

	CMS	PRO	MAN	CLR	SAL	SER	PR	MT	BW	SW
Skill Variety	4.6	5.4	5.6	4.0	4.8	5.0	4.2	5.1	4.2	5.2
Task Identity	4.4	5.0	4.7	4.7	4.4	4.7	4.3	4.9	4.5	5.1
Task Significance	4.3	5.6	5.8	5.3	5.5	5.7	5.3	5.6	5.8	5.5
Autonomy	4.7	5.4	5.4	4.5	4.8	5.0	4.5	4.9	4.6	5.0
Feedback from Job	4.6	5.1	5.2	4.6	5.4	5.1	4.7	4.9	4.4	4.9
Feedback from Agent	4.0	4.2	4.4	4.0	3.6	3.8	3.6	3.8	4.2	4.5
Dealing with Others	5.2	5.8	6.4	5.2	6.4	6.0	5.3	5.3	5.0	5.4
Motivating Score	96	154	156	106	146	152	105	136	110	141

Note. CMS = Community Music School Job, PRO = Professional, MAN = Managerial, CLR = Clerical, SAL = Sales, SER = Services, PR = Processing, MJF = Machine Trades, BW = Bench Work, SW = Structural Work

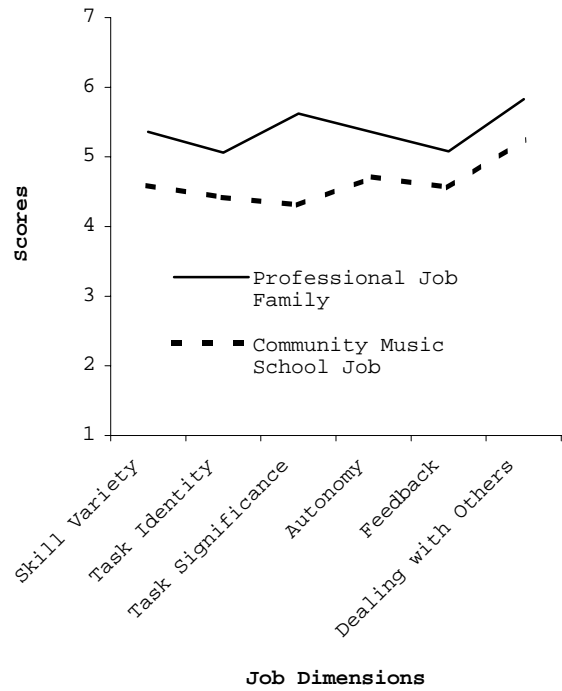


Figure 21. Graphic Representation of the Means for the Job Dimensions of the Professional Job Family and Community Music School Job.

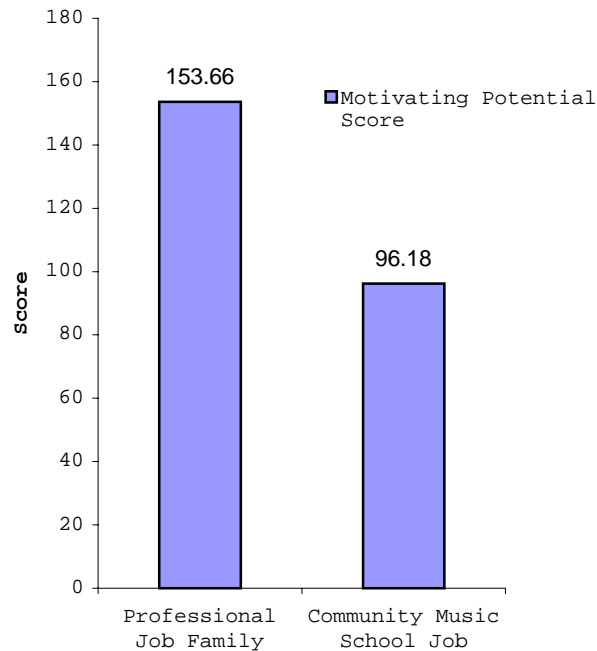


Figure 22. Graphic Representation of the Motivating Potential of the Professional Job Family and Community Music School Job.

Using a one-sample t-test, the means representing the core job dimensions and motivating potential score of the professional job family and those of the community music school job were compared to determine if they were significantly different. The results reported in Table 19 indicate a significant difference between each of the core job dimensions for the professional job family and the sample of music teachers in this study.

Table 19

One Sample t-test Comparing the Core Job Dimensions Means
of the Professional Job Family and the Community Music
School Job

Job Dimensions	t	df	Sig. (2-tailed)	Mean Difference	Confidence Intervals	
Skill Variety	-26.70	436.00	0.00*	-0.77	-0.83	-0.71
Task Identity	-17.13	436.00	0.00*	-0.64	-1.39	-1.24
Task Significance	-32.52	436.00	0.00*	-1.31	-1.39	-1.24
Autonomy	-21.57	436.00	0.00*	-0.64	-0.70	-0.58
Feedback from Job	-16.94	436.00	0.00*	-0.52	-0.58	-0.46
Feedback from Agent	-6.63	436.00	0.00*	-0.25	-0.33	-0.18
Dealing with Others	-13.67	436.00	0.00*	-0.58	-0.67	-0.50
Motivating Potential Score	-48.02	436.00	0.00*	-57.50	-59.85	-55.14

Note: *p < .05.

The means for the three critical psychological states representing the community music school job and the nine job groups proposed by Oldham, Hackman, and Stepina as normative data are presented in Table 20.

Table 20

Means for the Psychological States of the Community Music School Job and the Nine Job Families used to establish the National Norms

	CMS	PRO	MAN	CLR	SAL	SER	PR	MT	BW	SW
Meaningfulness	3.9	5.4	5.5	4.9	4.9	5.2	5.0	5.3	5.3	5.2
Responsibility	5.1	5.8	5.7	5.3	5.5	5.6	5.2	5.4	5.4	5.1
Knowledge of Results	4.2	5.0	5.0	4.9	5.0	5.0	5.1	5.3	4.9	5.2

Note. CMS = Community Music School Job, PRO = Professional, MAN = Managerial, CLR = Clerical, SAL = Sales, SER = Services, PR = Processing, MJF = Machine Trades, BW = Bench Work, SW = Structural Work

Figure 23 depicts the means of the community music school job and professional job family as presented in Table 21. Each psychological state is represented on the X-axis while the Y-axis portrays the 7-point Likert scale used to indicate the faculty's response.

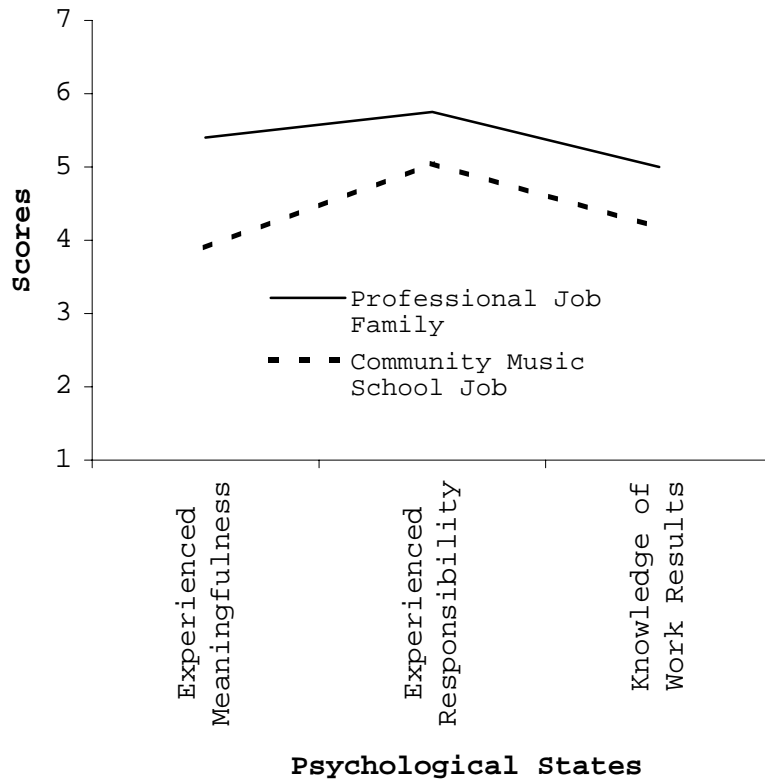


Figure 23. Graphic Representation of the Means for the Psychological States of the Professional Job Family and Community Music School Job.

