

JOB SATISFACTION OF SECONDARY SCHOOL PRINCIPALS

IN THE RIFT VALLEY PROVINCE OF KENYA

By

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Abstract

Few studies have examined how school administrators in Kenya perceive their work and employment conditions. The primary purpose of this study was to determine which aspects of the principal's position contributed to job satisfaction of Kenyan secondary school administrators. A secondary purpose was to investigate the extent to which overall job satisfaction is related to individual characteristics of the principals and to organizational characteristics of the schools.

Data were obtained by means of a survey questionnaire, which was mailed to 201 secondary school principals in the Rift Valley Province of Kenya. The response rate was 67% (135/201).

The data were analyzed using descriptive statistics, correlational analyses and multiple linear regression, as well as comparison of means using t-tests to answer the research questions. Content analyses of free response information were used to give substance to statistical findings.

The majority of the Kenyan secondary school principals (90%) were satisfied with their total work role. Highest satisfaction scores were associated with (1) principal relationships with teachers and students, (2) principal's social relationships with teachers, and (3) the principal's freedom to allocate teaching assignments. Principals appeared to be dissatisfied with "fringe benefits under the contract" and "other fringe benefits".

The means calculated from the reported perception of overall job satisfaction were not significantly different for (a) age, (b) gender, (c) length of administrative service, (d) post-secondary education, (e) school setting, (f) type of school system, or (g) school size.

The school principals in private schools were significantly more satisfied than those in public schools in the following work factors:

- i) The salary the principal receives,
- ii) Fringe benefits under the contract and other fringe benefits,
- iii) The physical conditions of the school,
- iv) The opportunity the principal has to help teachers and students to succeed,
- v) Satisfaction and morale of students,
- vi) The principal's freedom to allocate teaching assignments,
- vii) Attitude of parents toward the school,
- viii) Opportunities for advancement as an administrator, and
- ix) The effect of the job on the principal's personal life.

The facet "recognition of the principal's work" was the best predictor of overall job satisfaction and was strongly related ($r = 0.414$ or higher) to many other facets of job satisfaction.

Recommendations for practice included the suggestions that the working environment and the quality of life of Kenyan school administrators be improved

by directing efforts to reduce the causes of job dissatisfaction, the major one being fringe benefits under contract. Also suggested were encouragement, recognition and appointment of women to senior levels of educational administration. An introduction and continuation of preparatory courses for school administrators was recommended.

In future, researchers may need to focus their attention on beginning principals (0 to 4 years experience), female school administrators to understand why they are under-represented, and the job satisfaction-performance relationships in educational administration.

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Last, but by no means least, I wish to extend my gratitude to my local church and the entire Christian community of Thunder Bay, who have always continued to pray for me and my family. May God who is the omnipresent and the omnipotent be the light unto their path.

Dedication

This work is dedicated to my beloved wife, **Josephine Jelet** and our lovely sons, **Amos Kipkurui, Titus Kipkemoi, Charles Kigen, and Daniel Kipngeno**, who have tirelessly encouraged me to work hard.

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CHAPTER 1: Introduction

Purpose of the Study

The major focus of the study was to determine which aspects of the principal's position contribute to job satisfaction of representative Kenyan secondary school administrators.

Job satisfaction has been studied often in a variety of industrial contexts (Gruneberg, 1976; Vroom, 1964) and organizations such as hospitals (Pfaff, 1987), homes for the aged (Klassen, 1991) and schools (Holdaway, 1971, 1978; Lortie, 1975). According to Locke (1983), 3350 articles or dissertations appeared on the subject from 1958 to 1976. The common objective often has been to identify those facets in the work situation which were related to satisfaction — the assumption being that increased satisfaction led to better performance (Bacharach & Mitchell, 1983; Gruneberg, 1979; Holdaway, 1971; Locke, 1983).

Most of the job satisfaction research in education has focused on teachers (Bacharach & Mitchell, 1983; Friesen, Holdaway & Rice, 1981). There has been limited research on principal satisfaction (Gunn, 1984) and that which has been reported is mainly from Canada and the United States.

Background Information

In Kenya, every public secondary school (that is maintained, assisted and Harambee) is under the jurisdiction of a Board of Governors which receives its authority from the Ministry of Education through the Education Act (1980). These Boards of Governors are charged, among other things, with the proper management of the schools. Their main functions include "the development of these institutions and the management of their finances, discipline of pupils and teachers and the employment of non-teaching staff" (Kamunge, 1988, p. 109).

All public secondary schools are administered and managed on a day-to-day basis by principals who are employees of the Teachers' Service Commission (TSC), with the principal being responsible for the overall running of the school.

Statement of the Problem

This study was stimulated by the researcher's experience and awareness that:

- 1) a large number of principals resign from principalship of public secondary schools in Kenya;
- 2) very few studies are available in Kenya about how principals feel about their work and employment conditions.

The major purpose of this study was to determine the principals'

perceptions of their roles and job satisfaction in one province in Kenya. In particular, the study attempted to answer the question: Which aspects of the administrative position are factors in principals' perceptions of satisfaction? According to Johnson and Holdaway's (1991) study of principal job satisfaction, possible areas affecting satisfaction may include working conditions, personnel-related matters, student-related matters, role-related matters, district-related matters, and occupational-related matters.

The secondary purpose of the study was to investigate the extent to which overall job satisfaction is related to individual characteristics of the principals and to organizational characteristics of the schools. Personal characteristics were age, gender, length of administrative service, and post-secondary education. Organizational characteristics were school setting, type of school system, and the size of the school as measured by actual student enrolment.

Research Questions

The following were the research questions for this study:

- I Are there significant differences in the perception of overall job satisfaction as reported by:
 - a) female and male school principals?
 - b) younger and older school administrators?

- c) novice and experienced school principals?
 - d) school administrators who had two to four years of post-secondary education and those who had five or more years?
 - e) school administrators in rural and urban settings?
 - f) school principals in public and private schools?
 - g) school administrators in single-stream schools and those in two or more streams?
- II What significant differences in job satisfaction exist among the perceptions of administrators working in public schools and private schools?

The job satisfaction instrument consists of 45 work factors (Appendix B) classified under six dimensions. For each dimension a null hypothesis was stated as follows:

A) Working Conditions (8 factors)

H₀1: There is no significant difference between the mean scores calculated from the reported perceptions of administrators of public and private schools on each factor of the 8 working conditions within the job satisfaction instrument.

B) Personnel-related matters (8 factors)

H₀2: There is no significant difference between the mean scores calculated from the reported perceptions of administrators of public and private schools on each of the 8 personnel-related matters within the job satisfaction instrument.

C) Student-related matters (4 factors)

H₀3: There is no significant difference between the mean scores calculated from the reported perceptions of administrators of public and private schools on each of the 4 student-related matters within the job satisfaction instrument.

D) Role-related matters (8 factors)

H₀4: There is no significant difference between the mean scores calculated from the reported perceptions of administrators of public and private schools on each of the 8 role-related matters within the job satisfaction instrument.

E) District-related matters (9 factors)

H₀5: There is no significant difference between the mean scores calculated from the reported perceptions of

administrators of public and private schools on each of the 9 District-related matters within the job satisfaction instrument.

F) Occupation-related matters (8 factors)

H₀6: There is no significant difference between the mean scores calculated from the reported perceptions of administrators of public and private schools on each of the 8 occupation-related matters within the job satisfaction instrument.

III Which aspects of the administrative position are the major predictors of overall job satisfaction?

Significance of the Study

Through its contribution to the literature and research on job satisfaction of principals, this study is expected to provide a better understanding of the perceptions of Kenyan principals' roles and their job satisfaction. The knowledge gained can be used to address the question of what motivates principals in their work. Such knowledge may be used in effective planning for school reform in order to make the job of principals in Kenya more challenging, stimulating, and rewarding.

The comments from the respondents in this study provide insights into

how Kenyan secondary school principals' perceive their roles and how they think about job satisfaction. This information may be of value to persons who aspire to become secondary school principals.

The research findings may clarify why many principals in Kenya seem not to have high regard for their jobs. The research will then set the stage for exploring alternative courses of action for improving the working environment and quality of life of the Kenyan secondary school principal. Furthermore, the study will broaden the information base needed to design professional inservice programs for principals.

The results of this study should aid the Teachers' Service Commission (TSC) in policy formation. The TSC may be able to use the results of this research for determining how appointment and promotion of principals can be implemented more effectively. This body also will gain an awareness of motivational job factors, and could use these to expand continually these factors, so that job satisfaction among principals may be enhanced. In addition, the TSC, Ministry of Education, and Boards of Governors could devise ways and means of encouraging and supporting principals who are creative and willing to experiment with new programs, so as to allow more opportunities for achievement.

The use of motivator factors as incentives for long-term increase in job performance may make principals more satisfied with the job. Also, efforts

could be geared to avoiding those factors which bring about job dissatisfaction.

The research findings may be of interest to school principals, officials of the Ministry of Education, Boards of Governors, scholars, and educational interest groups such as the Kenya National Union of Teachers (KNUT), the Kenya Secondary School Heads' Association (KSSHA) as well as the general public.

Assumptions

The following assumptions were made in this study:

- 1) an individual's job satisfaction can be measured by means of a survey questionnaire;
- 2) principals' responses to the questionnaire items are genuine indicators of their perceptions and feelings;
- 3) the items included on the survey questionnaire represent discrete aspects of the principals' work.

Limitations

This study was limited by the instrumentation used. A questionnaire is a convenient means of data collection because selection-response items enhance consistency of response across respondents but is limited by the extent to which it can measure the variables being studied. Also, the

questionnaire selection-response items have the disadvantage of possibly "boxing in" the respondent on the breadth of the response (Wiersma, 1991).

Secondly, this research was limited because it was not a longitudinal study. Perceptions of principals' roles and their job satisfaction were not measured over time and at specific points in time during the school year. The measurements were restricted to one particular time in the school year, that is June to November 1992. The responses, therefore, may not be representative of other times. However, this limitation should not have affected substantially the testing of relationships among variables all of which were measured at the same time.

Thirdly, the size and nature of the sample may limit generalizability to the Rift Valley province in Kenya (See the map, p. 47). Due to financial constraints, it was not possible to follow up with the 70 non-respondents.

Operational Terminology

In this study the operational key terms have been defined as follows:

1. **Public School** — a school developed and maintained by public funds from the governments, parents, and communities (Kamunge, 1988). In Kenya, (a) maintained, (b) assisted, and (c) Harambee schools are included under this category of school system.
2. **Private School** — a school which is established and managed by private

individuals or organizations (Ministry of Education, 1987). Such schools have to be registered by the Ministry of Education, but meet their own financial responsibilities. Private schools are required also to adhere to the regulations laid down by the Kenyan government for the provision of physical facilities, equipment and teachers.

3. **Stream** — This term is used to refer to the size of a school in terms of student population. A single-stream school (that is, one class per form) consists of 40 students per class, from form one to four. Accordingly, the Ministry of Education approved total student enrolment for such a school is 160 (Ministry of Education, 1987).
4. **Principal** — a teacher who has been appointed to administer a designated school by the Teachers' Service Commission (TSC) or school governing body. He/she is responsible for the overall running and control of the school (Government of Kenya, 1980). The term principal includes headmaster/headmistress.
5. **Board of Governors** — a Board of Governors established as designated by the Ministry of Education in accordance with the Education Act. The main responsibilities of a board of governors include:
 - a) physical development of their school,
 - b) management of school finances,
 - c) discipline of students and teachers, and

- d) the employment of non-teaching staff (Government of Kenya, 1980).
6. ***District Education Officer*** — the Chief Education Officer at the district level. He/she oversees all matters relating to education in the district. For example, such an individual gives professional advice, guidance, and interpretation of policy in education matters (Ministry of Education, 1987).
 7. ***Provincial Education Officer*** — is the Chief Executive Officer at the provincial level. He/she oversees all matters relating to education in the whole province. Such an individual deals with planning, coordination, inspection, and development of educational standards in the province (Ministry of Education, 1987). There are eight provincial education offices in Kenya and each is headed by a Provincial Education Officer.
 8. ***Principal satisfaction*** — a feeling, a sense of gratification on the job (Holdaway, 1978; Johnson & Holdaway, 1991).
 9. ***Job satisfaction*** — may be viewed as "the pleasurable emotional state resulting from the perception of one's job as fulfilling or allowing the fulfilment of one's important job values, providing these values are compatible with one's needs" (Locke, 1983, p. 1342).
 10. ***Overall job satisfaction*** — the perceived overall job satisfaction as rated by each respondent (Gunn, 1984). This indicates "a person's affective

reactions to his/her total work role" (Lawler, 1973, p. 64). In this study indicated by the individual's rating of the item: (what is) Your overall feeling of satisfaction with your job.

11. **Job facet** — each aspect or dimension of a job (Holdaway, 1978; Johnson & Holdaway, 1991).
12. **Facet satisfaction** — may be viewed as "people's affective reactions to particular aspects of their job" (Lawler, 1973, p. 64).
13. **Local Authority** — a county or municipality under the Local Government Act (Government of Kenya, 1980).
14. **Teachers' Service Commission (TSC)** — the national body that deals with the employment of teachers for schools (except private schools) in Kenya. It is responsible for the overall teachers' remuneration and discipline in that it is empowered to hire and fire teachers as and when it becomes necessary (Government of Kenya, 1980).

Summary

This study focused on the job satisfaction of the Kenyan secondary school principal. In particular, it attempted to investigate which aspects of the administrative position are factors of principal job satisfaction. The secondary purpose of the study was to examine the extent to which overall job satisfaction is related to individual characteristics of the principal and to organizational characteristics of the schools. A questionnaire survey was used to gather information on current school principals' perceptions on job

satisfaction.

Organization of Thesis

Subsequent chapters of the thesis are organized in the following way. Chapter 2 reviews the literature regarding research and theoretical sources that informed this study; while chapter 3 provides a description of the research methodology used in the study. Analyses and the findings of the survey data are reported in chapter 4.

Chapter 5 discussed the research findings around the research questions for the study. The summary, conclusions and the implications of the findings for practice and further research are presented in chapter 6.

CHAPTER 2: Review of the Literature

Satisfaction is a qualitative term regardless of the context in which it is used. There are many definitions of job satisfaction. Smith, Kendall, and Hulin (1969) who developed the Cornell Job Descriptive Index (JDI) for measuring job satisfaction defined job satisfaction as "the feelings a worker has about his job" (p. 6). Both Locke (1969) and Lawler (1973) have emphasized the relationship between overall job satisfaction and satisfaction with specific facets of the job.

Each facet or aspect of the job contributed differently to overall satisfaction. According to both Locke and Lawler, those aspects perceived by individuals to be more important to them contributed more to the overall job satisfaction than those aspects perceived by them to be less important. Wanous and Lawler (1972) defined overall job satisfaction simply as "the sum of job facet satisfaction of teachers across all facets of a job" (p. 95). Holdaway (1978) treated job satisfaction as an all-embracing concept of "overall satisfaction" and has noted that the concept was "multi-dimensional" that is "satisfaction with the various facets of the job" (p. 6). He measured teacher satisfaction with five dimensions namely, working conditions, teaching-related matters, teaching matters, student-related matters and occupation-related matters. More recently, Johnson and Holdaway (1991) reported that the facets of the school principal's job included: working conditions; personnel-

related matters; student-related matters, role-related matters; district-related matters and occupational-related matters.

In this study, job satisfaction may be viewed as "the pleasurable emotional state resulting from the perception of one's job as fulfilling or allowing the fulfilment of one's important job values, providing these values are compatible with one's needs" (Locke, 1983, p. 1342). This definition appears to provide more insight about job satisfaction. It indicates that job satisfaction is the emotional state of feeling of individuals toward their present job. This feeling is reported by people's perceptions of their work and working conditions.

Job satisfaction often has been the subject of research within the field of organizational behaviour. The major reason for this extensive research has been the belief that satisfaction was instrumental in achieving such organizational objectives as lowered costs, increased productivity and therefore, higher profits (Chung & Magginson, 1981, Friesen, Holdaway, & Rice, 1984, Locke, 1969, 1983, and Vroom, 1964). High satisfaction did reduce turnover and absenteeism (Holdaway, 1971; Lawler, 1975). According to Davis (1977), low satisfaction appeared to be "one of the surest signs of deteriorating conditions in an organization" (p. 73).

Most of this research has been conducted in the industrial sector. There has been research on this topic in schools and that which has been reported

has focused on teachers and principals in elementary schools. There are limited data on the perceptions of secondary school principals (Gunn, 1984; Gunn & Holdaway, 1986). The variables considered in the research have included personal demographics, characteristics of the school, school settings, and principals' effectiveness. This review will focus on selected theories of job satisfaction. Six studies on teacher satisfaction and nine studies on principal job satisfaction will be examined.

The present study has been designed to determine which aspects of the principal's position contribute to job satisfaction of principals who work in Kenya. This will add information to the studies of secondary school administrators and extend the data base on the established attributes of job satisfaction.

Theories of Job Satisfaction

Previous studies of job satisfaction have been within a psychological framework that included theoretical formulations such as Maslow's hierarchy of needs theory, Herzberg's motivation-hygiene theory, Lawler's overall/facet satisfaction theory and Locke's value theory.

Maslow's Hierarchy of Needs Theory

In Maslow's (1943, 1968, 1970) hierarchy of needs theory, the lower-level needs (physiological and safety) must be satisfied before the higher-level

needs (esteem and self-actualization). According to this theory the satisfaction or dissatisfaction that individuals feel will depend upon the fulfilment of their lower-level needs and higher-level needs. This approach has limited utility for job satisfaction because it does not take into account individual differences, people's feelings about the environment and organizational context within which the individual operates.