The findings reported in Table 21 indicate that each of the psychological states were significantly lower for the community music school job than those reported by Oldham, Hackman and Stepina for the professional job family (1979).

Table 21

One Sample t-test Comparing the Psychological State Means
of the Professional Job Family and Community Music School
Job

Psychological States	t	df	Sig. (2-tailed)	Mean Difference	Confidence Intervals
Experienced Meaningfulness	-75.85	436.00	0.00*	-1.50	-1.54 -1.46
Experienced Responsibility	-22.57	436.00	0.00*	-0.70	-0.76 -0.63
Knowledge of Work Results	-22.23	436.00	0.00*	-0.83	-0.90 -0.76

Note: *p < .05.

Table 22 presents the means for the personal/work outcomes of the community music school job and the nine job groups proposed by Oldham, Hackman, and Stepina as normative data. The graph in Figure 24 depicts the means of the community music school job and professional job family as presented in Table 22.

Table 22

Means for the Personal/Work Outcomes of the Community Music School Job and the Nine Job Families used to establish the National Norms

	CMS	PRO	MAN	CLR	SAL	SER	PR	MT	BW	SW
General Job Satisfaction	4.5	4.9	4.9	4.5	4.4	4.6	4.6	4.9	4.7	4.9
Internal Work Motivation	5.2	5.8	5.8	5.4	5.7	5.7	5.3	5.6	5.5	5.6
Pay Satisfaction	3.8	4.4	4.6	4.0	4.2	4.1	4.5	4.2	4.4	4.5
Security Satisfaction	5.0	5.0	5.2	4.8	4.0	4.9	4.6	5.0	4.7	5.0
Coworkers Satisfaction	5.8	5.5	5.6	5.2	5.4	5.4	5.3	5.5	5.1	5.1
Supervision Satisfaction	5.4	4.9	5.2	4.9	4.6	4.7	4.6	4.6	4.5	4.9
Development Satisfaction	5.9	5.1	5.3	4.6	4.5	4.9	4.7	4.8	4.4	5.0

Note. CMS = Community Music School Job, PRO = Professional, MAN = Managerial, CLR = Clerical, SAL = Sales, SER = Services, PR = Processing, MJF = Machine Trades, BW = Bench Work, SW = Structural Work

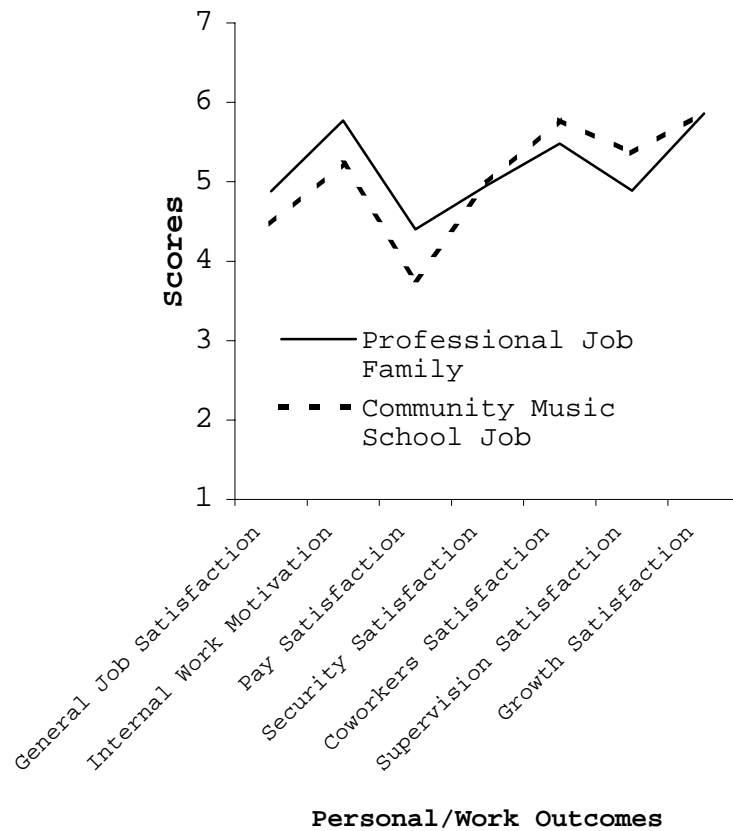


Figure 24. Graphic Representation of the Means for the Personal/Work Outcomes of the Professional Job Family and Community Music School Job.

The results of a one-sample t-test, illustrated in Table 23, confirmed a significant difference in job satisfaction, internal work motivation, and pay and compensation satisfaction for the professional job family. On the other hand, a significant difference in coworker and supervision satisfaction for the community music school faculty was

substantiated. No significant difference was found between a sense of security and growth satisfaction.

Table 23

One Sample t-test Comparing the Personal/Work Outcome Means of the Professional Job Family and Community Music School

Job

Personal/Work Outcomes	t	df	Sig. (2-tailed)	Mean Difference	Confidence Intervals	
General Job Satisfaction	-20.32	436.00	0.00*	-0.41	-0.45	-0.37
Internal Work Motivation	-21.32	436.00	0.00*	-0.54	-0.60	-0.49
Pay Satisfaction	-8.12	436.00	0.00*	-0.63	-0.78	-0.48
Security Satisfaction	0.36	436.00	0.72	0.03	-0.13	0.18
Coworkers Satisfaction	6.56	436.00	0.00*	0.30	0.21	0.38
Supervision Satisfaction	8.16	436.00	0.00*	0.47	0.36	0.59
Growth Satisfaction	0.40	436.00	0.69	0.02	-0.07	0.11

Note: *p < .05.

Table 24 presents the means for the personal/work outcomes of the community music school job and the nine job groups proposed by Oldham, Hackman, and Stepina as normative data. The graph in Figure 25 depicts the means of the community music school job and professional job family as presented in Table 24. Both of the growth need outcomes are represented on the X-axis while the Y-axis portrays the 7-point Likert scale used to measure each personal/work outcome.

Table 24

Means for the Growth Need of the Community Music School Faculty and the Nine Job Families used to establish the National Norms

	CMS	PRO	MAN	CLR	SAL	SER	PR	MT	BW	SW
"Would Like"	6.2	6.1	5.9	5.6	6.5	6.1	5.3	5.5	5.5	4.9
"Job Choice"	4.1	4.8	4.7	4.2	4.9	4.6	3.9	4.1	4.0	4.2

Note. CMS = Community Music School Job, PRO = Professional, MAN = Managerial, CLR = Clerical, SAL = Sales, SER = Services, PR = Processing, MJF = Machine Trades, BW = Bench Work, SW = Structural Work.

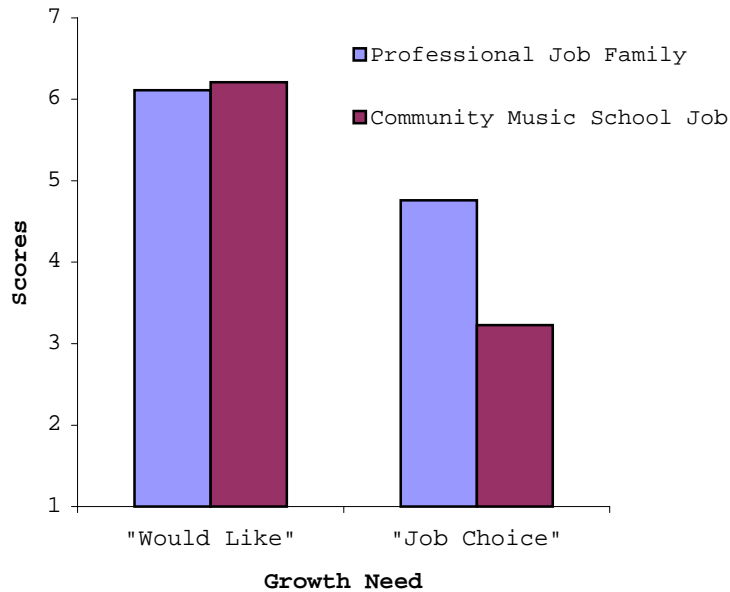


Figure 25. Graphic Representation of the Means for the Growth Need of the Professional Job Family and Community Music School Job.

Finally, the desire and need to be professionally challenged (i.e. stimulating work, opportunities for creativity and independent thought), thus experiencing growth and advancement, showed significant differences for the community music school job. A significant difference in preferences for jobs possessing various growth-need characteristics was discovered for the professional job family. Again, in the "would-like" section of the survey, faculty were asked to indicate the degree to which they would like several growth related conditions (e.g., stimulating work, opportunities to learn new things, opportunities to be creative and imaginative). Whereas in the "job choice" section, respondents were asked to indicate their preferences for pairs of hypothetical jobs; in each item a job with characteristics relevant to growth need satisfaction was paired with a job that may satisfy one of a variety of other needs. Table 25 presents the findings of a one-sample t-test confirming significant differences in growth need strength.

Table 25

One Sample t-test Comparing the Growth Need Means of the Professional Job Family and Community Music School Job

Growth Need	t	df	Sig. (2-tailed)	Mean Difference	Confidence Intervals
"Would Like" Format	1.95	436.00	0.05*	0.10	0.00 0.19
"Job Choice" Format	-63.60	436.00	0.00*	-1.53	-1.57 -1.50

Note: *p < .05.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND DISCUSSION

Summary

The purpose of this study was to apply Hackman and Oldham's Job Characteristic Model to the perceptions community music school faculty hold towards their job. The research questions were:

1. How do community music school faculty feel about their core job characteristics of skill variety, task identity, task significance, autonomy, and feedback, all of which determine the motivating potential of the job?
2. How do community music school faculty feel about their critical psychological states of experienced meaningfulness, experienced responsibility, and knowledge of results?
3. How do community music school faculty feel about their personal and work outcomes of satisfaction and motivation?

4. How do community music school faculty feel about their need for growth and advancement?
5. How do the mean scores of community music school faculty compare to the national norms established by Oldham, Hackman, and Stepina.

Methodology

The research questions were addressed by using Hackman and Oldham's original Job Diagnostic Survey with music faculty of thirty-three independent community schools with membership in the National Guild of Community Schools for the Arts. An independent community music school, unlike a divisional school, is not affiliated with any city, collegiate or professional orchestral program. The questionnaire, comprising of seven sections with a total of eighty-three Likert-type items, explored the core job dimensions, psychological states, personal/work outcomes, and growth-need of the participating community music school faculty.

The questionnaire was mailed to 686 community music school faculty and 437 were returned (64%). In addition to collecting responses to the Job Diagnostic Survey, biographical data pertaining to gender, age, degrees, years

of experience and service, certification, sources of income, students, teaching, and responsibilities were compiled for each subject. Techniques of statistical analysis included the following procedures:

1. Responses to the survey were compiled, tabulated and scored for each core job characteristic, psychological state, personal/work outcome, and growth-need, as suggested in the scoring key provided in Appendix B.
2. A motivating potential score was then computed using the formula provided by Hackman and Oldham (1974).
3. Means were established for each variable of the Job Diagnostic Survey and compared to the means of the professional job family established by Hackman and Oldham (1980, p. 317), using a one-sample t-test.

Results

Following a brief description of the sample, the results of this study are summarized as they relate to each of the research questions.

The majority of the respondents (73%) were female with an average age of forty-one years. Although most of the teachers (92%) held at least a bachelors degree in music,

only 8% had earned any type of music education degree or were certified to teach music in their respective states. The largest portion of the sample was comprised of piano teachers with twenty-one or more years of professional teaching experience (32%). The majority of the teachers (73%) had no responsibilities at the school other than teaching, averaged nine hours of teaching each week, had less than five years of service to the school, and teaching was their sole source of income.

Core Job Dimensions

The highest faculty scores were towards the following aspects of their job:

1. The ability to work closely with colleagues and students (M = 5.25);
2. The substantial freedom, independence, and discretion in determining how the work is conducted (M = 4.71).

The lowest faculty scores pertained to the amount of information provided to them regarding their job performance (M = 3.96). Faculty were neutral regarding the degree in which the job required different skills and talents, impacted the lives of others, and provided the opportunity to do a task from beginning to end. The

motivating potential score for the community music school job was 96.18.

Psychological States

Faculty agreed most strongly regarding the degree to which a sense of responsibility was experienced while doing the job (M = 5.05). Faculty felt neutral to slight dissatisfaction pertaining toward pay (M = 3.77) and slight to neutral feelings of general job satisfaction.

Personal/Work Outcomes

The opportunities for personal development and collegial relationships produced the highest levels of satisfaction amongst faculty (5.78). Although compensation (M = 3.77), and overall general job satisfaction (M = 4.47) received neutral scores, they represented the lowest level of satisfaction amongst faculty.

Growth-Need Strength

The faculty expressed a strong need to experience stimulating work and opportunities for creativity and independent thought (M = 6.21). However, the faculty remained neutral when asked to choose between a job possessing growth potential over one with other job characteristics, such as greater pay, security, and friendly colleagues (M = 4.10).

Comparison to National Norms

A descriptive comparison of the means produced by this study to those of the nine job families, illustrated that the feelings of musicians teaching in a community music school may best resemble those of people working a clerical job instead of a professional job. However, due to the Oldham, Hackman, and Stepina's placement of teachers in the professional job family, a comparison between the professional job family means and those of the community music school job, using a one-sample t-test, was administered. Significant differences for the professional job family were revealed between all core job dimensions ($p < .05$), psychological states ($p < .05$), and the personal/work outcomes ($p < .05$) of job satisfaction, pay satisfaction, and work motivation. Significant differences for the community music school job were revealed for relationships with colleagues and supervisors. No significant differences were found between the two groups for security or personal development satisfaction.

The comparison of mean scores, using a one-sample t-test, pertaining to the desire for growth satisfaction revealed a significant difference between the professional job family and the community music school job ($p < .05$).

Compared to the professional job family, the music faculty surveyed in this study conveyed a greater need for stimulating and challenging work with opportunities to exercise creative and independent thought. However, faculty had difficulty expressing partiality when asked to choose between a job offering growth opportunity and one that satisfies a variety of other needs (friendly coworkers, better pay, security, etc.).

Conclusions

The following conclusions can be drawn from the results of this investigation:

1. Faculty felt most strongly about their sense of work responsibility due to the autonomy experienced in doing the job.
2. Faculty felt least strongly about the meaningfulness of their job due to the degree in which they felt the job required a variety of different activities, allowed for the completion of entire tasks, and the impact the job has on the lives of others.
3. Faculty felt most satisfied about the opportunity for personal development and colleague relations.

4. Faculty felt least satisfied with pay and overall general satisfaction with the job.
5. Faculty indicated a strong desire to experience stimulating work and the opportunity to exercise creativity and independent thought; however, their feelings towards the core job dimensions produced a low motivating potential score.
6. Faculty perceptions toward teaching in a community music school may best resemble those perceptions of people working in the clerical job family instead of the professional job family as defined by Oldham, Hackman, and Stepina.
7. When compared to the national norms of the professional job family, this sample of community music school faculty perceived their jobs as less motivating.
8. When compared to the national norms of the professional job family, this sample of community music school faculty experienced a lower sense of meaningfulness, responsibility, and effectiveness.
9. When compared to the national norms of the professional job family, this sample of community

music school faculty were less satisfied with their personal/work outcomes.