Herzberg's Motivation-Hygiene Theory

Herzberg's (1959, 1966) motivation-hygiene theory was built upon Maslow's needs theory but added that job satisfaction and dissatisfaction were at opposite ends of a single continuum. Herzberg's theory was based on "motivators" and "hygiene" factors. The motivators were those favourable things that spur people to high achievement, and included achievement, recognition, work itself, responsibility and advancement. This set of factors were related to job context or extrinsic factors of the job.

The "hygiene" factors were related to the job content or the intrinsic factors of the job, and included company policy and administration, interpersonal relations, supervision, salary, working conditions, status, security, possibility of growth, and personal life. In short, hygiene factors were part of the organizational context. Most researchers now regard this formulation as outdated, partly on account of its seemingly method-bound, critical incident research approach (Gruneburg, 1979; Scott & Mitchell, 1972) and the doubtful

mutual exclusivity of the motivator (satisfaction) and hygiene (dissatisfaction) factors (Porter, Lawler & Hackman, 1975).

Lawler's Facet/Overall Satisfaction Theory

Lawler's (1973) facet satisfaction theory has made a valuable contribution towards job satisfaction. Lawler (1973) distinguished between "overall satisfaction" and "facet satisfaction" as follows: Facet satisfaction referred to "people's affection reactions to particular aspects of their job, such as pay, supervision and opportunities for promotion" (p. 64). Overall satisfaction referred to "a person's affective reactions to his total work" (p. 64). This kind of distinction was important because "a number of theories argue that job satisfaction is determined by some combination of people's affective reactions to the various facets of their job" (p. 65). It can, therefore, be seen that Lawler conceived of satisfaction in terms of particular facets of an individual's job, and he regarded overall job satisfaction as a compilation of feelings of satisfaction on an array of facets. This theory of facet satisfaction represents the most advanced approach available for investigating satisfaction in organizational settings (Johnson & Holdaway, 1991).

This Kenyan study has been related to the above approach because it attempted to examine job satisfaction in a school setting. The respondents were to indicate their satisfaction with particular aspects of their administrative position as well as their overall feeling of satisfaction with their total work role.

Locke's Value Theory

Locke (1983) distinguished between needs which are "objective" from values which are "subjective." He suggested that "values are what persons consciously or unconsciously want or seek to attain; values have been acquired (learned) and needs are innate, that is inborn" (p. 1304). Locke (1983) suggested that individuals have a "value hierarchy" in which their values are ranked as to importance. He believed, as did Lawler (1973), that satisfaction with particular facets of the job should be weighted as to importance in determining overall satisfaction.

After much discussion of values, needs and various theories of job satisfaction, Locke (1983) commented:

job satisfaction results from the appraisal of one's job as attaining or allowing the attainment of one's important job values, providing these values are congruent with or help to fulfil one's basic needs (p. 1319).

It can be seen that Locke's value theory reflected cognitive psychology because it involved the concepts of values, affective reactions, and discrepancy used by Lawler (1973). According to Gunn (1984), Lawler's theoretical approach to job satisfaction was cognitive in that

the affective reactions of individuals to facets of their jobs are determined by internal thought processes, by their perceptions

of such factors as their input-output balance and how their work situations compare to those of other workers (p. 30).

Locke's value theory also involved the concepts of needs and hierarchy used by Maslow and Herzberg. This cognitive explanation of job satisfaction highlighted the need to consider personal, organizational and perceptual influences on assessments of existing satisfaction levels (Johnson & Holdaway, 1991).

This section has reviewed research and theoretical sources that have informed the Kenyan study. The purpose was to determine which aspects of the principal's position contributed to their job satisfaction. It examined the extent to which selected personal and organizational characteristics were related to overall job satisfaction.

Teacher Satisfaction

This section reviews the research which indicate that job satisfaction is reported in studies of teachers. These studies set the foundation for work with school administrators in the last two decades. Also, it appears that similar research instruments by researchers (Gunn, 1984, Iannone, 1973, Schmidt, 1976) were used to study school administrators.

Since the 1960s researchers (Agbo, 1990, Chapman & Hutcheson, 1982, Holdaway, 1978, and Sergiovanni, 1967) have explored how teachers

feel about their work, their employment conditions, and the relative degree to which they are satisfied in their work. Sergiovanni (1967) replicated Herzberg's study among 175 teachers in the county of Monroe from New York State in the United States. He found that achievement, recognition and responsibility contributed to teacher job satisfaction. On the other hand, interpersonal relations (peers), technical supervision, school policy and administration as well as personal life were factors which contributed to teacher job dissatisfaction.

Great interest in teacher satisfaction continued through the 1970s. Lortie's (1975) sociological study on teachers provided information on how teachers felt about their work and employment conditions. Another study about teacher satisfaction is Holdaway's (1978) report on teachers from Alberta in Canada. He gave a comprehensive report on teachers' satisfaction with their work and working conditions. In addition, he investigated the relationships between overall and facet satisfaction of teachers. The teachers were asked to rate their degree of satisfaction with 58 facets as well as their degree of overall satisfaction with their job. Holdaway's findings indicated that overall (job) satisfaction appeared to be closely related to working with students, societal attitudes, status of teachers, recognition and achievement. The major sources of overall (job) dissatisfaction were attitudes of society, and parents towards education, and in-school administration/school policies. These findings were consistent with those of Sergiovanni (1967) cited above.

Holdaway's (1978) study also seems to provide a general support to Herzberg's motivation-hygiene theory, but only in the sense that the theory related to overall satisfaction rather than motivation.

In the 1980s the subject of teacher satisfaction was closely linked with school environment (Chapman & Hutcheson, 1982, Chapman & Lowther, 1982, Conley, Bacharach & Baur, 1989). Conley et al. (1989) stated:

if we are to genuinely improve teacher performance in schools, we should ensure that the work environment enhances teachers' senses of professionalism and in turn decreases their dissatisfaction. If we can discover the organizational work characteristics of schools associated with teacher-career dissatisfaction, we may have a basis for changing the work environment of schools to ensure continuous career satisfaction for teachers (p. 59).

The study by Conley et al. (1989) of teachers in 87 school districts from New York State in the United States found that school management and the nature of teachers' jobs as well as teachers' salaries were crucial in determining teachers' job satisfaction.

In the 1990s, studies (Agbo, 1990, Reyes, 1990) on teacher satisfaction investigated the relationships among teacher work orientation, organizational commitment and job satisfaction of public school teachers as well as how they

perceive their work and employment conditions in isolated communities. Reyes' (1990) study of 150 teachers in the mid-west region of United States revealed that gender was related to job satisfaction, suggesting that more women were happier with their jobs and more committed to school than were men. This finding was consistent with that of Chapman and Lowther (1982) who found that women had greater satisfaction with their careers than men.

In addition, Reyes' (1990) study indicated that work orientation was related to the degree of job satisfaction among teachers. Reyes' (1990) concluded that teaching experience and organizational tenure were associated with teacher job satisfaction. This meant that the greater the experience and the number of years at the job, the more teachers were satisfied with their work. The influence of the position and years in the job supported Gruneberg's (1976) observation that the level of job satisfaction increases with age up to 60 years and then declines with approaching retirement.

In spite of this curiosity in teacher satisfaction, few studies have examined how teachers and school principals perceive their work and working conditions in other cultural settings beyond North America. The satisfaction of teachers in a Jamaican setting is discussed in the next section.

Jamaican Teachers

Rodgers-Jenkison and Chapman's (1990) study was carried out in public and private elementary schools in metropolitan centres of Kingston and St.

Andrew in Jamaica. A questionnaire survey method was used to collect respondents' ratings of their job satisfaction and information on personal, professional and school characteristics from a stratified sample of 290 teachers. Their results showed that the quality of school working conditions and the respondents' relationships with other teachers were related significantly to satisfaction of both public and private elementary school teachers. This meant that the most satisfied teachers were those who felt that their school was held in high regard with the community and that they received appreciation and support from parents.

Jamaican teachers also indicated that job satisfaction was related most strongly to their perceptions of the prestige of their school within the community. Appreciation and support as factors of teacher satisfaction were consistent with the findings of Chapman and Hutcheson (1982) cited above.

In this study, a cultural factor appeared to have an effect on job satisfaction. This could have been caused by the differences in job attitudes of blacks and whites. Jamaican elementary school teachers differed somewhat from elementary school teachers in the United States. Research in both countries highlighted the importance of professional status and interpersonal relationships in teachers' job satisfaction. However, research in the United States has indicated that more satisfied elementary school teachers assign more importance to recognition by administrators and supervisors, and less

importance to recognition by peers (Chapman, 1983). Jamaican teachers in public schools were most satisfied. They appeared to assign greater importance to the reactions of the larger community than those of school administrators, although peer support was also found to be important.

The study of Jamaican teachers highlighted that culture may have an effect on job satisfaction. The present study was carried out in a Kenyan context but focused on secondary school administrators. Also, it attempted to determine the extent of differences in job satisfaction that exist among perceptions of administrators in public and private schools.

Linking Factors in the Studies

The above studies highlight the complexity of job satisfaction. It should not be referred to as a single variable but a complex set of variables. Also, it is dynamic as it does change with context, time, and the individual person. For example, teachers can be found who report that they are very satisfied with their supervisors, indifferent toward school policies, and very dissatisfied with their salaries. It is therefore, difficult to see which one or combination of these represents the level of satisfaction.

The selected literature on teacher job satisfaction suggests that the major factors that contributed to teacher job satisfaction were achievement and recognition. These factors appeared to be consistent across the studies and the years as shown by Agbo (1990), Chapman and Hutcheson (1982),

Chapman and Lowther (1982), Holdaway (1978), Rodgers-Jenkison and Chapman (1990), and Sergiovanni (1967). Approval and organization tenure come next when measured by the frequency of factors as noted by the cited researchers. Teachers in the 1980s and 1990s considered these aspects significant. All of these factors indicated that teachers drew satisfaction from aspects related to their work over which they had considerable control, for example, achievement and interpersonal relations.

The major sources of dissatisfaction were supervision, school policies and pay. These findings were consistent across three decades of research from early the 1960s to the 1990s. Other sources of dissatisfaction included professional status as well as group and individual values.

Principal Satisfaction

The literature on teacher job satisfaction raised this question. What factors contribute to principal job satisfaction? The following review of selected literature on principal job satisfaction will attempt to address this question.

A basic difference between principals' and teachers' satisfaction with regard to the sources of job satisfaction becomes apparent in examining these studies. According to Holdaway (1978), teachers' major source of job satisfaction comes from their relationships with students. For the principals of

the Friesen, Holdaway, and Rice (1984) study, this relationship was a minor though clearly identifiable factor in job satisfaction. However, it did not contribute to their overall satisfaction on the job. This decline of the importance of relationships with students as teachers become principals seems to increase as schools become larger. The reason may be that the principals have less time to interact with students. Their role involves interpersonal relationships with teachers, supervisors, the central office staff and the community at large.

Motivation-Hygiene Theory and School Administrators

Schmidt (1976) used a modified Herzberg's critical-incident technique to study the job satisfaction of 74 secondary principals and other administrators from Chicago in the United States. He found that recognition and achievement were perceived to be major determinants of principals overall job satisfaction; whereas, salary, interpersonal relationships, school policy and system administration, and supervision tended to be highly dissatisfying. Schmidt (1976) concluded that "recognition, achievement, and advancement were major forces in motivating (principals) to lift their performance to approach their maximum potential" (p. 81). These findings were strongly supported by Iannone's (1973) study of 20 high schools and 20 elementary schools from New York in the United States. Iannone (1973) also had used the critical-incident technique.

Brown (1976) also noted the importance of advancement to school administrators. His study assessed the relationships between the perceived needs (security, social, esteem, autonomy, and self actualization) of educational administrators and selected variables, the major one being job level. Brown's (1976) study involved a large stratified sample of school principals, directors, assistant superintendents, and superintendents from a northern state in the United States. He also found a significant positive relationship between need satisfaction and three of fourteen independent variables tests; namely, job level, level of education and the time one expected to remain in his/her position. Brown (1976) suggested that "the study revealed that school administrators, like their counterparts within business and industry, are motivated by high status position. Occupational status is a strong motivating factor for school administrators" (p. 49).

In this study, the researcher examined the extent in which length of administrative service, post-secondary education, school size, and school setting were related to overall job satisfaction.

Satisfaction/Dissatisfaction Factors

Rogus, Poppenhagen and Mingus (1980) employed a survey questionnaire to elicit responses from 150 junior high and senior high school principals on how they viewed themselves. The study was carried out in a mid-western state in the United States. Rogus et al. (1980) found that the majority

of junior and senior high school principals were satisfied with most aspects of their work. These aspects of work included administrative tasks, involvement with the central office staff, curriculum and instruction, school organization and utilization of school system services, and relationships with faculty and students. A majority of the respondents expressed dissatisfaction with the lack of time to be with their families and the amount of leisure time available to them. The school grade level and the location of school appeared to have no significance for both junior and senior high school principals. The findings of this study seems not to be consistent with the previous findings nor with theory on job satisfaction. According to Herzberg's theory, interpersonal relationships, company policy/administration, and supervision were factors which contributed to dissatisfaction as noted above. Schmidt (1976) and Iannone (1973) found support for this in their studies.

In a more recent study, Friesen, Holdaway, and Rice (1984) used a questionnaire survey to investigate the factors that contributed to job satisfaction for 410 elementary and secondary school principals in Alberta, Canada. Friesen et al. (1984) made the following observations:

- The older the principals were, the more satisfied they tended to be with factors of resource adequacy, salary, and overall satisfaction. On the other hand, the older principals tended to be less satisfied with limited responsibility and the lack of

autonomy.

- The male principals tended to be less satisfied with salary and benefits than were female principals.
- The more experienced principals tended to be, the more satisfied they were with resource adequacy and task demands, as well as with overall satisfaction.
- Principals in larger schools tended to be more satisfied with resource adequacy, salary, and benefits, and task demands, and to be less satisfied with rapport with students than were principals of smaller schools.
- The more urbanized the school setting, the more satisfied principals were with principal-teacher work involvements, resource adequacy, and salary and benefits, and the less satisfied they were with liaisons at the district level.

This study highlighted how variables such as age, gender, size and location of school are related to principal job satisfaction. Salary and benefits were related positively to the age of the principal, size of the school, and urbanization of the school. Salary and benefits also were related significantly to the gender of the principals. On the issue of gender, female principals tended to be more satisfied with salary and benefits than were male principals. Older principals, principals in larger schools and city principals appeared to be

more satisfied than other principals (in town and rural schools).

In their study, Bacharach and Mitchell (1983) distributed questionnaires to 46 superintendents and 95 principals in New York State in the United States. The respondents were sampled randomly and stratified according to geographical location, size of district, wealth of the district and district expenditures. These researchers (Bacharach & Mitchell, 1983) focused on organizational factors rather than personality variables, as determinants of satisfaction of educational administrators. Their hypotheses related to the following six potential variables to job dissatisfaction: bureaucratization, supervision, decision-making power, district environment, work demands, and individual attributes. In the case of school principals, the results showed that bureaucratization, supervision, and decision-making power were positively related to dissatisfaction; while there was mixed support in relating district environment, work demands and individual attributes to dissatisfaction. These findings appear to be consistent with those of Iannone (1973) and Schmidt (1976).

The factors — bureaucratization, supervision, and decision-making — were considered in this study under district-related matters. An attempt was made to determine how these factors were related to job satisfaction of school principals. Also, it related overall job satisfaction of school administrators to the school setting and length of administrative service.

Female School Principals

Fanser and Buxton (1984) used a questionnaire and the Job Descriptive Index as instruments to measure job satisfaction of female principals of public secondary schools. The study involved 408 women principals throughout the United States.

The most satisfying aspects of the principalship for these female secondary school principals were the mission of the school (student growth), high staff morale, respect and recognition (Fanser & Buxton, 1984). The recognition factor was identified earlier by Iannone (1973) and Schmidt (1976). The factors that led to lack of satisfaction related to bureaucratic confusion and ineffective and unco-operative people and groups associated with school programs. These findings supported Bacharach and Mitchell's (1983) results which showed that bureaucratization and supervision were related positively to dissatisfaction. According to Fanser and Buxton (1984), the major predictors of overall satisfaction of female principals were size of the school, principal's age, and feedback from children. The variables — age and size of the school — were identified also by Friesen et al. (1984) as factors that related to overall job satisfaction of principals.

In this study, the researcher attempted to determine the extent in which age, gender, and size of the school were related to overall job satisfaction of school administrators.

Relationships of Work Factors Among Perceptions of Job Satisfaction

Gunn and Holdaway (1986) investigated, by the use of questionnaires, the job satisfaction of principals of senior high schools and its relationships to principal perceptions of influence, personal effectiveness and school effectiveness. The study involved 155 principals in the province of Alberta in Canada. A sense of accomplishment was strongly related to:

- recognition by others.
- school effectiveness, the effectiveness of teachers and administrators when adapting to change.
- overall leader effectiveness and criteria of leader effectiveness relevant to the effectiveness of principals working directly with teachers, and to the level of positive interpersonal relationships and staff morale.

This study revealed an important reason for investigating job satisfaction of school principals. It related job satisfaction to work factors such as recognition of principal's work, achievement/accomplishment as an administrator and the effect of the job on principal's personal life.

Johnson and Holdaway's (1990) comparative study, investigated levels and important determinants of school effectiveness, job satisfaction of principals and the effectiveness of principals. Survey questionnaires were distributed to 131 elementary, 94 junior high, and 155 senior high school

principals. Johnson and Holdaway (1990) found that principal working relationships with teachers and students represented the most satisfying areas of principals' work. The principals' sense of accomplishment as an administrator, and recognition of the principals' work also were linked independently with overall satisfaction ratings. These findings were consistent with those of Fanser and Buxton (1984), Gunn and Holdaway (1986), Iannone (1973), and Schmidt (1976). Many elementary school principals expressed varying degrees of dissatisfaction with specific aspects of their work such as: freedom to allocate teaching assignments, hours of work and involvement in hiring teachers. Principal job satisfaction varied with the grade level.