10. When compared to the national norms of the professional job family, this sample of community music school faculty had stronger needs to experience stimulating work.

The following precepts served as the theoretical foundation of the Job Characteristic Model:

1. A job high in motivating potential must be high on at least one of the three job dimensions (skill variety, task significance, task identity) that prompt the psychological state establishing an employee's feelings of meaningfulness in his or her job.
2. A job high in motivating potential must be high on autonomy to instill the psychological state that establishes an employee's feelings of accountability and responsibility in his or her job.
3. A job high in motivating potential must be high on feedback to instill the psychological state that establishes an employee's awareness of how effectively he or she performs the job.

4. Employees with a strong need for professional growth will respond more positively to jobs that are high on the core job dimensions.

These precepts are supported by the descriptions the faculty of community music schools provided regarding their core job dimensions that affected their psychological states.

Of the core job dimensions that determine the motivating potential of a job, the faculty felt much job autonomy. As a result, and as predicted by the Job Characteristic Model, their feelings towards work responsibility were the strongest. On the other hand, of the core job dimensions that determine the motivating potential of a job, faculty felt the occurrence of feedback the least. As a result, their feelings towards their understanding of how effective they are at the job remained generally neutral. Finally, the moderate feelings faculty had toward the variety of skills needed to do the job, the opportunity to do a task from beginning to end, and the impact their work had on the lives of other people, all of which impact how meaningful they perceived their job to be, produced neutral feelings.

Discussion

As reported, significant differences between the norms reported by Oldham, Hackman, and Stepina (1979) and the community music school teaching job exists. However, reflection upon the findings of other studies in education using the Job Diagnostic Survey may provide additional insight and possible explanations as to why the results of this study differ from the norms.

Cammarata (1984) investigated the elementary and secondary teachers in Chester County, Pennsylvania and reported a motivating potential score of 178.9. This score is substantially higher than the 96.2 motivating potential score yielded by this study. Cammarata also reported that teachers, as a whole, had a positive outlook toward their job as indicated by the high scores in skill variety, task significance, autonomy, and dealing with others. Again, these findings are in sharp contrast to those of this study. When he compared his findings to the national norms, Cammarata discovered that teachers generally produced higher scores and were substantially more positive concerning their jobs.

The conflicting findings of Cammarata's research and this study may possibly be explained by examining the

possible differences between the organizational structures of a public school and a community music school. To begin, teachers in a public school are classified as full-time, salaried employees whereas the teachers in a community music school are typically part-time hourly staff, sometimes considered independent contractors. Public school teachers are usually provided various benefits such as major medical, dental, and retirement plans while the community music school teachers, as part-time staff, are typically provided no benefits. An organization that classifies workers as part-timers and provides no major health or retirement benefits may possibly experience problems with employee retention. This appears to be the case in the community music school setting where the majority of the teachers have less than five years of service to the school (64%). However, no data was collected to determine the number of years each school had been in existence, which would impact the length of faculty tenure.

Rooney (1990) investigated thirty-one elementary schools and four high schools in the Catholic Diocese of Wichita. She reported that educators with more than twenty years of experience reported greater job and salary satisfaction than educators with less than twenty years of experience.

If job and salary satisfaction are a result of employee longevity, then it may explain why the majority of the community music school faculty, who have less than five years of service at the school, express less than strong feelings of job and pay satisfaction.

In a study exploring the relationships among job design and teacher motivation, Ellis (1987) found that teachers who perceived a high degree of presence of the core job dimensions were more internally motivated than those who did not. Her sample of elementary and secondary classroom teachers in Fairfield County, Connecticut produced means that compared favorably with the scores for national norm groups reported by Hackman and Oldham, indicating that the job of teaching among her respondents was viewed more intrinsically motivating than were other professions. Again, the differences in the organizational structures of the public schools and the typical community music school may help explain the contrasting findings of this study. Of special interest to this researcher was the finding reported by Ellis that teachers with high growth and achievement needs were significantly less satisfied with their jobs than were their counterparts with lower growth needs. Likewise, this investigation revealed a high growth

need for community music school faculty who possessed a lower general job satisfaction.

The Job Characteristic Model predicts that individuals with strong growth needs will respond more negatively to jobs that are low on the core job dimensions because such jobs provide little opportunity for participation in various significant work activities that promote professional advancement. One could argue that this was the case with the respondents from the community music schools where the majority of the faculty only teach (73%) and are not involved with other school activities outside of teaching.

Rodriquez (1992) reported that due to a lack of task and skill variety in the content and context of the jobs of academic library catalogers at nine state universities in Florida, fourteen out of eighteen variables of the Job Characteristic Model were significantly lower than those of the professional job family. Likewise, one may suggest that the less than strong positive feelings faculty had towards the core job dimensions that produced a motivating potential score of 96.18 was a ramification of the majority of faculty having limited responsibilities, if any at all, outside of teaching (73%).

Recommendations for Practice

Kaplan (1966), Evans, Klein, and Delgado (1992), and Alexander (1997) all recommended better compensation, and benefit packages to improve working conditions in community music schools. Kaplan also suggested that full-time employment status would help to improve the organizational structure, thus enhancing teacher satisfaction. Although these recommendations address the importance of creating positive personal and work outcomes for faculty, a better understanding of the role core job dimensions and psychological states play in determining these outcomes may be more beneficial to any efforts to improve the community music school work environment. With this in mind, there are several recommendations that emanate from this investigation.

It appears that faculty of a community music school are not involved with different activities requiring a variety of skills outside of teaching. As a result, faculty feelings regarding the meaningfulness of the job were not as favorable as other experienced psychological states, thus contributing to their weaker sense of general job satisfaction. Therefore, community music school directors may want to begin exploring ways to either create or

delegate various administrative tasks (i.e., public relations, marketing, web site development and maintenance, program and curriculum design, etc.) to faculty in an effort to improve their involvement within the school operations.

Faculty retention may be a problem when considering that the majority of faculty have less than five years of service to the school, despite having over twenty years of teaching experience. This may explain why faculty did not respond favorably to being able to complete a "whole" identifiable piece of work, which in turn affected their feelings regarding the meaningfulness of their job. Therefore, in an effort to possibly improve faculty retention, directors of community music schools may want to consider various ways to diversify faculty activities, which may empower them to adopt "ownership" of the school's educational and economical success. With faculty averaging only nine hours of service to the school each week, this effort may also provide additional weekly work hours for faculty possibly leading to full-time, instead of part-time, positions.

A lack of feedback appears to be a source of some dissatisfaction for faculty, which directly affects their

feelings regarding the effectiveness of their job performance. Directors, in an effort to improve the degree to which faculty receive clear information about his or her work performance, should consider developing various avenues of communication that would be available for all faculty members (i.e., mentoring programs, periodic performance reviews, etc.).

Finally, considering the emphasis placed upon the need to improve faculty compensation and benefits (Kaplan, 1966; Evans, Klein, and Delgado, 1992; and Alexander, 1997) the following questions should be addressed:

1. If pay satisfaction is a product of employee longevity, as suggested by Rooney (1990), can an average of nine work hours per week for each faculty member instill and sustain a long-term professional commitment to a community music school?
2. Is the general dissatisfaction with the job and pay expressed by the community music teacher simply unhappiness with the organizational structure? In other words, if the community music school empowered faculty through a greater involvement with a variety of activities requiring a number of different skills,

and offered full-time salaried positions with benefits, would dissatisfaction with pay diminish?

As illustrated in the Job Characteristic Model, careful attention should be given to the core job dimensions (skill variety, task identity, task significance, autonomy, feedback) that shape the psychological states (experienced meaningfulness, experienced responsibility, and knowledge of results) and which determine the personal and work outcomes of employees. This study should be viewed as another contribution to the general understanding of employee perceptions by using the Job Characteristics Model and Job Diagnostic Survey in an educational setting and the first in a community music school environment.