Across the school levels, particularly in senior high schools, low satisfaction ratings were assigned to principals with their role in district decision-making and in district negotiations with teachers over working conditions. These findings supported those of Bacharach and Mitchell (1983), and Fanser and Buxton (1984) cited above. The most marked difference among the three school levels related to senior high principals' relatively low satisfaction with personal opportunities with inservice education. Slightly more than a decade earlier, Holdaway (1978) found a similar difference between elementary and senior high school teachers' levels of satisfaction with inservice education.

In another study, Johnson and Holdaway (1991) distributed

questionnaires to elicit responses from a sample of 131 elementary school principals, 391 teachers, and nine area superintendents in Alberta, Canada. Johnson and Holdaway (1991) investigated job satisfaction of elementary school principals, the effectiveness of their schools, the effectiveness of principals and the association between satisfaction and effectiveness. They used Locke's definition of job satisfaction and Lawler's overall facet theoretical formulation to develop a conceptual framework of variables. The framework is shown in Figure 1. The organizational characteristics included school size, and location of the school (i.e., city/rural/town); while personal characteristics included age, gender, and tenure. Most of the studies on job satisfaction do recognize the said variables as possible influences on job satisfaction.

Johnson and Holdaway (1991) suggested that elementary school principals were satisfied with their work, not only in overall satisfaction but also in most facets of the job. This result is consistent with Gunn's (1984) finding that senior high school principals were quite satisfied with their work. These findings were consistent with those of Mutie (1993). He used questionnaires and personal interviews to collect data from 24 public secondary school administrators in Kitui District of Kenya. Mutie (1993) found that most (63%) of secondary school principals were either moderately or highly satisfied with their job as a whole.

Johnson and Holdaway (1991) also observed that elementary school

principals were more satisfied than those at senior high level in student- and staff-related matters but considerably less satisfied with their hours of work, their working conditions, their involvement in hiring teachers and relationships with central office staff other than superintendents. According to Johnson and

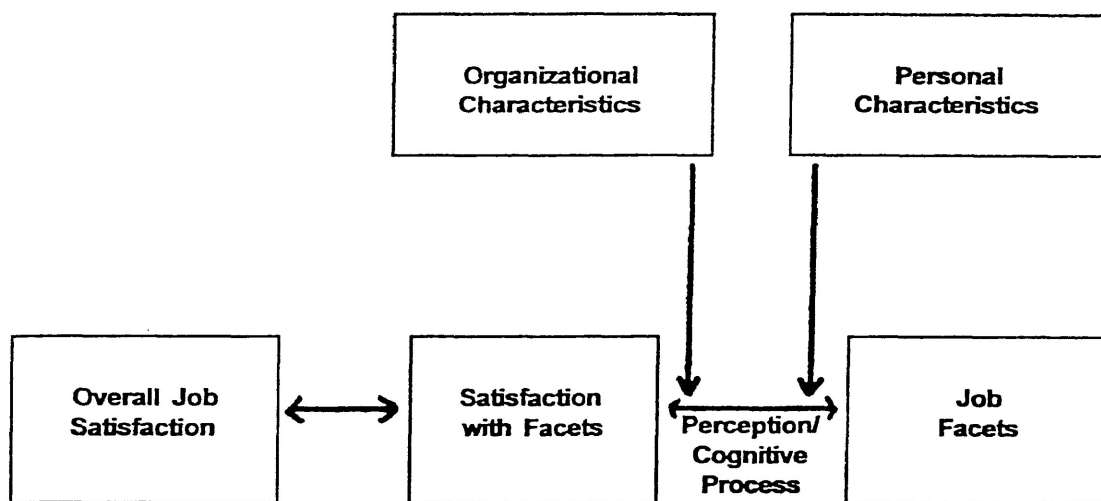


Figure 1. Conceptual relationships of work facets and personal characteristics with job satisfaction. (Adapted from Johnson & Holdaway, 1991, 29(1), 53.)

Holdaway (1991), the job satisfaction of elementary school principals was weakly related to their perceptions of school and administrative effectiveness. These findings were inconsistent with earlier research in the same region. Gunn (1984) identified satisfaction as the most important indicator of school effectiveness of senior high school principals. Another study by Gunn and

Holdaway (1986) established high, positive relationships between principals' overall job satisfaction and school effectiveness ($r=0.47$), as well as leader effectiveness ($r=0.40$). This study examined the relationships between overall job satisfaction and each aspect of the administrative position in the job satisfaction instrument. Also, it identified the major predictors of overall job satisfaction.

Application to Present Research

In Kenya, there are several factors which could affect principal job satisfaction. Some of these factors might include changing conditions, gender, and drop in the status of teaching. Some examples of changing conditions are:

- Changes in attitudes towards education. The parents have high expectations for the education of their children. This may be because the parents are more educated, enlightened, and critical of the education system than they were two decades ago. This new attitude seems to have been passed on to students. The change in attitude towards learning and authority is particularly noticed at the secondary level because students at this level are more critical and sometimes militant. However, increasing dissatisfaction is expressed in the media and some aspects of business community with the effectiveness and quality of formal schooling.

- Since Kenya's independence in 1963 the terms and conditions of service have changed slightly. For example, married female school principals (and even teachers!) are not eligible to be paid house allowance. As a result of the Ramtu Commission Report (1985), the Kenya government pays a housing allowance only to single, widowed or divorced women. It seems that in virtually all public work settings if a marriage occurs the woman loses her house allowance. This discrimination certainly does not enhance positively the career commitment of women working in the public sector, and may have a negative effect (Hughes & Mwiria, 1989). In general, it is my experience that the housing facilities of secondary school principals leave a lot to be desired.

In addition, the issue of promotions may cause dissatisfaction especially if the promotion process is seen to be unfair and non-rational. Furthermore, if promotions are few, school principals may feel uncertain and blocked in their careers.

- It is my experience that the authority of the principal has been undermined through lack of clear guidance as to the relationship between principals, and the Ministry of Education, and on the other hand, the Teachers' Service Commission (TSC). Moreover, this situation is aggravated by provincial administrators who like

to extend their sphere of influence into the education arena. Compounded with this is the fact that there is the tug of war between some principals and the Board of Governors, if the working relationship is not smooth enough. All these factors could affect satisfaction levels of the Kenyan secondary school principals.

In Kenya, teaching has been regarded traditionally as employment of higher status than the salary level would indicate. Typically, principals' status in their community operates as a non-monetary incentive helping to offset the otherwise low salaries. This equation is being threatened by a drop in the perceived status of teaching, thereby changing the incentive value of the job, and by salaries falling too low to be meaningfully offset by such intangibles as status. This threat encourages school principals to look for better job opportunities elsewhere (teachers college, university, parastatals¹, and the private sector). This threat may be offset by principal higher salaries, or by seeking to adjust non-monetary incentives to make remaining in teaching a desirable alternative for principals. Job satisfaction represents one type of incentive. Such a strategy requires that factors associated with high levels of

¹Parastatal — serving the state or government indirectly or in an auxiliary capacity; working with the state though not officially a part. An example of a parastatal body is the Kenya National Trading Corporation. Barnhart, C.L. & Barnhart, R.L. (1992). *The world book dictionary*. Chicago: World Book Inc.

job satisfaction must be well understood. This study represents one step in the equation as it helps identify which aspects of the principal's position contribute to job satisfaction of representative Kenyan secondary school principals. The questionnaire attempted to gather data on these points under the following dimensions: working conditions, personnel-related matters, student-related matters, role-related matters, district-related matters and occupation-related matters.

This review of the literature helped to define the population from which the sample was drawn, the instrument used to gather data as well as the procedures followed in the study. These aspects of the study have been described in detail in Chapter 3.

CHAPTER 3: Research Methodology

This chapter presents the research methodology used in this study. It describes the research design, the modification and validation of the research instrument, pilot phase of the study, sampling procedures, data collection, and data analyses using descriptive and interpretive statistics.

Research Design

The Questionnaire

The mailed questionnaire approach was chosen to survey a population sample of secondary school principals in the Rift Valley Province of Kenya because it was convenient and within the financial means of the researcher (Borg & Gall, 1989). In addition, Mouly (1978) suggested that the questionnaire approach enabled the researcher to preserve respondent anonymity (thus it may elicit more candid responses) and also allowed "greater uniformity in the way questions were asked and thus ensured greater compatibility in the responses" (p. 189).

The research instrument was based on Johnson and Holdaway's (1991) questionnaire on perceptions of principals of school effectiveness, their role, and their job satisfaction in Alberta, Canada. Permission to use this questionnaire was granted by E.A. Holdaway (Appendix A). Most (38/43) of

the individual work factors measuring satisfaction remained intact except when it was not appropriate to the Kenyan situation. Another item "other (please specify)", was added to each of the major sections of the matters relating to job satisfaction. This was to permit self-expression (individuals' beliefs and feelings), and add richness of data (Newman, 1991). A copy of the questionnaire can be found in Appendix B. The questionnaire was composed of four sections, namely, (1) school data, (2) personal data, (3) administrative tasks and responsibilities, and (4) job satisfaction.

The respondents were to rate their levels of involvement in each administrative task and responsibilities according to the scale: none(1), low(2), medium(3), and high(4). Also, the principals were requested to rate their overall job satisfaction and satisfaction on each of an array of 45 job facets using a Likert-type scale ranging from 1 (highly dissatisfied) to 6 (highly satisfied) with no neutral or undecided response. In addition, respondents were to rate the importance of each work factors for job satisfaction using the following scale: not important (N), slightly important (S), moderately important (M), and extremely important (E). All the work factors were rated as important by the respondents.

Validation of the Research Instrument

According to Borg and Gall (1989), content validity is "the degree the

sample of test items represents the content that the test is designed to measure" (p. 250). The survey questionnaire used had contents somewhat similar to that employed by Johnson and Holdaway (1991) on perceptions of principals of school effectiveness, their role and their job satisfaction in Alberta, Canada. The contents of the questionnaire were a representative sample of all matters relating to principalship. The following factors contributed to the content validity of the questionnaire:

- 1) The instrument was based upon well-validated and reliable instruments devised by Holdaway (1978), Gunn (1984), Johnson and Holdaway (1991), and Rice (1978).

Evidence of the validity and reliability of the job satisfaction instruments which were used to develop the questionnaire for this study is summed up by Holdaway and Johnson (1990) as follows:

The Job satisfaction questionnaires were based upon those previously used in a program of research on job satisfaction of educators which began at the University of Alberta in 1975. They were very similar to those used by Gunn (1984) in a 1983-84 study of senior high school principals in Alberta. In order to assure that the instruments were appropriate, preliminary interviews were conducted with a

representative sample of 14 people in September to October 1986 and the questionnaire was again pilot-tested before the final copy was adopted. The validity was assessed by experts as high... Reliability as assessed by the Guttman split-half technique was between 0.90 and 0.98 (p. 11).

- 2) The members of the thesis committee and two graduate students in the School of Education at Lakehead University were consulted in the modification of the questionnaire. These individuals made valuable comments to promote maximum clarity in the questionnaire. These individuals concurred in their comments.
- 3) A pilot study was carried out among five senior principals in Kenyan secondary schools. All their opinions were in agreement.

Mouly (1978) suggested that the validity of questionnaire data depends in a crucial way on the ability and willingness of the respondents to provide the information requested" (p. 190). The following factors contributed to the ability and willingness of Kenyan secondary principals to respond to the questionnaire:

- 1) Questionnaire was revised to remove ambiguity and to make it appropriate to the Kenyan context, by consultation with seasoned Kenyan administrators.
- 2) The level of education of the Kenyan secondary school principals

is high. Most of them have a university degree in education, and therefore, are capable of understanding questions and expressing themselves.

- 3) The questionnaire was particularly related to personal thoughts, concerns, opinions, and feelings of secondary school principals. This made the instrument interesting, challenging, and meaningful to the respondent. The questions were nonthreatening and the principals did not have to seek information from external sources.
- 4) The covering letter assured complete anonymity and confidentiality. It also stressed the richness of data through participation and promised to provide a summary of the results to all respondents who wished to receive it.

Pilot Study

The questionnaire distributed for the pilot study was developed with advice and input from members of the thesis committee and from two school principals in Thunder Bay. It was then distributed to five senior principals in Kenyan secondary schools. The five principals had been in the education system and at the same position for at least eight years. Each principal reviewed every item of the questionnaire to check for ambiguity,

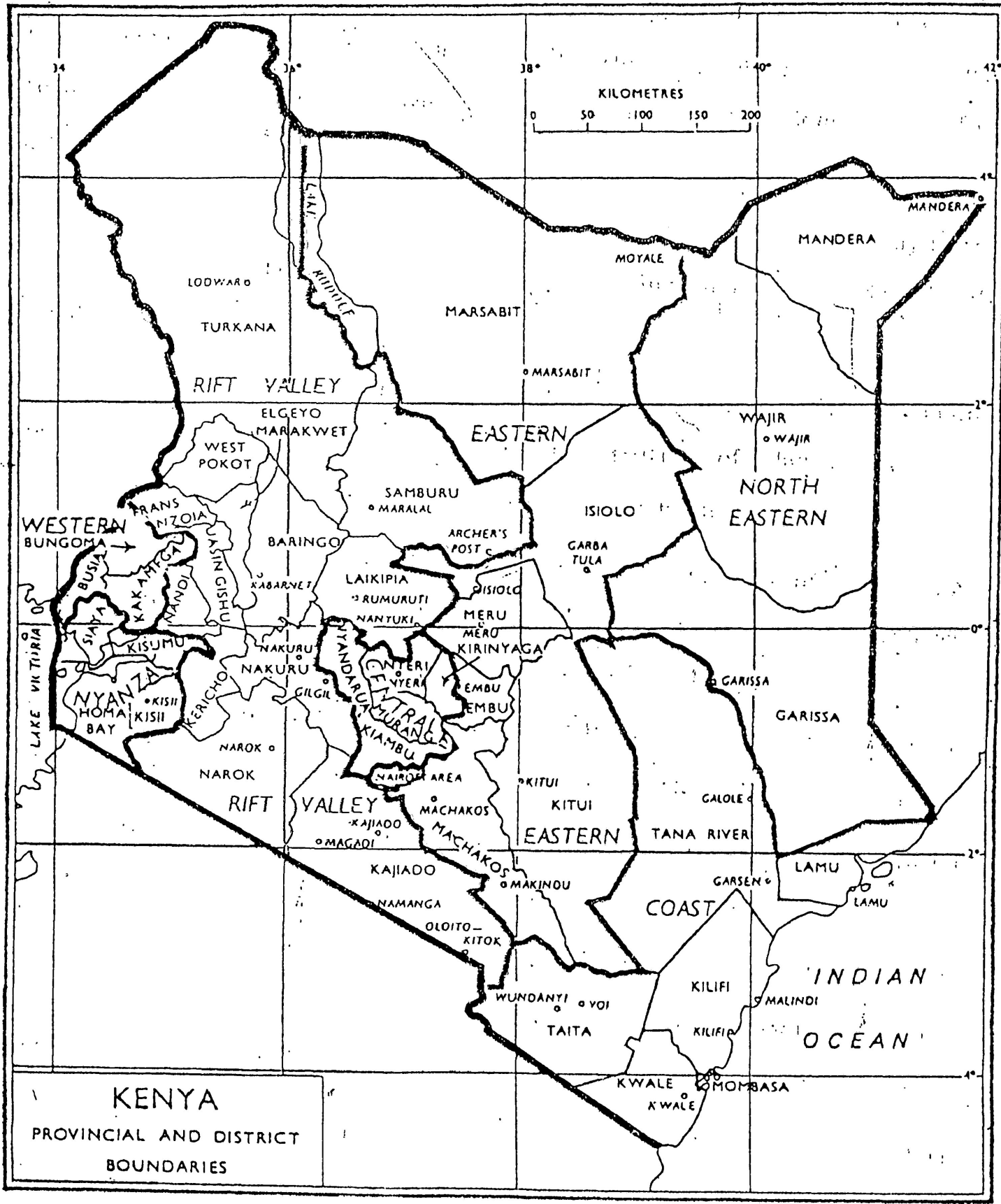
comprehensiveness, and appropriateness to the Kenyan context. I discussed principals' concerns, questions, and recommendations with each individual principal in a private interview. From all these interviews, final revisions which involved change in terminology were made throughout the questionnaire in preparation for distribution to principals.

Data Collection

The questionnaires were distributed by mail to 201 secondary school principals (171 public and 30 private) in Baringo, Elgeyo-Marakwet, Kericho and Nakuru districts in Kenya. The schools were identified randomly using information from the Provincial Education Office in Rift Valley province of Kenya (See the map, p. 47). An up-to-date list of all secondary schools in the four districts mentioned above was also obtained from the same office. The list provided school addresses and the type of school system.

A self-addressed, stamped envelope was included with each questionnaire. Of the 135 (67.2%) questionnaires returned, four were rejected, three were incomplete while one (from a private school) indicated that the school was no longer in existence. This brought the usable questionnaires to 131 (65.2%).

KENYA



Data Analyses

The new Statistical Package for Social Sciences (SPSS) was used in analyzing statistical data. There was also content analysis of the written free responses. Themes were identified and responses were categorized according to these themes — promotion on merit, school transport, student enrolment, teachers' housing, students' discipline, political interference, and financial provision.

The following three statistical techniques were used in the analyses of the questionnaire: comparison of means; Pearson product-moment correlation; and stepwise multiple linear regression.

Comparison of means using t-tests was used to determine the extent to which overall job satisfaction was related to selected personal characteristics of principals and organizational characteristics of schools (question 1). The respondents were grouped using selected characteristics as the independent variable so that the means of overall job satisfaction of the groups could be compared and substantial differences could be reported. Also, the t-tests were used to examine significant differences in job satisfaction among the perceptions of administrators working in public and private schools (question 2). Free response information was content-analyzed and used to give qualitative substance to statistical findings.