Recommendations for Future Research

As discussed, several studies in educational settings, including this one, have confirmed the legitimacy of the model proposed by Hackman and Oldham (Morton, 1992; Barnabe and Burns, 1994; and Gibbons, 1996). Additionally, research findings of these studies have indicated that the core job dimensions do indeed influence all three of the psychological states, which determine the personal/work outcomes and are mediated by individual growth need. However, despite convincing evidence in support of the Job

Characteristic Model, the use of the Job Diagnostic Survey as a tool to adequately measure faculty perceptions in the community music school environment should be further researched as well. The following questions address issues that may impact the validity and reliability of the Job Diagnostic Survey when administered to musicians working in different community music settings:

1. How applicable is the survey for measuring the perceptions of "part-time" workers, which tends to be the norm for the community music school environment?
2. How applicable is the language used throughout the survey to musicians?
3. Do musicians answer the questions in reference to their work at the community music school or teaching music in general?

It may be considered a weakness of this study that an assumption was made, despite the use of uncommon terminology (i.e. promotion, managers, co-workers) in relationship to a community music school job, that an appropriate understanding would prevail. Further concern is justified when considering how musicians interpreted the word "job" which was used in many questions throughout the

survey. For example, when asked if the "job" is simple and repetitive, did musicians answer the question as it pertains to their current responsibilities and position at the community music school in which they teach, or did they respond as a professional musician in general? Certainly, the answer would differ depending upon one's perception of what is meant by the word "job".

The following recommendations are made for further research:

1. Since Hackman and Oldham's model and survey has not been extensively tested in a community music school setting, it is recommended that other researchers replicate this study in order to substantiate the effectiveness of the model and survey in measuring and predicting job satisfaction.
2. A modified Job Diagnostic Survey, or the design of a new instrument, more specifically geared to the community music school job could be helpful in more accurately assessing faculty feelings toward their work.
3. Other instruments designed to measure job satisfaction (i.e., Minnesota Job Satisfaction Questionnaire, Job Description Index) should be used

in future studies to corroborate the relationship between job characteristics and feelings of community music school faculty.

4. Future research should incorporate a more thorough and systematic investigation of differences in particular community music schools (organizational practices, leadership styles, uses of technology, etc.), which might influence the relationship between job characteristics and job satisfaction.
5. When this study was initiated, no thought was given to the size of the school. An investigation should be conducted to determine the importance and impact school size may have on faculty feelings toward the core job dimensions, psychological states, and personal/work outcomes.
6. Future research should investigate whether faculty feelings toward the core job dimensions, psychological states, personal/work outcomes, and growth need differ depending upon individual differences (teaching experience, age, gender, instrument, etc.).

In closing, the results of this study should not be generalized beyond the sample of this study. However, the

findings should serve as the purpose for further
investigation into the work environments of musicians.

Appendix A

JOB DIAGNOSTIC SURVEY

APPENDIX A

THE JOB DIAGNOSTIC SURVEY

This appendix reproduces the Job Diagnostic Survey (JDS), an instrument designed to measure the key elements of the job characteristics theory. The survey measures several job characteristics, employees' experienced psychological states, employees' satisfaction with their jobs and work context, and the growth need strength of respondents. For a complete description of the job characteristics theory and the variables measured by the JDS, see Chapter 4 of this volume.

The JDS was designed to be completed by the incumbents of the job or jobs in question—not by individuals outside the job. An instrument designed for the latter purpose is entitled the Job Rating Form (JRF) and is reproduced in Appendix B. Instructions for scoring the JDS and JRF may be found in Appendix C. JDS norms for several job families are provided in Appendix E and may be used for comparison purposes with JDS data collected from many jobs.

The JDS is not copyrighted and therefore may be used without the authors' permission. However, prior to using the JDS, one should carefully read the users' guide for administering and interpreting the instrument (see Appendix D).

A short form of the JDS has also been developed. It excludes measures of the experienced psychological states and uses fewer items to measure other key variables in the job characteristics theory. The JDS short form and its scoring key may be found in Hackman and Oldham (1974).

SECTION ONE

This part of the questionnaire asks you to describe your job, as objectively as you can.

Please do not use this part of the questionnaire to show how much you like or dislike your job. Questions about that will come later. Instead, try to make your descriptions as accurate and as objective as you possibly can.

A sample question is given below.

- A. To what extent does your job require you to work with mechanical equipment?

1-----2-----3-----4-----5-----6-----7
Very little; the job requires almost no contact with mechanical equipment of any kind. Moderately Very much; the job requires almost constant work with mechanical equipment.

You are to circle the number which is the most accurate description of your job.

If, for example, your job requires you to work with mechanical equipment a good deal of the time--but also requires some paperwork--you might circle the number six, as was done in the example above.

If you do not understand these instructions, please ask for assistance. If you do understand them, turn the page and begin.

1. To what extent does your job require you to work closely with other people (either "clients," or people in related jobs in your own organization)?

1-----2-----3-----4-----5-----6-----7		
Very little; dealing with other people is not at all necessary in doing the job.	Moderately; some dealing with others is necessary.	Very much; dealing with other people is an absolutely essential and crucial part of doing the job.

2. How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?

1-----2-----3-----4-----5-----6-----7		
Very little; the job gives me almost no personal "say" about how and when the work is done.	Moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work.	Very much; the job gives me almost complete responsibility for deciding how and when the work is done.

3. To what extent does your job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?

1-----2-----3-----4-----5-----6-----7		
My job is only a tiny part of the overall piece of work; the results of my activities cannot be seen in the final product or service.	My job is a moderate-sized "chunk" of the overall piece of work; my own contribution can be seen in the final outcome.	My job involves doing the whole piece of work, from start to finish; the results of my activities are easily seen in the final product or service.

4. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

1-----2-----3-----4-----5-----6-----7		
Very little; the job requires me to do the same routine things over and over again.	Moderate variety	Very much; the job requires me to do many different things, using a number of different skills and talents.

5. In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

1-----2-----3-----4-----5-----6-----7

<p>Not very significant; the outcomes of my work are <u>not</u> likely to have important effects on other people.</p>	<p>Moderately significant.</p>	<p>Highly significant; the outcomes of my work can affect other people in very important ways.</p>
---	--------------------------------	--

6. To what extent do managers or co-workers let you know how well you are doing on your job?

1-----2-----3-----4-----5-----6-----7

<p>Very little; people almost never let me know how well I am doing.</p>	<p>Moderately; sometimes people may give me "feedback;" other times they may not.</p>	<p>Very much; managers or co-workers provide me with almost constant "feedback" about how well I am doing.</p>
--	---	--

7. To what extent does doing the job itself provide you with information about your work performance? That is, does the actual work itself provide clues about how well you are doing--aside from any "feedback" co-workers or supervisors may provide?

1-----2-----3-----4-----5-----6-----7

<p>Very little; the job itself is set up so I could work forever without finding out how well I am doing.</p>	<p>Moderately; sometimes doing the job provides "feedback" to me; sometimes it does not.</p>	<p>Very much; the job is set up so that I get almost constant "feedback" as I work about how well I am doing.</p>
---	--	---

SECTION TWO

Listed below are a number of statements which could be used to describe a job.

You are to indicate whether each statement is an accurate or an inaccurate description of your job.

Once again, please try to be as objective as you can in deciding how accurately each statement describes your job--regardless of whether you like or dislike your job.

Write a number in the blank beside each statement, based on the following scale:

How accurate is the statement in describing your job?