Pearson product-moment correlation co-efficients were calculated to

determine the relationship between overall job satisfaction and each of the satisfaction work factors. According to Mouly (1978), the limitations of correlation co-efficient are:

First, the index is relatively impressive, i.e., it fluctuates widely in repeated random sampling. Correlation coefficients are also affected by the homogeneity of the data: the smaller the range of the variable or variables over which the correlation is calculated, the lower the correlation tends to be. The actual correlation between two variables would also be under-estimated by the product-moment correlation when the relationships between the two variables is not linear as required for the proper use of r (p. 284).

He emphasized that correlation is a simple descriptive technique that cannot be used to establish causation between two variables. Despite all these limitations, Mouly (1978) supported the use of correlational studies in educational research due to its contribution to the development of the social sciences in the following way:

education in "its present state of development... to solve its more significant problems," and noted that "correlation between naturally occurring variables or events is a powerful exploratory tool ideally suited to provide important leads in the discovery of the "cause" of phenomena" (p. 287).

Stepwise multiple linear regression being a statistical technique related to the Pearson product-moment correlation was used to determine which aspects of the administrative position were the major predictors of overall job satisfaction. The new SPSS regression procedure was explained by Weiss (1983) in these statements:

The incremental stepwise procedure works from the "bottom up". Beginning with no predictor variables in the regression equation, variables are added which have the highest relationship with the criterion, as indicated by their partial correlations with the criterion. As variables are added, the multiple correlation is re-computed at each step until increment in R become no longer significant. At that point the prediction equation only includes those variables that are significantly predictive of the criterion (p. 332).

In addition, Einstein and Nocks (1987) suggested "with this procedure, different linear equations (i.e., different sets and orderings of the independent variables) are compared to find the best model for the prediction of the dependent variable" (p. 154).

As in the other statistical techniques described, the greatest limitation of stepwise multiple linear regression is that "deviations from linearity will reduce the predictability of the criterion from the chosen subset of predictors" (Weiss, 1983, p. 332). In spite of this weakness, this technique was

considered the most appropriate to determine the best predictors of overall job satisfaction (question 3).

Summary

This chapter on research methodology has described research design through validation of the instrument, pilot study, data collection and analyses. At least seven factors contributed to the content validity of the questionnaire.

A survey questionnaire was used to elicit responses on perceptions of secondary school principals' roles and their job satisfaction in Kenya. The questionnaire considered personal and organizational characteristics of school principals as these may be possible influences on job satisfaction. The instrument contained 45 work factors and one item to measure overall job satisfaction. An open item "other (please specify)" at the end of each major section of facets of the questions invited respondents to express concerns or opinions.

After the pilot study and permission was granted from relevant authorities in Kenya, the questionnaire was distributed by mail to a sample of 201 secondary school principals (171 public and 30 private). The final response rate was 135 (67.2%) but 131 (65.2%) were used in the data analyses.

The data were analyzed using descriptive statistics, correlational

analyses and multiple linear regression, as well as comparison of means using t-tests to answer the research questions. The next chapter reports the analyses and findings of survey data.

CHAPTER 4: Analyses and Findings of Survey Data

This chapter reports the analyses and findings of the data generated by the 131 school principals who responded to the questionnaire. This portion of the report deals with (1) organizational characteristics of schools, (2) numbers of students and teachers, (3) personal and professional characteristics of principals, and (4) administrative tasks and responsibilities of principals. This information is followed by a chart which summarizes the degree of job satisfaction of respondents with each of the work factors examined.

Organizational Characteristics of the Schools

Organizational characteristics of schools are classified by school setting, type, ministry status, and management structures. The frequency and percentage distribution of these organizational characteristics are shown in Table 1.

School Setting and Type of School System

Rural schools are the schools which are located in the countryside where people make use of land for agricultural purposes (rural community settings) whereas municipal schools are those found within the municipal council settings as stipulated by the Kenya Government Local Act. Town schools are the schools located in a township area as stipulated by the Kenya Government Local Act.

TABLE 1 Distribution of organizational characteristics of schools (**N** = 131)

Characteristics		Frequency (f)	Percent (%)
<u>School Setting</u>			
Rural		98	74.8
Town		6	4.6
Municipality		27	20.6
<u>Type of School System</u>			
Public		115	87.8
Private		16	12.2
<u>Ministry of Education approved student enrolment¹</u>			
Number of Students	Number of Streams		
160	1	60	45.8
320	2	42	32.1
480	3	16	12.2
640	4	7	5.3
800	5	2	1.5
960	6	2	1.5
1000+	7	2	1.5
Mean number of students = 311 Standard deviation = 193			
<u>School Management</u>			
Ministry of Education approved board of governors		112	85.5
Church organization		10	7.6
Parents' school committee		5	3.8
Private board		4	3.1

¹In Kenya, the Ministry of Education approved number of students per class (one class per form) in any stream is 40 (Ministry of Education, 1987). Thus, a single-stream school consists of 40 students per class from form one to four. Accordingly, the approved total enrolment number of such a school is 160.

Seventy-five percent of the high schools surveyed were rural schools. Twenty-one percent were municipality schools and five percent (only six) were town schools. Eighty-eight percent of the secondary schools were public schools, while twelve percent were in the private school system.

Ministry of Education Approved Student Enrolment

Forty-six percent of the respondents reported that they were in single-stream secondary schools and thirty-two percent were in double-stream schools (two classes per form). Twelve percent were in three-stream schools (three classes per form) while only five percent were in four-stream schools (four classes per form). The remaining four and a half percent were in five-stream, six-stream and seven-stream schools.

School Management

Eighty-six percent of the respondents reported that they were run by Ministry of Education approved boards of governors, and eight percent said that their schools were managed by church organizations. Five respondents (four percent) indicated that their school was managed by a parents' school committee while only four respondents reported to be under a private school board (schools operated by private individuals or organizations).

Number of Students and Teachers in Schools

The frequency and percentage distribution of the actual numbers of

students and teachers in the schools that were involved in the research study are shown in Table 2. The actual student enrolment indicated the numbers of students who were physically present in the schools.

TABLE 2 Distribution of the actual number of students and teachers (**N** = 131).

Numbers of Students and Teachers	Frequency(f)	Percent(%)
<u>Number of Students</u>		
Fewer than 200	60	45.8
200-399	40	30.5
400-599	19	14.5
600-799	8	6.1
800-999	3	2.3
1000 or more	1	0.8
<u>Number of teachers</u>		
Fewer than 10	28	21.4
10-19	64	48.9
20-29	23	17.6
30-39	10	7.6
40-49	4	3.1
50 or more	2	1.5

Numbers of Students

Approximately one-half of secondary schools had actual student enrolments of fewer than 200 and almost one-third had enrolments of 200 to 399. Fifteen percent reported actual student enrolment of 400 to 599 and only six percent had enrolments of 600 to 799. Three respondents reported enrolments of 800 to 999 while only one respondent reported enrolments of 1000 or more. The highest number of student enrolment was 1000 and the lowest was 50.

Size of Teaching Staff

Forty-nine percent of the respondents indicated staff sizes of 10 to 19 compared to twenty-one percent who reported staff sizes of fewer than 10. Eighteen percent reported staff sizes of 20 to 29; and the remaining twelve percent of the respondents reported staff sizes of 30 to 39, 40 to 49, and 50 or more respectively. The actual range of teachers in schools was from 4 to 53 teachers.

Personal Characteristics of School Principals

This section of the report deals with demographic characteristics of school principals. The gender and age of the respondents are reported in Table 3.

Gender

The majority of the respondents were men. Only sixteen (twelve percent) of the 131 respondents were women.

Age

Twelve percent of the respondents were under 30 years of age and approximately one-half were 30 to 39 years old. Thirty-seven percent reported that they were in the age group of 40-49. Only two respondents were between 50 and 59 years, while three respondents were 60 or older. The most frequent age group was 30 to 39 years.

TABLE 3 **Distribution of demographic characteristics of school principals (N = 131)**

Characteristics	Frequency(f)	Percentage(%)
<u>Gender</u>		
Female	16	12.2
Male	115	87.8
<u>Age</u>		
Under 30	15	11.5
30-39	62	47.3
40-49	49	37.4
50-59	2	1.5
60 or older	3	2.3

Professional Characteristics of Principals

This portion of the report deals with professional characteristics of principals under the headings — career aspirations, experience and post-secondary education.

Career Aspirations

The long-term career plans of the respondents are shown in Table 4. Although nearly half of the respondents aspired to remain as principals, nearly a fifth aspired to some position in the Ministry of Education headquarters. Sixteen percent aspired to teaching positions in a college or university and only seven respondents (five percent) aspired to the position of consultant or inspector at the central office. Only four aspired to the position of Provincial Education Officer, while three wished to become District Education Officers. The remaining fifteen percent of the respondents aimed at other positions as shown in Table 4 below. In brief, the data indicated that fifty-nine percent

(77/131) of the respondents had career aspirations which would take them out of their principalships.

TABLE 4 Distribution of long-term career plans of school principals (**N** = 131).

Career Plans	Frequency(f)	Percentage(%)
Principalship	54	41.2
Position in Ministry of Education headquarters	23	17.6
Teaching position in college or university	21	16.0
Consultant or Inspector at the Central Office	7	5.3
Other educational careers	7	5.3
Provincial Education Officer	4	3.1
District Education Officer	3	2.3
Aspirations outside education	5	3.8
Unknown	7	5.3

Under other educational careers, the respondents listed vocational aspirations such as researcher in education, Education Attache, Assistant Primary School Inspector (APSI). The aspirations outside education listed included such vocations as the banking sector, non-government organizations, member of parliament.

Experience

The frequency and percentage distribution of years in the present position and years of experience as a teacher are shown in Table 5. The years of experience in the present position ranged from 1 to 21 years. Only eight percent of the respondents reported to be in their first year of principalship and thirty-five percent were in two to four years of principalship. Thirty-four percent of school principals had been in the same position for five to nine years

as compared to sixteen percent who were in 10 to 14 years of principalship. Only eight respondents reported 15 or more years of principalship, although it is not known whether or not these years were spent in the same school.

Ten percent of the respondents were at either end of the spectrum, that is, ten percent had no more than one year of teaching experience before principalship and a similar percentage had 15 or more years of teaching before becoming principals. Twenty-seven percent had two to four years of teaching experience as compared with thirty-six percent who reported five to nine years of teaching experience. The remaining eighteen percent of respondents had 10 to 14 years of teaching experience. The range of teaching experience reported was from 3 months to 45 years.

TABLE 5 **Distribution of years of experience of school principals (N = 131).**

Years of Experience	Frequency(f)	Percentage(%)
<u>In present position</u>		
0- 1	11	8.4
2- 4	46	35.1
5- 9	45	34.4
10-14	21	16.0
15 or more	8	6.1
<u>As a teacher (i.e., prior principalship)</u>		
0- 1	13	9.9
2- 4	35	26.7
5- 9	47	35.9
10-14	23	17.6
15 or more	13	9.9

Post Secondary Education

As shown in Table 6, more than half of the respondents had the basic two to three years of post-secondary education and a fifth had four years of

post-secondary education. Fifteen percent had five years of post-secondary education and five percent of the respondents had six years of post-secondary education. Only two of the 131 respondents had seven years of post-secondary education. The range of post-secondary education was from two to seven years.

TABLE 6 Distribution of post-secondary education of respondents (**N** = 131).

Years of post-secondary education	Frequency(f)	Percentage(%)
2- 3	76	58.0
4	27	20.6
5	20	15.3
6	6	4.6
7	2	1.5
Mean = 3.69 Standard deviation = 1.02		

Administrative Tasks and Responsibilities

The respondents were requested to assess their level of involvement in each area of administrative tasks and responsibilities according to the scale none (1) to high (4). The frequency, percentage and mean distribution of levels of involvement in administrative tasks and responsibilities of school principals are reported in Table 7. The highest mean was 3.73 and the lowest was 2.32.

The areas of administrative tasks and responsibilities with a mean greater than 3.50 were considered by the researcher to be high levels of involvement. Those areas with a mean of less than 2.70 were considered low, while those with a mean of less than or equal to 3.50 and greater or equal to 2.70 were considered to be areas of medium levels of involvement.

The respondents indicated high level of involvement in the following school-centred areas:

- management of school finances (Mean = 3.73).
- supervision of student behaviour (Mean = 3.71).
- development of school budget (Mean = 3.59).
- maintenance of student records (Mean = 3.55).
- development of school-community relations (Mean = 3.52).

The areas in which the respondents showed low level of involvement were in policy and school board level decision-making such as:

- appointment/transfer of teachers (Mean = 2.32).
- development of system-wide policies at district/division/county/municipal level (Mean = 2.60).

The respondents reported medium level of involvement in the following building-based responsibilities:

- operation of school building-physical aspects (Mean = 3.49).
- management of instructional resources (Mean = 3.44).
- development of school projects (Mean = 3.43).
- parent-teacher association (Mean = 3.41).
- choice of school programs (Mean = 3.11).
- evaluation of instructional programs (Mean = 3.11).
- management of non-instructional resources (Mean = 3.07).
- school fund raising (Mean = 3.02).
- formal evaluation of teachers (Mean = 2.98).
- informal developmental evaluation of teachers (Mean = 2.94).

TABLE 7 Frequency, percentage and mean distribution of administrative tasks and responsibilities of school principals (**N** = 131).

ADMINISTRATIVE TASKS & RESPONSIBILITIES	Levels of Involvement									
	None		Low		Medium		High		Mean	
	f	%	f	%	f	%	f	%		
a) Formal evaluation of teachers	8	6.1	23	17.6	64	48.9	36	27.5	2.977	
b) Informal developmental evaluation of teachers	9	6.9	23	17.6	66	50.4	33	25.2	2.939	
c) Appointment/transfer of teachers	28	21.4	50	38.2	36	27.5	17	13.0	2.321	
d) Choice of school programs	10	7.6	21	16.0	45	34.4	55	42.0	3.107	
e) Evaluation of instructional programs	7	5.3	19	14.5	58	44.3	47	35.9	3.107	
f) Management of instructional resources	1	0.8	10	7.6	51	38.9	69	52.7	3.435	
g) Management of non-instructional resources	4	3.1	25	19.1	60	45.8	42	32.1	3.069	
h) Development of school budget	1	0.8	10	7.6	31	23.7	89	67.9	3.588	
i) Management of school finances	1	0.8	5	3.8	22	16.8	103	78.6	3.733	
j) Operation of school building -physical aspects	3	2.3	6	4.6	46	35.1	76	58.0	3.489	
k) Supervision of student behaviour			1	0.8	36	27.5	94	71.8	3.710	
l) Maintenance of students' records			4	3.1	51	38.9	76	58.0	3.550	
m) Development of school community relations	1	0.8	8	6.1	44	33.6	78	59.5	3.519	
n) Development of system-wide policies at the district/division/county/municipal level	14	10.7	46	35.1	49	37.4	22	16.8	2.603	
o) School fund raising	12	9.2	24	18.3	44	33.6	51	38.9	3.023	
p) Development of school projects	5	3.8	17	13.0	26	19.8	83	63.4	3.427	
q) Parent-teacher association	5	3.8	13	9.9	37	28.2	76	58.0	3.405	

Job Satisfaction

The respondents were to rate their degree of satisfaction with each work factor using a scale ranging from highly dissatisfied (1) to highly satisfied (6). The percentage and mean distribution of degree of satisfaction is shown in Table 8.

The writer decided that it was feasible to assume that the work factors with a rating scale greater than 5.5 be considered highly satisfied. The scale, moderately satisfied was used for those work factors where the mean was less or equal to 5.5 and greater than 4.50 while those factors where the mean was less or equal to 4.50 and greater than 3.50 were considered slightly satisfied. The respondents were considered to be dissatisfied with these work factors which had a rating of less than 3.50. According to the researcher's interpretation, a mean score of 3.5 (that is, the mean of the six-point scale) indicated neither satisfaction nor dissatisfaction. Thus, a mean score above 3.5 indicated satisfaction and a mean score below 3.5 indicated dissatisfaction.

The respondents were moderately satisfied with the following work factors:

- The principal's working relationship with teachers (Mean = 5.29).
- The principal's relationships with students (Mean = 5.27).
- The principal's social relationships with teachers (Mean = 5.17).

- The principal's freedom to allocate teaching assignments (Mean = 5.11).
- The teaching competence of teachers (Mean = 4.95).
- The principal's relationship with the Provincial Education Officer (Mean = 4.95).
- The principal's involvement in decision making at the board of governors level (Mean = 4.89).
- The principal's relationship with the District Education Officer (Mean = 4.86).
- The opportunity the principal has to help teachers and students to succeed (Mean = 4.84).
- The principal's involvement in budget preparation (Mean = 4.82).
- The principal's sense of accomplishment as an administrator (Mean = 4.78).
- The principal's social position in the community (Mean = 4.64).
- Satisfaction and morale of the staff (Mean = 4.63).
- Authority associated with the principal's position (Mean = 4.62).
- Achievement of the principal's own professional objectives (Mean = 4.59).

TABLE 8 Percentage and mean distribution of degree of job satisfaction of school principals ($N = 131$).