1	2	3	4	5	6	7
Very	Mostly	Slightly	Uncertain	Slightly	Mostly	Very
Inaccurate	Inaccurate	Inaccurate		Accurate	Accurate	Accurate

- ___ 1. The job requires me to use a number of complex or high-level skills.
- ___ 2. The job requires a lot of cooperative work with other people.
- ___ 3. The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end.
- ___ 4. Just doing the work required by the job provides many chances for me to figure out how well I am doing.
- ___ 5. The job is quite simple and repetitive.
- ___ 6. The job can be done adequately by a person working alone--without talking or checking with other people.
- ___ 7. The supervisors and co-workers on this job almost never give me any "feedback" about how well I am doing in my work.
- ___ 8. This job is one where a lot of other people can be affected by how well the work gets done.
- ___ 9. The job denies me any chance to use my personal initiative or judgment in carrying out the work.
- ___ 10. Supervisors often let me know how well they think I am performing the job.
- ___ 11. The job provides me the chance to completely finish the pieces of work I begin.
- ___ 12. The job itself provides very few clues about whether or not I am performing well.
- ___ 13. The job gives me considerable opportunity for independence and freedom in how I do the work.
- ___ 14. The job itself is not very significant or important in the broader scheme of things.

SECTION THREE

Now please indicate how you personally feel about your job.

Each of the statements below is something that a person might say about his or her job. You are to indicate your own, personal feelings about your job by marking how much you agree with each of the statements.

Write a number in the blank for each statement, based on this scale:

How much do you agree with the statement?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

- ___ 1. It's hard, on this job, for me to care very much about whether or not the work gets done right.
- ___ 2. My opinion of myself goes up when I do this job well.
- ___ 3. Generally speaking, I am very satisfied with this job.
- ___ 4. Most of the things I have to do on this job seem useless or trivial.
- ___ 5. I usually know whether or not my work is satisfactory on this job.
- ___ 6. I feel a great sense of personal satisfaction when I do this job well.
- ___ 7. The work I do on this job is very meaningful to me.
- ___ 8. I feel a very high degree of personal responsibility for the work I do on this job.
- ___ 9. I frequently think of quitting this job.
- ___ 10. I feel bad and unhappy when I discover that I have performed poorly on this job.
- ___ 11. I often have trouble figuring out whether I'm doing well or poorly on this job.
- ___ 12. I feel I should personally take the credit or blame for the results of my work on this job.
- ___ 13. I am generally satisfied with the kind of work I do in this job.
- ___ 14. My own feelings generally are not affected much one way or the other by how well I do on this job.
- ___ 15. Whether or not this job gets done right is clearly my responsibility.

SECTION FOUR

Now please indicate how satisfied you are with each aspect of your job listed below. Once again, write the appropriate number in the blank beside each statement.

How satisfied are you with this aspect of your job?

1	2	3	4	5	6	7
Extremely Dissatisfied	Dissatisfied	Slightly Dissatisfied	Neutral	Slightly Satisfied	Satisfied	Extremely Satisfied

- ___ 1. The amount of job security I have.
- ___ 2. The amount of pay and fringe benefits I receive.
- ___ 3. The amount of personal growth and development I get in doing my job.
- ___ 4. The people I talk to and work with on my job.
- ___ 5. The degree of respect and fair treatment I receive from my boss.
- ___ 6. The feeling of worthwhile accomplishment I get from doing my job.
- ___ 7. The chance to get to know other people while on the job.
- ___ 8. The amount of support and guidance I receive from my supervisor.
- ___ 9. The degree to which I am fairly paid for what I contribute to this organization
- ___ 10. The amount of independent thought and action I can exercise in my job.
- ___ 11. How secure things look for me in the future in this organization.
- ___ 12. The chance to help other people while at work.
- ___ 13. The amount of challenge in my job.
- ___ 14. The overall quality of the supervision I receive in my work.

SECTION FIVE

Now please think of the other people in your organization who hold the same job you do. If no one has exactly the same job as you, think of the job which is most similar to yours.

Please think about how accurately each of the statements describes the feelings of those people about the job.

It is quite all right if your answers here are different from when you described your own reactions to the job. Often different people feel quite differently about the same job.

Once again, write a number in the blank for each statement, based on this scale:

How much do you agree with the statement?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

- ___ 1. Most people on this job feel a great sense of personal satisfaction when they do the job well.
- ___ 2. Most people on this job are very satisfied with the job.
- ___ 3. Most people on this job feel that the work is useless or trivial.
- ___ 4. Most people on this job feel a great deal of personal responsibility for the work they do.
- ___ 5. Most people on this job have a pretty good idea of how well they are performing their work.
- ___ 6. Most people on this job find the work very meaningful.
- ___ 7. Most people on this job feel that whether or not the job gets done right is clearly their own responsibility.
- ___ 8. People on this job often think of quitting.
- ___ 9. Most people on this job feel bad or unhappy when they find that they have performed the work poorly.
- ___ 10. Most people on this job have trouble figuring out whether they are doing a good or a bad job.

SECTION SIX

Listed below are a number of characteristics which could be present on any job. People differ about how much they would like to have each one present in their own jobs. We are interested in learning how much you personally would like to have each one present in your job.

Using the scale below, please indicate the degree to which you would like to have each characteristic present in your job.

NOTE: The numbers on this scale are different from those used in previous scales.

4	5	6	7	8	9	10
Would like having this only a moderate amount (or less)			Would like having this very much			Would like having this <u>extremely much</u>

- ___ 1. High respect and fair treatment from my supervisor.
- ___ 2. Stimulating and challenging work.
- ___ 3. Chances to exercise independent thought and action in my job.
- ___ 4. Great job security.
- ___ 5. Very friendly co-workers.
- ___ 6. Opportunities to learn new things from my work.
- ___ 7. High salary and good fringe benefits.
- ___ 8. Opportunities to be creative and imaginative in my work.
- ___ 9. Quick promotions.
- ___ 10. Opportunities for personal growth and development in my job.
- ___ 11. A sense of worthwhile accomplishment in my work.

SECTION SEVEN

People differ in the kinds of jobs they would most like to hold. The questions in this section give you a chance to say just what it is about a job that is most important to you.

For each question, two different kinds of jobs are briefly described. You are to indicate which of the jobs you personally would prefer--if you had to make a choice between them.

In answering each question, assume that everything else about the jobs is the same. Pay attention only to the characteristics actually listed.

Two examples are given below.

<u>JOB A</u>	<u>JOB B</u>
A job requiring work with mechanical equipment most of the day	A job requiring work with other people most of the day
1-----2-----3-----4-----5	
Strongly Prefer A	Strongly Prefer B
Slightly Prefer A	Slightly Prefer B
Neutral	

If you like working with people and working with equipment equally well, you would circle the number 3, as has been done in the example.

* * * *

Here is another example. This one asks for a harder choice--between two jobs which both have some undesirable features.

<u>JOB A</u>	<u>JOB B</u>
A job requiring you to expose yourself to considerable physical danger.	A job located 200 miles from your home and family.
1-----2-----3-----4-----5	
Strongly Prefer A	Strongly Prefer B
Slightly Prefer A	Slightly Prefer B
Neutral	

If you would slightly prefer risking physical danger to working far from your home, you would circle number 2, as has been done in the example.

Please ask for assistance if you do not understand exactly how to do these questions.

JOB A

JOB B

1. A job where the pay is very good.

A job where there is considerable opportunity to be creative and innovative.

1-----2-----3-----4-----5
Strongly Slightly Neutral Slightly Strongly Prefer A Prefer A Prefer B Prefer B

2. A job where you are often required to make important decisions.

A job with many pleasant people to work with.

1-----2-----3-----4-----5
Strongly Slightly Neutral Slightly Strongly Prefer A Prefer A Prefer B Prefer B

3. A job in which greater responsibility is given to those who do the best work.

A job in which greater responsibility is given to loyal employees who have the most seniority.

1-----2-----3-----4-----5
Strongly Slightly Neutral Slightly Strongly Prefer A Prefer A Prefer B Prefer B

4. A job in an organization which is in financial trouble-- and might have to close down within the year.

A job in which you are not allowed to have any say whatever in how your work is scheduled, or in the procedures to be used in carrying it out.

1-----2-----3-----4-----5
Strongly Slightly Neutral Slightly Strongly Prefer A Prefer A Prefer B Prefer B

5. A very routine job.

A job where your co-workers are not very friendly.