WORK FACTOR	Degree of Satisfaction						Mean	Percent Satisfied
	Highly Satisfied	Moderately Satisfied	Slightly Satisfied	Slightly Dissatisfied	Moderately Dissatisfied	Highly Dissatisfied		
Working Conditions								
1. The salary the principal receives	9.2	41.2	16.0	11.5	6.1	16.0	3.878	66.4
2. Fringe Benefits under the contract	8.4	13.0	22.9	15.3	8.4	32.1	3.015	44.3
3. Other fringe benefits	5.3	16.8	18.3	19.1	13.0	27.5	2.992	40.4
4. The number of hours you must work as a principal	18.3	36.6	12.2	13.0	10.7	9.2	4.115	67.1
5. The principal's office space	25.2	19.1	18.3	11.5	9.9	16.0	3.901	62.6
6. The physical conditions of the school	8.4	26.0	22.9	22.1	9.2	11.5	3.679	57.3
7. Availability of clerical staff to assist the principal	15.3	29.0	28.2	13.7	6.9	6.9	4.115	72.5
8. The way in which consultation between board and teachers concerning working conditions is conducted in the school system.	20.6	30.5	21.4	10.7	9.2	7.6	4.198	72.5
Personnel-Related Matters								
10. The principal's working relationships with teachers	44.3	44.3	9.2	1.5		0.8	5.290	97.8
11. The principal's social relationships with teachers	38.9	41.2	19.1			0.8	5.168	99.2
12. The teaching competence of teachers	27.5	46.6	19.8	6.1			4.954	93.9
13. The competence of teachers in handling of other professional duties	9.9	43.5	33.6	10.7	1.5	0.8	4.473	87.0
14. Attitudes of teachers towards ongoing professional improvement	10.7	42.0	34.4	9.9	0.8	2.3	4.450	87.1
15. The opportunity the principal has to help teachers and students to succeed	23.7	46.6	20.6	8.4	0.8		4.840	90.9
16. Attitudes of teachers towards change	9.9	36.6	38.9	12.2	2.3		4.397	85.4
17. Satisfaction and morale of the staff	20.6	41.2	22.1	13.0	2.3	0.8	4.626	83.9

Table 8 (cont'd)

WORK FACTOR	Degree of Satisfaction						Mean	Percent Satisfied	
	Highly Satisfied	Moderately Satisfied	Slightly Satisfied	Slightly Dissatisfied	Moderately Dissatisfied	Highly Dissatisfied			
Student-Related Matters									
19.	The principal's relationships with students	39.7	48.9	9.9	1.5		5.267	98.5	
20.	The attitudes of students towards education	9.9	28.2	29.0	22.9	7.6	2.3	4.031	67.1
21.	Satisfaction and morale of students	8.4	32.8	32.1	20.6	3.8	2.3	4.145	73.3
22.	Achievement of students	9.9	39.7	24.4	15.3	7.6	3.1	4.198	74.0
Role-Related Matters									
24.	The principal's freedom to change the school program	10.7	41.2	27.5	11.5	5.3	3.8	4.290	79.4
25.	The principal's freedom to allocate teaching assignments	41.2	38.2	13.7	4.6	1.5	0.8	5.107	93.1
26.	The principal's involvement in hiring teachers for the school	24.4	29.8	15.3	16.8	5.3	8.4	4.260	69.5
27.	Authority associated with the principal's position	24.4	38.9	22.1	6.9	3.8	3.8	4.618	85.4
28.	The principal's involvement in budget preparation	34.4	35.9	16.0	8.4	1.5	3.8	4.817	86.3
29.	The principal's responsibility for formal teacher evaluation	15.3	40.5	28.2	10.7	2.3	3.1	4.466	84.0
30.	The principal's involvement in decision making at the board of governors level	32.8	37.4	20.6	5.3	3.1	0.8	4.893	90.8
31.	Prestige associated with the principal's position	19.8	36.6	19.8	13.0	6.1	4.6	4.374	76.2
District-Related Matters									
33.	The principal's relationship with the District Education Officer	33.6	35.1	19.8	6.9	3.8	0.8	4.855	88.5
34.	The principal's relationship with the Provincial Education Officer	33.6	37.4	21.4	6.1	1.5		4.954	92.4
35.	The principal's relationships with other Central office staff	21.4	34.4	26.7	11.5	4.6	1.5	4.519	82.5
36.	The principal's involvement in decision making at the district/division/county/municipal level	7.6	25.2	23.7	27.5	12.2	3.8	3.771	56.5

Table 8 (cont'd)

		Degree of Satisfaction						Mean	Percent Satisfied
		Highly Satisfied	Moderately Satisfied	Slightly Satisfied	Slightly Dissatisfied	Moderately Dissatisfied	Highly Dissatisfied		
WORK FACTOR		Percentage							
37.	Availability of support to assist the principal with problems	9.9	33.6	25.2	16.0	9.9	5.3	4.015	68.7
38.	Opportunities for useful in-service education for the principal	7.6	29.0	22.1	18.3	12.2	10.7	3.695	58.7
39.	Board of Governors expectations of the principal	20.6	36.6	27.5	8.4	3.1	3.8	4.519	84.7
40.	The methods used to evaluate principals	3.8	25.2	29.0	23.7	9.9	8.4	3.641	58.0
41.	Attitudes of District Education Officers towards teachers and administrators	17.6	35.1	22.9	14.5	5.3	4.6	4.313	75.6
Occupation-Related Matters									
43.	Attitudes of parents towards the school	14.5	42.7	23.7	11.5	3.1	4.6	4.405	80.9
44.	Principal's social position in the community	17.6	43.5	27.5	9.2	1.5	0.8	4.641	88.6
45.	Achievement of the principal's own professional objectives	12.2	49.6	24.4	13.0		0.8	4.588	86.2
46.	The principal's sense of accomplishment as an administrator	23.7	43.5	23.7	6.9	0.8	1.5	4.779	90.9
47.	Recognition of the principal's work	11.5	43.5	28.2	13.0	2.3	1.5	4.443	83.2
48.	Opportunities for advancement as an administrator	9.2	21.4	24.4	27.5	9.9	7.6	3.695	55.0
49.	The effect of the job on the principal's personal life	6.1	26.7	32.8	21.4	9.2	3.8	3.878	65.6
50.	Successful completion of projects and tasks	15.3	44.3	18.3	15.3	5.3	1.5	4.443	77.9
Overall Job Satisfaction									
52.	Your overall feeling of satisfaction with your job	14.5	43.5	32.1	4.6	1.5	3.8	4.534	90.1

- The principal's relationship with the other Central Office staff (Mean = 4.52).
- Board of Governors' expectations of the principal (Mean = 4.52).

School principals were slightly satisfied with the following work factors:

- The competence of teachers in handling of other professional duties (Mean = 4.47).
- The principal's responsibility for formal teacher evaluation (Mean = 4.47).
- Attitudes of teachers toward ongoing professional improvement (Mean = 4.45).
- Recognition of the principal's work (Mean = 4.44).
- Successful completion of projects and tasks (Mean = 4.44).
- Attitudes of parents towards the school (Mean = 4.41).
- Attitudes of teachers towards change (Mean = 4.40).
- Prestige associated with the principal's position (Mean = 4.37).
- Attitudes of District Education Officers towards teachers and administrators (Mean = 4.31).
- The principal's freedom to change the school program (Mean = 4.29).
- The principal's involvement in hiring teachers for the school

(Mean = 4.26).

- The way in which consultation between board and teachers concerning working conditions is conducted in the school system (Mean = 4.20).
- Achievement of students (Mean = 4.20).
- Satisfaction and morale of students (Mean = 4.15).
- Availability of clerical staff to assist the principal (Mean = 4.12).
- The number of hours you must work as a principal (Mean = 4.12).
- The attitudes of students toward education (Mean = 4.03).
- Availability of support to assist the principal with problems (Mean = 4.02).
- The principal's office space (Mean = 3.90).
- The effect of the job on the principal's personal life (Mean = 3.88).
- The salary the principal receives (Mean = 3.88).
- The principal's involvement in decision making at the district/division/county/municipal level (Mean = 3.77).
- Opportunities for advancement as an administrator (Mean = 3.70).
- Opportunities for useful in-service education for the principal

(Mean = 3.70).

- The physical conditions of the school (Mean = 3.68).
- The methods used to evaluate principals (Mean = 3.64).

The respondents reported to be dissatisfied with the fringe benefits under the contract and other fringe benefits. Their mean satisfaction were 3.02 and 2.99 respectively.

Respondents were asked to identify other work factors they were satisfied/dissatisfied with after each set of related factors and in a general statement at the end of the questionnaire. Their additional factors have been itemized and categorized on Table 9. The most frequently reported work factors which respondents reported to be dissatisfied with were political interference (Mean = 3.00) and financial provision (Mean = 3.08).

TABLE 9 Frequency, mean and degree of satisfaction of other work factors identified by school principals.

WORK FACTOR	FREQUENCY	DEGREE OF SATISFACTION
Working Conditions (Question 9 from Survey)		
a) Promotion on merit (rewards over achievement)	6	slightly dissatisfied (Mean = 3.17)
b) School transport (i.e. means of transport in school)	3	moderately dissatisfied (Mean = 2.33)
c) Student enrolment	3	slightly dissatisfied (Mean = 3.00)
d) Housing for teachers	2	slightly dissatisfied
e) Availability of funds for school development	1	slightly satisfied
f) Responsibility allowances	1	slightly dissatisfied
g) School inspection by the inspectorate	1	slightly dissatisfied
Personnel-Related Matters (Question 18 from survey)		
a) Professional qualification of teaching staff	1	slightly satisfied
b) Relationships with politicians	1	highly dissatisfied
c) Pastoral relations	1	slightly satisfied
d) Relationships between parents-teachers association and board of governors	1	highly satisfied

Table 9 (cont'd)

WORK FACTOR	FREQUENCY	DEGREE OF SATISFACTION	
Student-Related Matters (Question 23 from survey)			
a) Students' discipline	6	slightly satisfied	(Mean = 3.83)
b) Attitudes of students towards culture and religion	1	moderately satisfied	
c) Students' attitudes towards science subjects	1	slightly dissatisfied	
d) Attitudes of students towards the particular school	1	highly dissatisfied	
e) Students' attendance	1	slightly dissatisfied	
f) Students' evaluation	1	moderately satisfied	
Role-Related Matters (Question 32 from survey)			
a) Principal's delegation of duties to teachers	2	highly satisfied	
b) Principal's involvement in co-curricular activities (games, sports, etc.)	2	moderately satisfied	
c) Principal's involvement in parents' and teachers association	1	highly satisfied	
d) Level of education of members of board of governors	1	highly satisfied	
e) Evaluation of teachers work	1	slightly dissatisfied	
f) School suppliers	1	slightly satisfied	
g) Principal's relationships with the TSC	1	moderately satisfied	
District-Related Matters (Question 42 from survey)			
a) School inspection by District Inspectorate	1	moderately dissatisfied	
b) District Education Board decisions	1	moderately dissatisfied	
c) Information communication from District Education Office	1	moderately satisfied	
Other Work Factors (Question 51 from survey)			
i) Political interference (political patronage, alignment, etc.)	15	slightly dissatisfied	(Mean = 3.00)
ii) Financial provision (school fees collection, governments inadequate support, etc.)	12	slightly dissatisfied	(Mean = 3.08)
iii) Principal's relationships with the community	4	slightly satisfied	(Mean = 3.75)
iv) Site of the school	3	moderately dissatisfied	(Mean = 2.33)
v) Availability of electricity, water and telephone	3	moderately dissatisfied	(Mean = 2.00)
vi) Retirement benefits	3	slightly satisfied	
vii) Provision of essential physical facilities (i.e. library, science equipment, etc.)	3	slightly dissatisfied	(Mean = 2.67)
viii) Attitudes of government officials towards the school	3	slightly satisfied	(Mean = 3.67)
ix) Tribalism (Tribal sentiments among teachers and students)	3	moderately dissatisfied	(Mean = 2.00)
x) Training of principals on the job	2	moderately dissatisfied	

Table 9 (cont'd)

WORK FACTOR		FREQUENCY	DEGREE OF SATISFACTION
Other Work Factors (Question 51 from survey)			
xi)	Principal's role in guidance and counselling	2	slightly satisfied
xii)	Staffing and staff distribution	2	slightly dissatisfied
xiii)	Principal's creativity and innovation	2	moderately satisfied
xiv)	Security (risks involved in the job)	2	moderately dissatisfied
xv)	Dealing with staff discipline	2	slightly satisfied
xvi)	Principal's relationship with sponsor	1	moderately satisfied
xvii)	Clarity in implementation of national curriculum	1	slightly dissatisfied
xviii)	Type of school set up	1	highly dissatisfied
xix)	Dealing with subordinate staff	1	moderately dissatisfied
xx)	Principal's freedom to dictate religious environment	1	highly satisfied
xxi)	Transparency	1	slightly dissatisfied
xxii)	Lack of appreciation by parents	1	highly dissatisfied
xxiii)	Guidelines by Ministry of Education	1	moderately satisfied

Overall Job Satisfaction

Each respondent was to assess his/her perceived overall feeling of satisfaction with the job. This item was used to show a person's affective reactions to his/her total work role. The rating scale ranged from highly dissatisfied (1) to highly satisfied (6). The frequency and percentage frequency of overall job satisfaction are reported in Table 10.

Fifteen percent were highly satisfied as compared to forty-four percent who were moderately satisfied with their overall job. Thirty-two percent were slightly satisfied and only ten percent of the respondents were slightly

TABLE 10 Distribution of overall job satisfaction of school principals (**N** = 131).

Degree of overall job satisfaction	Scale	Frequency(f)	Percentage (%)
Highly dissatisfied	1	5	3.8
Moderately dissatisfied	2	2	1.5
Slightly dissatisfied	3	6	4.6
Slightly satisfied	4	42	32.1
Moderately satisfied	5	57	43.5
Highly satisfied	6	19	14.5
Mean = 4.53			
Standard deviation = 1.09			

dissatisfied, moderately dissatisfied or highly dissatisfied with their total work role. In short, 90% of school principals indicated they were satisfied with their overall work.

Summary

This chapter presented the survey findings of 131 school principals who responded to the questionnaire, under these sections — Organizational Characteristics of Schools, Number of Students and Teachers, Personal and Professional Characteristics of School Principals; Administrative Tasks and Responsibilities; and finally, Job Satisfaction.

Almost three-quarters of the secondary schools were rural schools and approximately one-half of the respondents were principals of schools with fewer than 200 students. Eighty-eight percent of the schools were public

schools as compared to twelve percent in private school system.

Only 16 of the 131 respondents were women and forty-seven percent were 30 to 39 years old. Fifty-nine percent of the respondents had career aspirations which would take them out of their principalships. Forty-eight percent had the basic two to three years of post-secondary education.

The respondents indicated high levels of involvement in management of school finances and supervision of student behaviour. The areas of low levels of involvement were appointment/transfer of teachers and development of system-wide policies at the district/division/county/municipal levels.

In their assessment of the degree of satisfaction with the work factors, the respondents indicated highest satisfaction scores with the following items:

- The principal's working relationships with teachers and students,
and
- The principal's social relationships with teachers as well as their
freedom to allocate teaching assignments.

The respondents were dissatisfied with fringe benefits under contract and other fringe benefits. On the rating of their overall feeling of satisfaction with their job, the respondents reported that they were fairly satisfied. The next chapter presents the interpretation and discussion of the research findings.

CHAPTER 5: Interpretation and Discussion

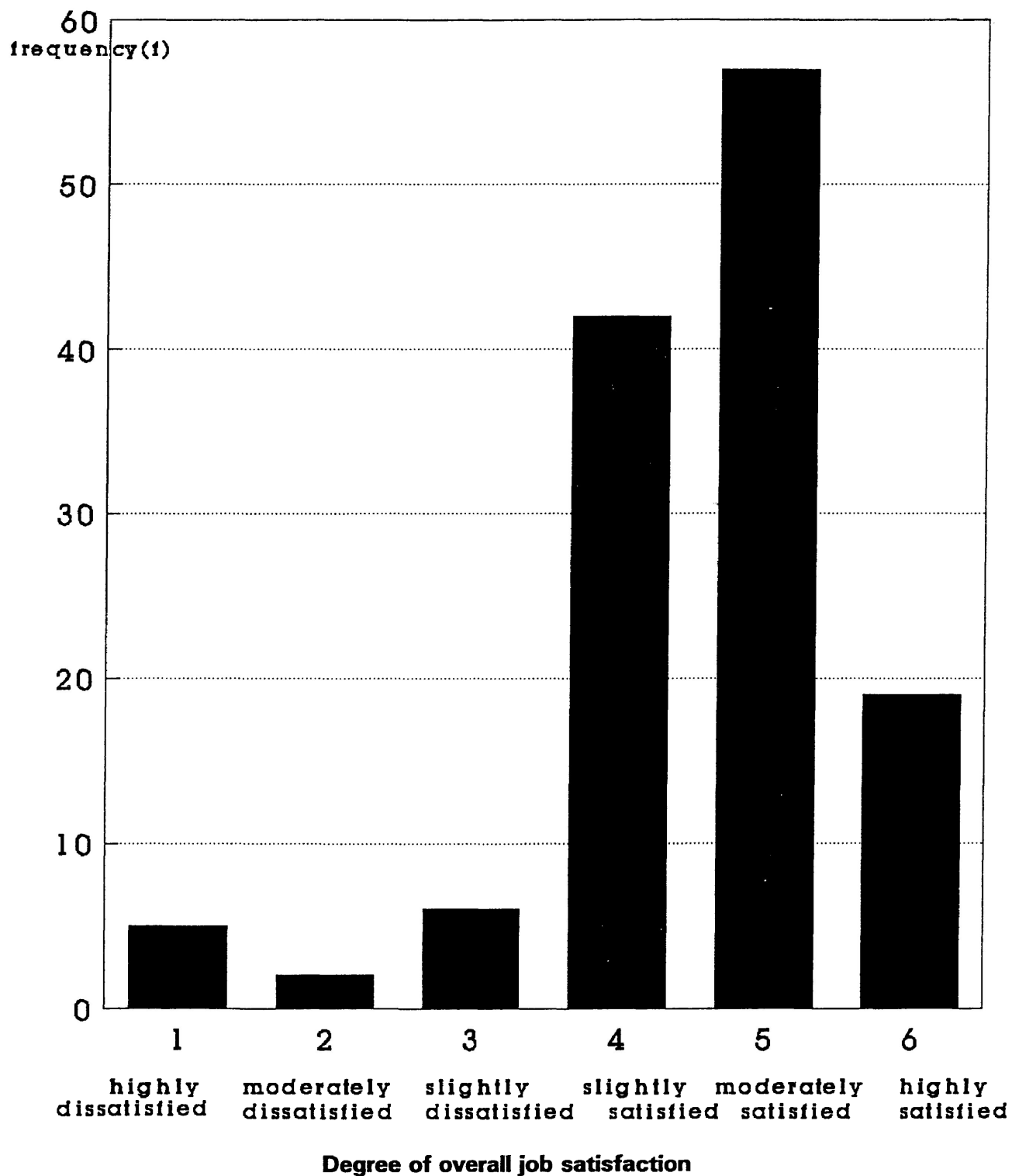
This chapter presents the interpretation and discussion of the research findings for each of the research questions in the study. It deals with the extent of differences in which overall job satisfaction is related to selected personal characteristics of principals and organizational characteristics of schools. The differences that exist among the perceptions of administrators working in public and private schools also is examined. The major predictors of principal job satisfaction are identified, the perceptions of principal's role, and the sources of job satisfaction and job dissatisfaction of school principals are discussed.

Overall Job Satisfaction

As reported in chapter 4, each respondent was to assess his/her perceived overall feeling of satisfaction with the job. This item was used to show a person's affective reactions to his/her total work role. The rating scale ranged from highly dissatisfied (1) to highly satisfied (6). The histogram of the frequency of overall job satisfaction of school principals is shown in Figure 2.

The distribution of overall job satisfaction is skewed to the left (i.e., negatively skewed). It showed that a very high number of school principals (90%) were satisfied with their total work role but a few were very dissatisfied.

Figure 2. Histogram of overall job satisfaction of school principals ($N = 131$).



The mean, median, and standard deviation were 4.53, 5 and 1.09 respectively. The mode was 5. The data showed that only 13 of the 131 respondents were dissatisfied with their overall work role.

The above findings were consistent with those of Mutie (1993). He found that the majority (63%) of secondary school principals were either moderately or highly satisfied with their job as a whole. Also, similar findings were found by Johnson and Holdaway (1990) and Friesen et al. (1984) in their studies of job satisfaction of high school principals in Alberta, Canada.

Research Question One

Overall job satisfaction indicates a "person's affective reactions to his/her total work role" (Lawler, 1973, p. 64). The t-test procedure was used to determine the extent of differences in which overall job satisfaction was related to selected personal characteristics of principals and organizational characteristics of schools in an attempt to provide information relevant to research question one: Are there significant differences in the perception of overall job satisfaction as reported by:

- (a) Younger (under 40 years) and older (40 years or older) school administrators?
- (b) Female and male school principals?
- (c) Novice (0 to 4 years experience) and experienced (5 or more

- years) school principals?
- (d) School administrators who had two to four years of post-secondary education and those who had five or more years of post-secondary education?
- (e) School administrators in rural and urban settings?
- (f) School principals in public schools and private schools?
- (g) School administrators in single-stream schools and those in two or more stream schools?

Personal Characteristics

Overall Job Satisfaction and Age

In order to use the t-test procedure to analyze the results the researcher divided the respondents into two levels of under 40 years and 40 or more years old. These two groups were independent of one another. The means of the overall job satisfaction of principals in groups defined by age are shown in Table 11.

Table 11 Overall job satisfaction of groups defined by age of principals (N = 131).

Age	f	Mean	Standard Deviation	t Value	Degrees of Freedom	2-tail Prob.
under 40	77	4.390	1.137	-1.83	129	.070
40 or older	54	4.741	0.994			

$p < 0.05$

The mean calculated from the reported perception of overall job satisfaction of principals who were 40 years of age or older was not significantly different from the mean for those principals who were under 40 years of age. This meant that age was not a determinant of overall job satisfaction for this population sample. This finding was contrary to Mutie's (1993) finding which indicated significant differences for age of secondary school principals. He found that the mean score of administrators who were 40 years or older was significantly greater than for those who were 20 to 34 years old.

In addition, the above results were inconsistent with Gunn's (1984) findings which indicated that the level of overall job satisfaction of high school principals increased incrementally from the youngest to the oldest group of principals. Friesen et al. (1984) also identified age as a factor that was related to overall job satisfaction of principals.

Overall Job Satisfaction and Gender

The means of overall job satisfaction of principals defined by gender are reported in Table 12. The t-test procedure was used to test for significant differences between the means of the reported perception of overall job satisfaction of male and female respondents. The mean scores calculated from the reported perception of overall job satisfaction were not significantly different for gender. For this sample of respondents, gender may not be a

determinant of job satisfaction, however, this needs further study using a larger sample of school principals since the level of significance approached the 0.05 level.

Table 12 Overall job satisfaction of principals defined by gender (N = 131).

Gender	f	Mean	Standard Deviation	t Value	Degrees of Freedom	2-tail Prob.
Female	16	4.063	1.611	-1.86	129	.064
Male	115	4.600	0.989			

$p < 0.05$

This finding was consistent with Mutie's (1993) finding which showed no significant differences in the mean satisfaction scores of male and female school administrators. These findings seem to be contrary to some of the findings in the literature (Hulin & Smith, 1976; Hopkins, 1983).

The data clearly demonstrated that women in school administration are fewer in number than male colleagues. This observation supported Hughes and Mwiria's (1989) observation that Kenyan women are vastly under-represented in educational administration.

Overall Job Satisfaction and Years in Present Position

Principals were grouped in appropriate groups for t-test analyses and data are displayed in Table 13. There was no significant difference in their mean scores on overall job satisfaction between the school principals who had four or fewer years of principalship and those principals who had five or more

years of principal experience.

Table 13 Overall job satisfaction of principals in groups defined by number of years in present position (N = 131).

Years in Present Position	f	Mean	Standard Deviation	t Value	Degrees of Freedom	2-tail Prob.
0-4	57	4.404	1.132	-1.21	129	.229
4 or more	74	4.635	1.054			

$p < 0.05$

This finding was inconsistent with Mutie's (1993) results which indicated significant differences in the mean scores of overall job satisfaction of administrators according to the factor of administrative experience. He found that the school administrators with 10 or more years of experience were more satisfied with their job than those with 4 or fewer years of experience.

Overall Job Satisfaction and Post-Secondary Education

As shown in Table 14, the years of post-secondary education were grouped into two independent groups (2 to 4 years and 5 to 7 years). The t-test indicated that there was no significant difference between school administrators who had 2 to 4 years of post-secondary education and those administrators who had 5 to 7 years of post-secondary education in their mean scores on overall job satisfaction. This means that the administrators who had 2 to 4 years of post-secondary education and those who had 5 to 7 years of post-secondary education did not differ significantly in their feelings on their job as a whole.

Table 14 Overall job satisfaction of principals in groups defined by post-secondary education ($N = 131$).

Years in Post-Secondary Education	f	Mean	Standard Deviation	t Value	Degrees of Freedom	2-tail Prob.
2-4	103	4.573	1.072	0.77	129	.441
5-7	28	4.393	1.166			

$p < 0.05$

Organizational Characteristics of Schools

The selected school characteristics were school setting, type of school system and school size as measured by the actual student enrolment. The differences between means of overall job satisfaction and each of the selected characteristics are reported below.

Overall Job Satisfaction and School Setting

As shown in Table 15, the school settings of the respondents were grouped into rural and urban. The schools in town and municipal settings were collapsed into an urban setting. The t-test results showed that there was no significant difference in the calculated means of overall job satisfaction between the principals in rural school settings and those in urban school settings.

Table 15 Overall job satisfaction of principals in groups defined by school setting ($N = 131$).

School Setting	f	Mean	Standard Deviation	t Value	Degrees of Freedom	2-tail Prob.
Rural	98	4.571	1.025	0.67	129	.505
Urban	33	4.424	1.275			

$p < 0.05$

From Table 15, we can conclude that the school principals in urban settings and those in rural school settings had similar feelings on their job as a whole. This finding was inconsistent with the finding of Friesen et al. (1984) who found that city principals were more satisfied than those in rural or town settings.

Overall Job Satisfaction and the Type of School System

As shown in Table 16, the Kenyan secondary schools are categorized into two independent school systems, namely, public and private. The t-test was administered to test significant difference between the means of the reported perception of overall job satisfaction among school administrators in the two systems. The results showed that there was no significant difference in their mean scores on overall job satisfaction between the administrators in public and private schools.

Table 16 Overall job satisfaction as defined by the school system (N = 131).

School System	f	Mean	Standard Deviation	t Value	Degrees of Freedom	2-tail Prob.
Public	115	4.496	1.111	-1.09	129	.278
Private	16	4.813	0.911			

$p < 0.05$

This means that public and private school administrators did not differ significantly on their overall job satisfaction.

Overall Job Satisfaction and School Size

The means of the reported perception of overall job satisfaction of principals in groups defined by two independent school sizes are shown in Table 17. The t-test results showed that there was no significant difference between the means of the reported perception of overall job satisfaction of administrators in schools with fewer than 200 students (single-stream schools) and those administrators in schools with more than 200 students (two or more stream schools). This finding supported Mutie's (1993) results which showed no significant differences in the mean scores of administrators' overall job satisfaction according to school size.

Table 17 Overall job satisfaction of principals in groups defined by school size ($N = 131$).

School Size	f	Mean	Standard Deviation	t Value	Degrees of Freedom	2-tail Prob.
Fewer than 200 students (single-stream schools)	60	4.417	1.211	-1.14	129	.258
200 or more students (two or more streams)	71	4.634	0.975			

$p < 0.05$

These results were inconsistent with Gunn's (1984) findings which reported that principals of the largest schools (1500 or more students) were substantially more satisfied than were principals of the smallest schools (fewer than 500 students), but few schools in this sample were that large.

In summary, the data showed that the means calculated from the reported perceptions of overall job satisfaction were not significantly different for such demographic characteristics as age, gender, length of administrative service (experience), level of post-secondary education, school setting, type of school system, or school size.

Research Question Two

The second research question stated: What significant difference in job satisfaction exist among the perceptions of administrators working in public and private schools?

The job satisfaction instrument consists of 45 work factors classified into the following dimensions:

- 1) Working Conditions - 8 factors
- 2) Personnel-related matters - 8 factors
- 3) Student-related matters - 4 factors
- 4) Role-related matters - 8 factors
- 5) District-related matters - 9 factors
- 6) Occupation-related matters - 8 factors

Statements of Null Hypotheses

- 1) Eight null hypotheses on the 8 work factors of *working conditions* were stated in the following form:

H₀: There is no significant difference between the mean scores calculated from the reported perceptions of administrators of public and private schools on each factor of the 8 working conditions within the job satisfaction instrument.

The results of the t-test analyses are shown in Table 18. This table gives the following results concerning the null hypothesis, H₀:

- (a) The H₀ hypothesis was rejected at the 0.05 level of significance for each of the four following factors:
 - 1.1 The salary the principal receives,

Table 18. t-test results: Public by Private: Working conditions - 8 factors

WORKING FACTOR	PUBLIC		PRIVATE		t Value	Degrees of Freedom	2-tail Prob
	mean	standard	mean	standard			
1. Working Conditions							
1.1. The salary the principal receives	3.765	1.580	4.688	1.621	-2.18	129	.031 *
1.2. Fringe benefits under the contract	2.844	1.642	4.250	1.653	-3.21	129	.002 *
1.3. Other fringe benefits	2.826	1.569	4.188	1.515	-3.27	129	.001 *
1.4. The number of hours you must work as a principal	4.087	1.587	4.313	1.537	-.53	129	.594
1.5. The principal's office space	3.809	1.781	4.563	1.672	-1.60	129	.113
1.6. The physical conditions of the school	3.583	1.475	4.375	1.147	-2.06	129	.041 *
1.7. Availability of clerical staff to assist the principal	4.035	1.363	4.688	1.493	-1.77	129	.078
1.8. The way in which consultation between board and teachers concerning working conditions is conducted in the school system.	4.157	1.508	4.500	1.506	-.85	129	.395

* $p < 0.05$

- 1.2 Fringe benefits under the contract,
- 1.3 Other fringe benefits, and
- 1.6 The physical conditions of the school.

This was because there was sufficient evidence to their rejection at the 0.05 level of significance. This means that there did exist a significant difference between the mean scores of the two groups of administrators (i.e. public and private school principals) on each of these factors. From this analysis of their mean scores, we can conclude that the principals in private schools reported significantly higher level of satisfaction than their colleagues in public schools in the salary received, contractual and other benefits, as well as physical conditions of schools.

(b) The H_0 hypothesis was accepted at the 0.05 level of significance for each of the following work factors:

- 1.4 The number of hours you must work as a principal,
- 1.5 The principal's office space,
- 1.7 Availability of clerical staff to assist the principal, and
- 1.8 The way in which consultation between board and teachers concerning working conditions is conducted in the school system.

In other words, there did not exist a statistical significance between the mean scores of administrators in public and private schools on each of these

factors. We concluded that the public and private school administrators reported similar satisfaction levels on number of hours worked, office space, availability of clerical staff, and board and teachers consultation on working conditions.

2) Eight null hypothesis on the 8 work factors of *personnel-related matters* were stated in the following form:

H₀: There is no significant difference between the mean scores calculated from the reported perceptions of administrators of public and private schools on each of the 8 personnel-related matters within the job satisfaction instrument.

The results of the t-tests analyses are shown in Table 19. This table provides the following results concerning the null hypothesis, H₀:

(a) The H₀ hypothesis was rejected at the 0.05 level of significance for the work factor 2.6: The opportunity the principal has to help teachers and students to succeed. There did exist a significant difference between the mean scores of public and private school administrators on this factor.

The administrators in private schools were significantly more satisfied with the opportunity the principal has to help teachers and students to succeed than their colleagues in public schools.

(b) The H₀ hypothesis was not rejected at the 0.05 level of

Table 19. t-test results: Public by Private: Personnel-related matters - 8 factors.

WORKING FACTOR	PUBLIC		PRIVATE		t Value	Degrees of Freedom	2-tail Prob
	mean	standard	mean	standard			
2. Personnel-Rated Matters							
2.1 The principal's working relationships with teachers	5.278	0.822	5.375	0.619	-.45	129	.652
2.2. The principal's social relationships with teachers	5.174	0.830	5.125	0.806	.22	129	.825
2.3. The teaching competence of teachers	4.913	0.854	5.250	0.775	-1.49	129	.138
2.4. The competence of teachers in handling of other professional duties	4.461	0.930	4.563	0.892	-.41	129	.681
2.5. Attitudes of teachers toward ongoing professional improvement	4.444	0.957	4.500	1.265	-.21	129	.832
2.6. The opportunity the principal has to help teachers and students to succeed	4.765	0.921	5.375	0.619	-2.56	129	.011*
2.7. Attitudes of teachers towards change	4.357	0.910	4.688	0.873	-1.37	129	.173
2.8. Satisfaction and morale of the staff	4.617	1.056	4.688	1.195	-.24	129	.807

* $p < 0.05$

significance for each of the following factors:

2.1 the principal's working relationships with teachers,

2.2 the principal's social relationships with teachers,

- 2.3 the teaching competence of teachers,
- 2.4 the competence of teachers in handling of other professional duties,
- 2.5 the attitudes of teachers toward ongoing professional improvement,
- 2.7 Attitudes of teachers towards change, and
- 2.8 Satisfaction and morale of the staff.

This means that there did not exist a statistical significance between the perceptions of administrators of public and private schools on each of these work factors. The public and private school principals reported similar degrees of satisfaction on working relationships with teachers, social relationships with teachers, competence of teachers on teaching, and in handling other professional duties, attitudes of teachers toward ongoing professional improvement, change, and satisfaction and morale of the staff.

3) Four null hypotheses on the 4 work factors of *student-related matters* were stated in the following form:

H₀: There is no significant difference between the mean scores calculated from the reported perceptions of administrators of public and private schools on each of the 4 student-related matters within the job satisfaction instrument.

The results of the t-tests analyses are shown in Table 20. From this

table, we make the following comments concerning the null hypothesis, H_0 :

Table 20. t-test results: Public by Private: Student-related matters - 4 factors

WORKING FACTOR	PUBLIC		PRIVATE		t Value	Degrees of Freedom	2-tail Prob
	mean	standard	mean	standard			
3. Student-Related Matters							
3.1. The principal's relationships with students	5.261	0.702	5.313	0.704	-.28	129	.783
3.2. The attitudes of students toward education	3.957	1.210	4.563	0.964	-1.92	129	.057
3.3. Satisfaction and moral of students	4.044	1.087	4.875	0.957	-2.90	129	.004*
3.4. Achievement of students	4.130	1.218	4.688	1.195	-1.72	129	.088

* $p < 0.05$

- (a) For the factor 3.3 – satisfaction and morale of students, the H_0 hypothesis was rejected at the 0.05 level of significance. This means that there did exist a statistical significant difference between the mean scores of the two groups of administrators. The administrators in private schools were significantly more satisfied with satisfaction and morale of students than their counterparts in public schools.
- (b) The H_0 hypothesis was accepted at the 0.05 level of significance for each of the following factors:

- 3.1, the principal's relationships with students,
- 3.2, the attitudes of students toward education, and
- 3.4, achievement of students.

This means that there did not exist a significant statistical difference between the calculated means of perceptions of administrators in public and private schools on each of these factors. The two groups of administrators had almost the same degree of satisfaction on relationships with students, student attitudes toward education and achievement.

- 4) Eight null hypotheses on the 8 work factors of *role-related matters* were stated in the following form:

H₀: There is no significant difference between the mean scores calculated from the reported perceptions of administrators of public and private schools on each of the **8** role-related matters within the job satisfaction instrument.