1-----2-----3-----4-----5
Strongly Slightly Neutral Slightly Strongly Prefer A Prefer A Prefer B Prefer B

6. A job with a supervisor who is often very critical of you and your work in front of other people.

A job which prevents you from using a number of skills that you worked hard to develop.

1-----2-----3-----4-----5
Strongly Slightly Neutral Slightly Strongly Prefer A Prefer A Prefer B Prefer B

- | <u>JOB A</u> | 1-----2-----3-----4-----5 | <u>JOB B</u> |
|---|---|--|
| 7. A job with a supervisor who respects you and treats you fairly. | Strongly Prefer A Slightly Prefer A Neutral Slightly Prefer B Strongly Prefer B | A job which provides constant opportunities for you to learn new and interesting things. |
| 8. A job where there is a real chance you could be laid off. | Strongly Prefer A Slightly Prefer A Neutral Slightly Prefer B Strongly Prefer B | A job with very little chance to do challenging work. |
| 9. A job in which there is a real chance for you to develop new skills and advance in the organization. | Strongly Prefer A Slightly Prefer A Neutral Slightly Prefer B Strongly Prefer B | A job which provides lots of vacation time and an excellent fringe benefit package. |
| 10. A job with little freedom and independence to do your work in the way you think best. | Strongly Prefer A Slightly Prefer A Neutral Slightly Prefer B Strongly Prefer B | A job where the working conditions are poor. |
| 11. A job with very satisfying team-work. | Strongly Prefer A Slightly Prefer A Neutral Slightly Prefer B Strongly Prefer B | A job which allows you to use your skills and abilities to the fullest extent. |
| 12. A job which offers little or no challenge. | Strongly Prefer A Slightly Prefer A Neutral Slightly Prefer B Strongly Prefer B | A job which requires you to be completely isolated from co-workers. |

Appendix B

SCORING KEY FOR THE JOB DIAGNOSTIC SURVEY

SCORING KEY FOR THE JOB DIAGNOSTIC SURVEY

The Job Diagnostic Survey (JDS) measures several characteristics of jobs, the reactions of the respondents to their jobs, and the growth need strength of the respondents. Each variable measured by the JDS is listed below, along with (a) a one or two sentence description of the variable, and (b) a list of the questionnaire items which are averaged to yield a summary score for the variable.

The JDS is based on a questionnaire originally compiled by Hackman & Lawler (Employee Reactions to Job Characteristics, Journal of Applied Psychology Monograph, 1971, 55(3), 259-286). A complete description of the JDS is provided by Hackman & Oldham (The Job Diagnostic Survey: An Instrument for Diagnosing the Motivational Potential of Jobs, Technical Report No. 4, Department of Administrative Sciences, Yale University, 1974). The theory on which the JDS is based is described by Hackman & Oldham (Motivation Through the Design of Work: Test of a Theory, Technical Report No. 6, Department of Administrative Sciences, Yale University, 1974).

For further information about the instrument and its uses, contact:

Prof. J. Richard Hackman	or	Prof. Greg R. Oldham
56 Hillhouse Avenue		Department of Business Administration
Yale University		University of Illinois
New Haven, Ct. 06520		Urbana, Ill. 61801

* * *

I. JOB DIMENSIONS: Objective characteristics of the job itself.

A. Skill Variety: The degree to which a job requires a variety of different activities in carrying out the work, which involve the use of a number of different skills and talents of the employee.

Average the following items:

Section One #4
Section Two #1
#5 (reversed scoring--i.e., subtract the number entered by the respondent from 8)

B. Task Identity: The degree to which the job requires the completion of a "whole" and identifiable piece of work--i.e., doing a job from beginning to end with a visible outcome.

Average the following items:

Section One #3
Section Two #11
#3 (reversed scoring)

C. Task Significance: The degree to which the job has a substantial impact on the lives or work of other people--whether in the immediate organization or in the external environment.

Average the following items:

Section One: #5
Section Two: #8
#14 (reversed scoring)

D. Autonomy: The degree to which the job provides substantial freedom, independence, and discretion to the employee in scheduling his work and in determining the procedures to be used in carrying it out.

Average the following items:

Section One: #2
Section Two: #13
#9 (reversed scoring)

E. Feedback from the Job Itself: The degree to which carrying out the work activities required by the job results in the employee obtaining information about the effectiveness of his or her performance.

Average the following items:

Section One: #7
Section Two: #4
#12 (reversed scoring)

F. Feedback from Agents: The degree to which the employee receives information about his or her performance effectiveness from supervisors or from co-workers. (This construct is not a job characteristic per se, and is included only to provide information supplementary to construct (E) above.)

Average the following items:

Section One: #6
Section Two: #10
#7 (reversed scoring)

G. Dealing with Others: The degree to which the job requires the employee to work closely with other people (whether other organization members or organizational "clients").

Average the following items:

Section One: #1
Section Two: #2
#6 (reversed scoring)

II. EXPERIENCED PSYCHOLOGICAL STATES: The psychological impact of the job on the employees. These three psychological states are viewed as mediating between objective job characteristics (listed above) and the affective (e.g., satisfaction, motivation) and behavioral (e.g., performance quality, absenteeism) responses of employees to their work. Each of the three constructs are measured both directly (Section Three) and indirectly, via projective-type items (Section Five).

A. Experienced Meaningfulness of the Work: The degree to which the employee experiences his or her job as one which is generally meaningful, valuable, and worthwhile.

Average the following items:

Section Three: #7
 #4 (reversed scoring)
Section Five: #6
 #3 (reversed scoring)

B. Experienced Responsibility for the Work: The degree to which the employee feels accountable and responsible for the results of the work he or she does.

Average the following items:

Section Three: #8, #12, #15
 #1 (reversed scoring)
Section Five: #4, #7

C. Knowledge of Results: The degree to which the employee knows and understands, on a continuous basis, how effectively he or she is performing his job.

Average the following items:

Section Three: #5
 #11 (reversed scoring)
Section Five: #5
 #10 (reversed scoring)

III. AFFECTIVE RESPONSES TO THE JOB: The private, affective reactions or feelings an employee gets from working on his job. The first two constructs (general satisfaction and internal work motivation) are measured both directly (Section Three) and indirectly (Section Five).

A. General Satisfaction: An overall measure of the degree to which the employee is satisfied and happy in his or her work. (This measure has been shown to predict both turnover and absenteeism--i.e., the lower the satisfaction, the more the turnover and absenteeism).

Average the following items:

Section Three: #3, #13
 #9 (reversed scoring)
Section Five: #2
 #8 (reversed scoring)

B. Internal Work Motivation: The degree to which the employee is self-motivated to perform effectively on the job. This measure previously has been shown to relate directly to the quality of the employee's work.

Average the following items:

Section Three: #2, #6, #10
 #14 (reverse scoring)
Section Five: #1, #9

C. Specific Satisfactions: These short scales tap several specific aspects of the employee's job satisfaction. They all relate positively to the general satisfaction measure (Construct A above), but the specific satisfaction with "growth" (Scale 5, below) relates most strongly to the characteristics of jobs themselves.

- C1. "Pay" satisfaction. Average items #2 and #9 of Section Four.
- C2. "Security" satisfaction. Average items #1 and #11 of Section Four.
- C3. "Social" satisfaction. Average items #4, #7, and #12 of Section Four.
- C4. "Supervisory" satisfaction. Average items #5, #8, and #14 of Section Four.
- C5. "Growth" satisfaction. Average items #3, #6, #10, and #13 of Section Four.

IV. INDIVIDUAL GROWTH NEED STRENGTH: These scales tap an individual difference among employees--namely, the degree to which each employee has a strong vs. weak desire to obtain "growth" satisfactions from his or her work. Individuals high on this measure have been shown to respond positively (i.e., with high satisfaction and internal work motivation) to complex, challenging, and "enriched" jobs; individuals low on this measure tend not to find such jobs satisfying or motivating. The questionnaire yields two separate measures of growth need strength, one from Section Six and one from Section Seven.