The results of the t-test analyses are shown in Table 21. From this table, we make the following comments concerning the null hypothesis, H₀:

- (a) For the work factor 4.2 — the principal's freedom to allocate teaching assignments, the H₀ hypothesis was rejected at the 0.05 level of significance. There did exist a significant statistical difference between the mean scores of administrators of public and private schools on this factor. From the data, we can

TABLE 21. t-test results: Public by Private: Role-related matters - 8 factors

WORKING FACTOR	PUBLIC		PRIVATE		t Value	Degrees of Freedom	2-tail Prob
	mean	standard	mean	standard			
4. Role-Related Matters							
4.1 The principal's freedom to change the school program	4.296	1.147	4.250	1.571	.04	129	.887
4.2 The principal's freedom to allocate teaching assignments	5.026	1.013	5.688	0.602	-2.55	129	.012*
4.3 The principal's involvement in hiring teachers for the school	4.200	1.517	4.688	1.662	-1.19	129	.236
4.4 Authority associated with the principal's position	4.583	1.221	4.875	1.455	-.88	129	.382
4.5 The principal's involvement in budget preparation	4.774	1.236	5.125	1.360	-1.05	129	.295
4.6 The principal's responsibility for formal teacher evaluation	4.417	1.170	4.813	0.750	-1.31	129	.192
4.7 The principal's involvement in decision making at the board of governor's level	4.922	1.053	4.688	1.195	.82	129	.414
4.8 Prestige associated with the principal's position	4.348	1.325	4.563	1.548	-.59	129	.553

* $p < 0.05$

conclude that the administrators in private schools were significantly more satisfied with the principal's freedom to

allocate teaching assignments than their colleagues in public schools.

(b) We fail to reject the H_0 hypothesis at the 0.05 level of significance for each of the following factors:

- 4.1, the principal's freedom to change the school program,
- 4.3, the principal's involvement in hiring teachers for the school,
- 4.4, authority associated with the principal's position,
- 4.5, the principal's involvement in budget preparation,
- 4.6, the principal's responsibility for formal teacher evaluation,
- 4.7, the principal's involvement in decision making at the board of governor's level, and
- 4.8, prestige associated with the principal's position.

There did not exist a significant statistical difference between the calculated means of perceptions of administrators in public and private schools. The administrators of public and private schools did not differ significantly in their degree of satisfaction on the principal's freedom to change school programs, the principal's involvement in hiring teachers, authority associated with position, involvement in budget preparation, responsibility for formal teacher evaluation, involvement in decision making at the board of governor's level, and prestige associated with position.

5) Nine null hypotheses on the 9 work factors of *district-related matters*

TABLE 22. t-test results: Public by Private: District-related matters - 9 factors

WORKING FACTOR	PUBLIC		PRIVATE		t Value	Degrees of Freedom	2-tail Prob
	mean	standard	mean	standard			
5. District-Related Matters							
5.1 The principal's relationship with the District Education Officer	4.852	1.149	4.875	0.957	-.08	129	.940
5.2 The principal's relationship with the Provincial Education Officer	4.983	0.955	4.750	1.065	.90	129	.370
5.3 The principal's relationships with other Central office staff	4.504	1.165	4.625	1.258	-.38	129	.701
5.4 The principal's involvement in decision making at the district/division/county/municipal level	3.748	1.310	3.938	0.998	-.56	129	.579
5.5 Availability of support to assist the principal with problems	3.948	1.363	4.500	1.033	-1.56	129	.122
5.6 Opportunities for useful in-service education for the principal	3.678	1.466	3.813	1.515	-.34	129	.733
5.7 Board of Governors expectations of the principals	4.513	1.217	4.563	1.263	-.15	129	.880
5.8 The methods used to evaluate principals	3.609	1.309	3.875	1.204	-.77	129	.443
5.9 Attitudes of District Education Officers towards teachers and administrators	4.313	1.360	4.313	1.014	0.00	129	.999

* $p < 0.05$

were stated in the following form:

H_0 : There is no significant difference between the mean scores

calculated from the reported perceptions of administrators of public and private schools on each of the 9 District-related matters within the job satisfaction instrument.

The results of the t-test analyses are shown in Table 22. From Table 22, we can conclude that the two groups of administrators had similar degrees of satisfaction for each of the district-related matters.

6) Eight null hypothesis on the *8 occupation-related matters* were stated in the following form:

H₀: There is no significant difference between the mean scores calculated from the reported perceptions of administrators of public and private schools on each of the 8 occupation-related matters within the job satisfaction instrument.

The results of the t-test analyses are shown in Table 23. From Table 23, we can make the following comments concerning the null hypothesis, H₀:

(a) The H₀ hypothesis was rejected at the 0.05 level of significance for each of the following factors:

6.1, attitudes of parents towards the school,

6.6, opportunities for advancement as an administrator, and

6.7, the effect of the job on the principal's personal life.

In other words, there did exist a significant statistical difference between the calculated mean scores of perceptions of administrators in public and private schools on each of these factors. The t-test results revealed that the administrators in private schools were significantly more satisfied than their colleagues in public schools in the attitudes of parents toward the school,

opportunities for advancement, and the effect of the job on personal life.

(b) The H_0 hypothesis was not rejected at the 0.05 level of significance for each of the following factors:

6.2, principal's social position in the community,

6.3, achievement of the principal's own professional objectives,

6.4, the principal's sense of accomplishment as an administrator,

Table 23. t-test results: Public by Private: Occupation-related matters - 8 factors

WORKING FACTOR	PUBLIC		PRIVATE		t Value	Degrees of Freedom	2-tail Prob
	mean	standard	mean	standard			
6. Occupation-Related Matters							
6.1 Attitudes of parents toward the school	4.322	1.239	5.000	0.966	-2.10	129	.038*
6.2 Principal's social position in the community	4.609	0.971	4.875	1.025	-1.02	129	.309
6.3 Achievement of the principal's own professional objectives	4.557	0.919	4.813	0.911	-1.04	129	.298
6.4 The principal's sense of accomplishment as an administrator	4.791	0.969	4.688	1.302	.38	129	.702
6.5 Recognition of the principal's work	4.426	1.043	4.563	0.964	.49	129	.622
6.6 Opportunities for advancement as an administrator	3.600	1.356	4.375	1.258	-2.16	129	.033*
6.7 The effect of the job on the principal's personal life	3.800	1.156	4.438	1.365	-2.02	129	.045*
6.8 Successful completion of projects and tasks	4.374	1.195	4.938	0.854	-1.82	129	.071

* $p < 0.05$

6.5, recognition of the principal's work, and

6.8, successful completion of projects and tasks.

There was significant evidence to support H_0 for each of these factors. In other words, there did not exist a significant statistical difference in the calculated mean scores of perceptions of administrators of public and private schools in each of these factors.

We can conclude that the two groups of administrators reported similar degrees of satisfaction on principal's social position in the community, achievement of own professional objectives, sense of accomplishment as an administrator, recognition of the principal's work, and successful completion of projects and tasks.

In summary, the t-test results indicated that school administrators in private schools were significantly more satisfied than those in public schools in these work factors:

- a) the salary the principal receives,
- b) fringe benefits under contract and other fringe benefits,
- c) the physical conditions of the school,
- d) the opportunity the principal has to help teachers and students to succeed,
- d) the principal's freedom to allocate teaching assignments,
- e) satisfaction and morale of students,
- g) attitudes of parents toward the school,
- h) opportunities for advancement as an administrator, and

- i) the effect of the job on the principal's personal life.

This explains why some secondary school principals quit principalship of public schools.

These factors were mainly under working conditions and occupation-related matters. There were no significant differences in the remaining 35 work factors. These were mainly under district-related matters, personnel-related matters and role-related matters. Also, it is important to note that school administrators in public and private schools did not differ significantly on their degree of overall job satisfaction (Question 1).

Research Question Three

Research question three was stated as follows: Which aspects of the administrative position are the major predictors of overall job satisfaction?

To put this question in the multiple regression terminology, we would state this question in the following hypothesis:

H₀: There is no linear relationship between the overall job satisfaction (dependent variable) and the entire 45 factors (independent variables) within the job satisfaction instrument.

The Pearson Product-Moment Correlation Co-efficient was used to determine the relationship between overall job satisfaction and each of the satisfaction work factors and to provide direction of relationship relevant to

question three mentioned above. Table 24 shows the Pearson Correlation Coefficients between the overall job satisfaction item and each of the 20 work factors. Due to the many facets involved, only those facets for which significant levels were found are shown in Table 24.

The Pearson Product-Moment Correlation Analysis included overall job satisfaction (dependent variable) and 45 work factors (independent variables). By using the standard method for assessing the significance of an individual correlation ($p < 0.05$) among the 1035 correlations, then it would be expected that in a set of 1035 correlations over 50 correlations may occur by chance alone. The Bonferroni procedure (Collis & Rosenblood, 1985; Silverstein, 1986) was applied to the data, and any correlation over 0.335 was significant at 0.05, and any correlation over 0.364 was significant at 0.01. Out of the 45 factors, 13 had significant levels at 0.01 while 7 had significant levels at 0.05.

This means that the H_0 hypothesis for question three above was rejected at the 0.05 level of significance for 7 work factors and at the 0.01 level of significance for the 13 work factors shown in Table 24. In other words, there **did** exist a significant linear relationship between the overall job satisfaction and each of these 20 factors.

Table 24 Pearson Correlation Co-Efficient between overall job satisfaction and each of the 20 satisfaction work factors.

WORK FACTOR	r
Working Conditions	
1. The salary the principal receives	.384**
2. Fringe benefits under the contract	.444**
3. Other fringe benefits	.338*
8. The way in which consultation between board and teachers concerning working conditions is conducted in the school system.	.371**
Personnel-Related Matters	
16. Attitudes of teachers towards change	.359*
Student-Related Matters	
19. The principal's relationships with students	.346*
21. Satisfaction and morale of students	.415**
22. Achievement of students	.398**
Role-Related Matters	
24. The principal's freedom to change the school program	.422**
27. Authority associated with the principal's position	.388**
30. The principal's involvement in decision making at the board of governors level	.419**
31. Prestige associated with the principal's position	.349*
District-Related Matters	
37. Availability of support to assist the principal with problems	.359*
40. The methods used to evaluate principals	.398**
Occupation-Related Matters	
44. Principal's social position in the community	.362*
45. Achievement of the principal's own professional objectives	.437**
46. The principal's sense of accomplishment as an administrator	.353*
47. Recognition of the principal's work	.506**
48. Opportunities for advancement as an administrator	.380**
50. Successful completion of projects and tasks	.428**

* $p < 0.05$, ** $p < 0.01$

The data indicated that overall job satisfaction was strongly correlated with:

- i) Recognition of principal's work ($r = 0.506$).
- ii) Fringe benefits under contract ($r = 0.444$).
- iii) Achievement of the principal's own professional objectives ($r = 0.437$).
- iv) Successful completion of projects and tasks ($r = 0.428$).
- v) The principal's freedom to change the school program ($r = 0.422$).
- vi) The principal's involvement in decision making at the board of governors level ($r = 0.419$).
- vii) Satisfaction and morale of students ($r = 0.415$).

As shown in Table 25, the correlation co-efficients indicated that the overall job satisfaction was directly and positively related to all the satisfaction work factors examined for secondary school principals in Kenya. This meant that respondents with high scores of overall job satisfaction also gave high scores for the seven facet variables. The same was true for low scores on both the overall and facet variables. The analysis showed low positive correlation of overall job satisfaction with:

- i) The number of hours you must work as a principal ($r = 0.179$);
- ii) The principal's office space ($r = 0.182$);
- iii) The physical conditions of the school ($r = 0.167$); and
- iv) The principal's work relationships with teachers ($r = 0.192$).

Table 25 Pearson correlation co-efficient between overall job satisfaction and each of the 45 work factors.

WORK FACTORS	MULTIPLE REGRESSION						
	OCCU45S	OCCU46S	OCCU47S	OCCU48S	OCCU49S	OCCU50S	OCCU52S ¹
WORK15	.252	-.137	-.280	-.233	-.355	-.134	-.384
WORK25	-.329	-.230	-.290	-.430	-.462	-.306	-.444
WORK35	-.380	-.258	-.305	-.455	-.480	-.399	-.333
WORK45	-.266	-.171	-.153	-.133	-.354	-.197	-.179
WORK55	-.265	-.155	-.255	-.371	-.280	-.224	-.182
WORK65	-.452	-.317	-.335	-.372	-.273	-.453	-.167
WORK75	-.235	-.270	-.206	-.274	-.314	-.323	-.218
WORK85	-.454	-.378	-.399	-.353	-.363	-.464	-.371
PERS10S	-.321	-.281	-.151	-.153	-.239	-.395	-.192
PERS11S	-.316	-.253	-.247	-.149	-.154	-.329	-.207
PERS12S	-.262	-.150	-.138	-.320	-.275	-.314	-.309
PERS13S	-.241	-.212	-.174	-.330	-.332	-.232	-.213
PERS14S	-.323	-.280	-.344	-.348	-.267	-.349	-.216
PERS15S	-.472	-.313	-.355	-.351	-.307	-.515	-.312
PERS16S	-.400	-.214	-.320	-.291	-.352	-.325	-.359
PERS17S	-.343	-.286	-.249	-.327	-.307	-.422	-.305
STUD19S	-.292	-.325	-.229	-.632	-.104	-.295	-.346
STUD20S	-.369	-.327	-.232	-.415	-.405	-.237	-.313
STUD21S	-.386	-.360	-.423	-.457	-.345	-.533	-.415
STUD22S	-.435	-.384	-.417	-.470	-.374	-.502	-.393
ROLE24S	-.214	-.345	-.285	-.295	-.207	-.258	-.422
ROLE25S	-.293	-.200	-.284	-.125	-.199	-.375	-.295
ROLE26S	-.240	-.320	-.218	-.195	-.197	-.195	-.233
ROLE27S	-.331	-.408	-.305	-.346	-.303	-.353	-.393
ROLE28S	-.337	-.345	-.357	-.445	-.350	-.344	-.298
ROLE29S	-.371	-.353	-.343	-.397	-.355	-.377	-.320
ROLE30S	-.440	-.413	-.350	-.252	-.273	-.358	-.419
ROLE31S	-.138	-.157	-.156	-.213	-.267	-.138	-.349
DI3T33S	-.500	-.419	-.414	-.347	-.234	-.353	-.258
DI3T34S	-.463	-.470	-.373	-.139	-.261	-.262	-.271
DI3T35S	-.435	-.462	-.311	-.288	-.326	-.308	-.251
DI3T36S	-.392	-.421	-.316	-.331	-.214	-.347	-.222
DI3T37S	-.500	-.453	-.397	-.412	-.400	-.307	-.353
DI3T38S	-.414	-.323	-.378	-.522	-.469	-.276	-.265
DI3T39S	-.523	-.470	-.355	-.430	-.472	-.431	-.334
DI3T40S	-.392	-.252	-.419	-.560	-.274	-.253	-.398
DI3T41S	-.285	-.280	-.259	-.335	-.297	-.315	-.273
OCCU43S	-.383	-.414	-.335	-.442	-.317	-.474	-.291
OCCU44S	-.463	-.425	-.395	-.281	-.251	-.395	-.362
OCCU45S	1.000	-.514	-.592	-.519	-.360	-.521	-.437
OCCU46S	-.514	1.000	-.575	-.425	-.325	-.441	-.353
OCCU47S	-.592	-.575	1.000	-.551	-.306	-.492	-.506
OCCU48S	-.519	-.425	-.551	1.000	-.557	-.465	-.330
OCCU49S	-.360	-.325	-.306	-.557	1.000	-.434	-.304
OCCU50S	-.521	-.441	-.492	-.465	-.434	1.000	-.428
OVER52S	-.437	-.353	-.305	-.330	-.304	-.423	1.000

¹Over 52S — overall job satisfaction

In short, the Pearson Correlation Co-Efficient showed that overall job satisfaction had positive relationships with all the 45 work factors. However, it had high correlation with those aspects which allowed for individual fulfilment of one's important work values. These work factors included recognition fringe benefits, achievement, successful completion of projects and tasks as well as the principal's freedom to change school programs (unlimited autonomy).

Best Predictors of Overall Job Satisfaction

The major predictors of overall job satisfaction were identified using stepwise multiple linear regression, in order to provide relevant information to question three of the research questions. Out of 45 work factors which entered the regression equation, only six factors emerged as statistically significant predictors of overall job satisfaction. The six predictors of overall job satisfaction shown in Table 26 accounted for 46% of its variance as indicated by the value of adjusted R square.

The best three predictors of overall job satisfaction, in order of importance were: (1) recognition of the principal's work (25%), (2) fringe benefits under contract (an additional 9%), and (3) the principal's freedom to change the school program (an additional 5%).

The aspect of the administrative position which was the chief predictor of overall job satisfaction was recognition of the principal's work. The aspect -

- "recognition of the principals' work" was found to be a major determinant of principals' overall job satisfaction by Iannone (1973), Johnson and Holdaway (1990), Fanser and Buxton (1984), and Schmidt (1976). This showed that the Kenyan secondary school principals had a similar determinant of overall job satisfaction when compared with their North American colleagues.

Table 26 Stepwise multiple regression analysis of work factors as major predictors of overall job satisfaction.

MAJOR PREDICTORS		PERCENTAGE OF VARIANCE	CHANGE IN PERCENTAGE VARIANCE	r	t	p
(1)	Recognition of the principal's work	25.04	25.04	.506	4.426	.0001
(2)	Fringe benefits under contract	34.22	9.18	.444	3.922	.0001
(3)	The principal's freedom to change the school program	39.32	5.10	.422	3.358	.0023
(4)	The principal's involvement in decision making at the Board of Governors level.	41.91	2.59	.419	3.120	.0010
(5)	The teaching competence of teachers	44.10	2.19	.309	2.893	.0045
(6)	The principal's involvement in budget preparation	46.40	2.12	.298	2.522	.0129

The other work factors which had high correlation with overall job satisfaction but did not account for more than two percent of the variance in overall job satisfaction were:

- i) Achievement of the principal's own professional objectives ($r = 0.437$),

- ii) Successful completion of projects and tasks ($r=0.428$), and
- iii) Satisfaction and morale of students ($r=0.415$).