"Would Like" Format (Section Six)

Average the six items from Section Six listed below. Before averaging, subtract 3 from each item score; this will result in a summary scale ranging from one to seven. The items are:
#2, #3, #6, #8, #10, #11

"Job Choice" Format (Section Seven)

Each item in Section Seven yields a number from 1-5 (i.e., "Strongly prefer A" is scored 1; "Neutral" is scored 3; and "Strongly prefer B" is scored 5. Compute the need strength measure by averaging the twelve items as follows:

#1, #5, #7, #10, #11, #12 (direct scoring)
#2, #3, #4, #6, #8, #9 (reversed scoring)

Appendix C

COVER LETTER FOR THE JOB DIAGNOSTIC SURVEY

Dear Colleague,

As a fellow colleague in music education and as a fellow music educator currently employed by a community music school, I am asking you for your help. The research that I am conducting as a doctoral candidate at the University of North Texas is intended to contribute to the knowledge pertaining to the working conditions of faculty in community schools in the United States.

On the following pages, you will find the original Job Diagnostic Survey developed by Hackman and Oldham in 1974, which was designed to diagnose jobs prior to redesign. The survey consists of seven sections, which have several different kinds of questions about your job. The questions are designed to obtain your opinion of your job and the entire survey will take approximately 15 minutes to complete. Specific instructions are given at the beginning of each section of the survey.

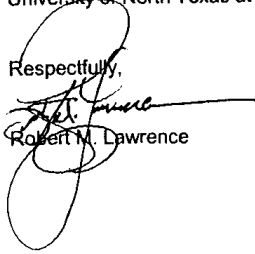
Your individual answers will be kept completely confidential. Your name will never be associated with the data and only group analysis of the data will be conducted. Please help contribute to the collection of accurate data that is needed to improve our profession by answering each item as honestly and frankly as possible.

General Instructions:

1. Please complete the Biographical Data Form attached to the survey.
2. Please complete the original Job Diagnostic Survey by Hackman and Oldham
 - a. Carefully read the introduction to each section carefully.
 - b. Be sure to answer each item.
 - c. Be as honest and objective as possible with your responses.
 - d. Circle, or indicate, the most appropriate number for each response.

If you have any questions you may contact me at 972.380.8050 extensions 211, or Dr. Froehlich of the University of North Texas at 940.565.3744, or the Institutional Review Board of the University of North Texas at 940.565.3940. Thank you for your time, cooperation and assistance.

Respectfully,


Robert M. Lawrence

APPROVED BY THE UNT IRB
FROM 12/06/01 TO 12/05/01
(2)

Appendix D

FACULTY BIOGRAPHICAL DATA SHEET

BIOGRAPHICAL INFORMATION

By answering the questions below, you will provide us valuable information needed for this study. Your input is sincerely appreciated. Thank you for your time, cooperation, and assistance.

General Information

1. Male or female: _____
2. Age: _____

Professional Information

1. Degrees Held? _____
2. What is your main instrument? _____
3. Are you certified to teach public school in your state? _____
4. Number of years teaching professionally? _____
5. Is teaching/performing music your sole source of income? _____

School Information

1. Number of years teaching at this music school? _____
2. How many hours do you typically teach each week for this music school? _____
3. What is the age range of your students at this music school? _____
4. Is teaching your only responsibility at this music school? _____

(If your answer is "no" – please explain.)

5. Please list the various types of teaching you personally do at this music school.

(Example: Individual instructions, group lessons, ensembles, courses, etc.)

Thank you. Please turn the page and complete the Job Diagnostic Survey.

Appendix E

JOB DIAGNOSTIC SURVEY SCORES FOR
COMMUNITY MUSIC SCHOOL FACULTY

Section One

	1	2	3	4	5	6	7
Question 1	2	9	3	21	14	29	359
Question 2	0	2	6	30	40	170	189
Question 3	1	18	6	82	82	99	149
Question 4	12	10	10	123	93	94	95
Question 5	2	5	10	57	57	125	181
Question 6	36	51	50	98	86	85	31
Question 7	4	2	4	51	83	169	124

Section Two

	1	2	3	4	5	6	7
Question 1	3	2	6	11	53	185	177
Question 2	11	29	12	15	72	102	196
Question 3	13	26	27	64	36	97	174
Question 4	3	2	11	31	55	226	109
Question 5	0	116	80	24	50	11	156
Question 6	32	87	54	31	43	42	148
Question 7	38	63	61	17	53	118	88
Question 8	17	45	60	33	70	101	111
Question 9	9	6	12	12	10	64	324
Question 10	43	84	45	32	64	125	44
Question 11	20	34	34	50	44	135	120
Question 12	7	9	20	19	37	168	177
Question 13	3	0	7	13	13	144	257
Question 14	5	16	18	30	33	145	190

Section Three

	1	2	3	4	5	6	7
Question 1	7	1	2	8	10	82	327
Question 2	15	1	0	15	27	174	205
Question 3	7	8	14	37	39	216	116
Question 4	0	0	7	10	13	148	259
Question 5	9	4	4	10	38	257	115
Question 6	5	2	0	4	26	139	261
Question 7	6	2	3	9	46	106	265
Question 8	5	0	0	2	22	113	295
Question 9	14	18	27	38	33	112	195
Question 10	4	10	4	71	47	194	107
Question 11	3	7	28	32	32	196	138
Question 12	4	33	35	35	84	161	85
Question 13	2	5	2	13	39	249	127
Question 14	7	23	5	32	40	194	136
Question 15	0	6	25	23	48	138	197

Section Four

	1	2	3	4	5	6	7
Question 1	30	53	44	38	24	182	66
Question 2	67	105	77	38	85	64	1
Question 3	3	27	20	39	95	189	64
Question 4	1	3	17	39	45	194	138
Question 5	4	12	18	34	22	167	180
Question 6	0	5	3	15	68	195	151
Question 7	4	5	29	62	52	180	105
Question 8	4	17	26	115	48	142	85
Question 9	26	70	74	48	94	104	21
Question 10	2	9	0	9	31	183	203
Question 11	17	25	20	76	40	178	81
Question 12	0	1	4	60	44	191	137
Question 13	5	3	15	47	49	188	130
Question 14	7	22	19	137	42	157	53

Section Five

	1	2	3	4	5	6	7
Question 1	0	7	0	54	68	237	71
Question 2	0	29	25	98	116	142	27
Question 3	2	6	10	67	15	171	166
Question 4	0	16	13	56	33	212	107
Question 5	0	5	15	73	62	236	46
Question 6	0	5	8	65	63	228	68
Question 7	0	19	15	59	81	199	64
Question 8	17	19	46	136	43	125	51
Question 9	1	22	7	102	76	197	32
Question 10	5	22	32	94	60	170	54

Section Six

	4	5	6	7	8	9	10
Question 1	8	7	4	65	36	47	269
Question 2	6	5	1	57	42	64	261
Question 3	0	1	0	10	6	15	60
Question 4	11	4	9	66	31	65	251
Question 5	7	5	7	97	63	57	201
Question 6	6	5	8	50	54	66	248
Question 7	7	11	3	49	46	26	295
Question 8	3	2	2	38	37	62	293
Question 9	73	21	38	121	45	22	117
Question 10	2	3	12	55	48	58	259
Question 11	1	1	4	32	35	35	329

Section Seven

	1	2	3	4	5	6	7
Question 1	23	67	70	183	94	0	0
Question 2	22	70	122	144	74	5	0
Question 3	153	138	113	21	7	5	0
Question 4	114	114	166	35	8	0	0
Question 5	56	141	185	40	15	0	0
Question 6	10	54	191	142	40	0	0
Question 7	31	117	104	148	37	0	0
Question 8	26	107	171	117	16	0	0
Question 9	61	139	91	107	39	0	0
Question 10	18	57	208	136	17	0	0
Question 11	12	53	87	134	151	0	0
Question 12	11	32	147	199	48	0	0

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