According to Gunn (1984), this situation occurs in stepwise multiple linear regression because "certain predictor variables are very closely related so that the contribution made by one may be included in the contribution of another" (p. 142). For example, in this study, "achievement of the principal's own professional objectives" correlated highly with "recognition of principal's work" ($r=0.592$), but did not appear as an important predictor because its contribution may be largely in the latter work factor.

The Pearson Correlation Matrix (See Appendix C, Table C-1) showed that the best predictor of overall job satisfaction -- "recognition of principal's work" correlated highly with the following variables:

- i) Achievement of the principal's own professional objectives ($r=0.592$);
- ii) The principal's sense of accomplishment as an administrator ($r=0.575$);
- iii) Opportunities for advancement as an administrator ($r=0.551$);
- iv) Successful completion of projects and tasks ($r=0.492$);
- v) Satisfaction and morale of students ($r=0.423$);
- vi) The methods used to evaluate principals ($r=0.419$);
- vii) Achievement of students ($r=0.417$); and
- viii) The principal's relationship with the District Education officer ($r=0.414$).

The correlation matrix seems to suggest that the strongest predictor of

overall job satisfaction, "recognition" is an umbrella variable which may easily through intercorrelation include "achievement," "accomplishment" and "advancement." Further research should therefore, be carried out to discover what "recognition" really means. This may include — what and who is recognized; and how principals are recognized.

The second best predictor, "fringe benefits under contract," was highly correlated with these work factors:

- i) Other fringe benefits ($r = 0.793$);
- ii) The salary the principal receives ($r = 0.600$);
- iii) The effect of the job on the principal's personal life ($r = 0.462$);
- iv) Opportunities for advancement as an administrator ($r = 0.430$); and
- v) The principal's office space ($r = 0.402$).

In brief, the aspects of the administrative position which were major predictors of overall job satisfaction were: (1) Recognition of principal's work, (2) Fringe benefits under contract, and (3) the Principal's freedom to change the school program. These aspects were strong determinants of overall job satisfaction of Kenyan secondary school administrators.

Perceptions of Principal's Role

Kenyan secondary school principals reported high levels of involvement on issues dealing with school finances (i.e., management of school finances and

development of school budget); student-related matters (i.e., supervision of student behaviour and maintenance of student records); and development of school-community relations. All these tasks had a positive but low correlation with overall job satisfaction. For example, the principal involvement in budget preparation had a correlation co-efficient of $r=0.248$. However, these tasks and responsibilities were consistent with the stipulated role of Kenyan principals by the Ministry of Education. According to the Ministry of Education (1987) heads' manual, the major duties of the principal include:

- i) the overall running and control of the school and maintenance of the tone and of all-round standards;
- ii) planning, organizing, directing, controlling, staffing, innovating, co-ordinating, motivating and actualizing the educational goals and objectives of the institution and the country;
- iii) controlling school finances as well as accounting of all school revenue and expenditure;
- iv) maintenance of an efficient filing system as an aid to good administration;
- v) proper selection of subjects appearing in the school curriculum so as to ensure a well-balanced education is provided;
- vi) the appointed secretary of a legally constituted Board of Governors and the agent for the Teachers' Service Commission in his/her school; and

- vii) facilitating and encouraging the establishment of the Parents-Teachers Association as well as cultivating good relations both with parents and with the local community (p. 2-3).

In addition, the finding regarding school finances supported Sogomo's (1990) qualitative study which noted that financial management was an important but problematic administrative task for principals from 19 public secondary schools in Kenya. This aspect calls for the training of school principals in financial management and administrative skills to enable the practitioners to improve the effectiveness of schools and simultaneously, their work satisfaction. Also, it is important that school administrators receive continuous human and technical support from the relevant authorities.

Sources of Job Satisfaction and Job Dissatisfaction

The overall job satisfaction mean of 4.53 suggested that the Kenyan secondary school principals as a group were moderately satisfied with most aspects of their administrative position at the time of data collection. The school principals' greatest source of satisfaction came from student- and teacher-related matters. This included such aspects as the teaching competence of teachers and the opportunity the principal has to help teachers and students to succeed. The latter aspect supported Weindling's (1992) observation that heads of schools gained satisfaction from helping pupils,

parents and staff to be more successful.

Ninety-eight percent of school principals derived high satisfaction from working with teachers and 99% gained some satisfaction from relationships with students (Table 8). These findings were consistent with those of Mutie (1993). Also, these findings were similar to Johnson and Holdaway's (1990) findings which found that principal working relationships with teachers and students represented the most satisfying areas of principal's work in Alberta, Canada. These helping aspects appear to not have cultural boundaries. A similar percentage (i.e. 99%) reported high satisfaction for social relationships with teachers. As reported in the Canadian studies, the data suggested that principal-teacher relationships and principal-student relationships were expressed as the greatest sources of job satisfaction of Kenyan secondary school principals. The other aspects which involved interpersonal relationships and which were identified with job satisfaction were: (1) the principal's relationship with the Provincial Education Officer and (2) the principal's relationship with the District Education Officer. These aspects were reported by 92% and 89% of the respondents respectively.

Although the school principals reported high satisfaction with the above-mentioned aspects of the administrative position, those work factors were not strongly correlated with overall job satisfaction. This means that the teaching competence of teachers, the opportunity the principal has to help teachers and

students to succeed as well as the principal's working relationships with teachers and students are not important determinants of principal's overall job satisfaction.

The importance of interpersonal relationship with teachers, students, and education officers as sources of job satisfaction for principals supported Rice's (1978) findings in his study of high school principals in Alberta, Canada. He identified interpersonal relationships with peers, subordinates and superordinates as a greater source of satisfaction than dissatisfaction. Also, the above findings were consistent with Friesen, Holdaway and Rice's (1981) study of education administrators in Alberta, Canada. They found interpersonal relationships to be a motivator (satisfier). In the Kenyan context, the interpersonal relationships are important sources of work satisfaction because they provide the human support needed to run the schools effectively. Human support assists in the resolution of school problems and issues through exchange of ideas. However, earlier research on job satisfaction by Herzberg (1966), Iannone (1973), and Schmidt (1976) found interpersonal relationships to be a dissatisfier. This disagreement may come about because as executive officers at school level, the central part of school principal's job involves spending a great deal of time working with people (Friesen et al., 1981).

The other aspects which provided great source of job satisfaction were the principal's freedom (unlimited autonomy) to allocate teaching assignments

and the principal's involvement (empowerment) in decision making at the Board of Governors level. These were reported by 93% and 91% of the respondents respectively. These results supported Gunn's (1984) finding that school principals gained greatest job satisfaction from being able to make changes so as to make the school better. The Kenyan school administrators were similar to their colleagues in North America on these aspects.

The greatest source of job dissatisfaction of the principal administrative position were fringe benefits under contract (Mean = 3.02) and other fringe benefits (Mean = 2.99). Fifty-six percent and 60% of the respondents respectively were dissatisfied with these aspects. Similarly, Mutie (1993) found that secondary school administrators were very dissatisfied with fringe benefits. Principal's benefits may include pension, medical, paid annual leave, paid vacations, and maternity leave. These findings seem to be consistent with those of Rice (1978) and Bacharach and Mitchell (1983), who identified physical benefits and conditions of the job as sources of dissatisfaction, if not effectively present. This means that the Kenyan school administrators are not satisfied with the fringe benefits currently under contract. The TSC and other relevant authorities need to pay more attention to this issue. This issue comes under hygiene factors in Herzberg's Motivation-Hygiene Theory. Also, it is important to note that fringe benefits under contract had a direct, high positive correlation with the overall job satisfaction of school principals ($r = 0.444$), and

statistically significant at 0.01 level.

The other dissatisfying aspects worth noting were political interference (political patronage, political alignment) and inadequate provision of school finances (poor payment of school fees, inadequate financial support from the government). The facet — "political interference" was one of the facets which contributed most to overall job dissatisfaction of secondary school administrators in Mutie's (1993) study. These need more attention by the relevant Kenyan authorities. These aspects do not seem to appear in studies carried out on job satisfaction in Canada and the United States of America.

Summary

This chapter discussed the survey results around the research questions. The t-tests results for the means calculated from the reported perception of overall job satisfaction were not significantly different for:

- (a) age,
- (b) gender,
- (c) length of service (administrative experience),
- (d) post-secondary education,
- (e) school setting,
- (f) type of school system, or
- (g) school size.

The school principals in private schools were significantly more satisfied than their counterparts in public schools in the following work factors:

- 1) The salary the principal receives,
- 2) Fringe benefits under the contract and other fringe benefits,
- 3) The physical conditions of the school,
- 4) The opportunity the principal has to help teachers and students to succeed,
- 5) Satisfaction and morale of students,
- 6) The principal's freedom to allocate teaching assignments,
- 7) Attitudes of parents towards school,
- 8) Opportunities for advancement as an administrator, and
- 9) The effect of the job on the principal's personal life.

The Pearson Product-Moment Correlation Co-efficient indicated a direct, positive correlation between overall job satisfaction and each of the 45 work factors. The aspects of the administrative position which were the best three predictors of overall job satisfaction, in order of importance were: (1) recognition of the principal's work, (2) fringe benefits under contract, and (3) the principal's freedom to change the school program. These aspects had a high and positive relationship with overall job satisfaction. This meant that these three aspects were important determinants of overall job satisfaction.

The Kenyan secondary school principals were moderately satisfied with

their overall job. However, their greatest source of satisfaction came from student- and teacher-related matters. For example, the principal's working relationships with teachers and students. On the other hand, the major sources of dissatisfaction centred on fringe benefits under contract and other fringe benefits, as well as political interference and inadequate provision of school finances (i.e. shoe-string budgets).

The next chapter summarizes the purpose of the study, research problem methodology and major findings. Also, it presents conclusions and the implications of the findings for practice and further research.

CHAPTER 6: Summary, Conclusions and Implications

This chapter presents a summary of the purpose of the study, research problem, methodology and major findings. Also, it presents conclusions and the implications drawn from the findings for practice and further research.

Purpose of the Study

This study was conducted to examine the Kenyan secondary school principals' perception of their work and employment conditions. The primary purpose was to determine which aspects of the principal's position contributed to job satisfaction of representative Kenyan school administrators. The secondary purpose was to investigate the extent to which overall job satisfaction related to individual characteristics of the principals and to organizational characteristics of the schools. Individual characteristics were age, gender and length of service (administrative experience), and post-secondary education. Organizational characteristics were school setting, type of school system, and size of the school as measured by the actual student enrolment.

The research questions addressed the significant differences in the perception of overall job satisfaction as reported by school administrators according to selected demographic characteristics of principals as well as

selected organizational characteristics of schools. Also, the research questions examined significant differences in work factors as reported by school administrators in public and private schools and identified the major predictors of overall job satisfaction.

Methodology

A survey questionnaire was used to collect data from a population sample of 201 secondary school principals in Kenya. The job satisfaction instrument was based on Johnson and Holdaway's (1991) questionnaire on perceptions of principals of school effectiveness, their role, and their job satisfaction in Alberta, Canada. The respondents were from four districts namely, Baringo, Elgeyo/Marakwet, Kericho, and Nakuru in the Rift Valley Province. One hundred thirty-one respondents (i.e., 65%) returned usable questionnaires for data analysis. The raw data were coded for use in the SPSS computer program.

The t-tests, descriptive statistics, correlational analysis as well multiple linear regression were used to:

- i) determine the extent of differences in which overall job satisfaction was related to selected personal characteristics of principals and organizational characteristics of schools,
- ii) determine significant differences that exist among the reported

perceptions of work factors of administrators in public and private schools,

- iii) examine the relationship between overall job satisfaction and each of the work factors, and
- iv) identify the major predictors of overall job satisfaction.

Major Findings

The following major findings were identified in this study:

- i) Kenyan secondary school principals reported high levels of involvement in the management of school finances and supervision of student behaviour. The areas of low levels of involvement were appointment/transfer of teachers and development of system-wide policies at the district/division/county/municipal levels;
- ii) The majority of school principals (118/131; 90%) were satisfied with their total work role. Only 15% (19/131) of the principals were highly satisfied and approximately one-tenth (13/131) were dissatisfied with their total work role;
- iii) There were no significant differences in the mean scores from the reported perceptions of overall job satisfaction for:
 - (a) age,

- (b) gender,
 - (c) length of administrative service (experience),
 - (d) post-secondary education,
 - (e) school setting,
 - (f) type of school system, or
 - (g) school size.
- iv) The work factor mean scores for administrators of Kenyan private schools were significantly higher than their public school colleagues for the following factors:
- (a) the salary the principal receives,
 - (b) fringe benefits under contract and other fringe benefits,
 - (c) the physical conditions of the school,
 - (d) the opportunity the principal has to help teachers and students to succeed,
 - (e) the principal's freedom to allocate teaching assignments,
 - (f) satisfaction and morale of students,
 - (g) opportunities for advancement as an administrator, and
 - (i) the effect of the job on the principal's personal life.
- v) Three aspects of the administrative position were the best positive predictors of overall job satisfaction; in order of importance these were:

- a) recognition of the principal's work (by students, teachers, parents, and community),
- b) fringe benefits under the contract; and
- c) the principal's freedom to change the school program(s).

These facets were found to be statistically significant at the 0.01 level.

- vi) Kenyan secondary school principals gained their greatest job satisfaction from student- and teacher-related matters. These included the teaching competence of teachers and positive outcomes from both students and teachers. Ninety-eight percent of school principals achieved their greatest satisfaction from working with teachers, from principal-student relationships and from social relationships with teachers;
- vii) Fringe benefits under the contract, other fringe benefits, political interference, as well as inadequate provision of school finances were the major sources of job dissatisfaction of the principals who responded.

The Nature of Overall Job Satisfaction

Recognition of the principal's work was the best predictor of overall job satisfaction. The Pearson Correlation Matrix showed that three variables

namely, "achievement of the principal's own professional objectives", "the principal sense of accomplishment as an administrator", and "opportunities for advancement as an administrator" were correlated highly with recognition of principal's work. These were found to be statistically significant ($p < 0.01$). These findings were consistent with the early research by Locke (1983) who reported that achievement on the task is an important determinant of work satisfaction.

Similarly, Gunn and Holdaway (1986) found that "a sense of accomplishment was strongly related to recognition by others. In addition, Iannone (1973), Fanser and Buxton (1984), Rice (1978), and Schmidt (1976) found recognition to be an important source of job satisfaction for high school principals, as indicated in this study.

The second best predictor of overall job satisfaction -- "fringe benefits under the contract" was strongly related to "other fringe benefits"; "the salary the principal receives", and "the effect of the job on principal's personal life." This suggests that these aspects were strong determinants of overall job satisfaction and, hence, important for the well-being of school principals. This somewhat supported Gunn's (1984) findings which indicated that "effect of the job on your personal life" was related to the physical benefits and conditions of the job (excluding salary). These findings provide an insight into the nature of overall job satisfaction.

Conclusions

- i) A large majority of Kenyan secondary school principals were satisfied with their total work role. The frequency and level of job dissatisfaction were minimal. The greatest source of overall job dissatisfaction was the fringe benefits under contract. The TSC and other relevant Kenyan authorities needs to pay more attention to this issue.
- ii) The principals of private schools were significantly more satisfied than their counterparts in public schools in the following aspects:
 - (a) the salary principal receives,
 - (b) fringe benefits under contract and other fringe benefits,
 - (c) the physical conditions of the school,
 - (d) the opportunity the principal has to help teachers and students to succeed,
 - (e) satisfaction and morale of students,
 - (f) the principal's freedom to allocate teaching assignments,
 - (g) attitudes of parents toward the school,
 - (h) opportunities for advancement as an administrator, and
 - (i) the effect of the job on the principal's personal life.
- iii) The major determinants of principals' overall job satisfaction were recognition of principal's work, fringe benefits under contract, and principal's freedom to change school programs.

Implications for Practice

As a result of the findings, the researcher has arrived at some implications for practice. Perhaps the most crucial issue facing the Teachers' Service Commission (TSC) and the Ministry of Education is how to improve the working environment and quality of life of the Kenyan secondary school principal. It is suggested that the TSC and Ministry of Education make efforts to understand and remove the causes of job dissatisfaction over which they have considerable control. For example, the TSC could make an effort to improve the fringe benefits under contract and other fringe benefits. By so doing, the TSC could increase job satisfaction levels as well as improve the working conditions for tomorrow's principals.

The results of the study showed that Kenyan women are under-represented in school administration. There is, therefore, an urgent need for greater encouragement of women to consider being school administrators. Also, there is a need to examine why this is so.

Sadly, the recent report published by the Presidential working party on education and Manpower Training for the next decade and beyond (Kamunge, 1988), included no special recommendations regarding women in educational administration among its 19 proposals concerning the future direction of utilization of human resources in Kenya. This underscores the long distance the Kenyan society has yet to travel in the recognition of, and response to, the

dearth of Kenyan women (in educational administration!). Hughes and Mwiria (1989, p. 192) argued that "until women are recognized as an under-utilized national resource by educators, employers and politicians alike, the emancipation of Kenyan women will not be complete."

The data indicated that approximately three-fifths of school principals had the basic two to three years of teacher training. This means that they have not had training in principalship except the one-shot inservice programs organized by the Kenya Education Staff Institute (KESI) which are usually two weeks during school holidays. However, Sogomo (1990) noted that very few principals attended courses organized by KESI due to the Institute's lack of funds, personnel, and poor deployment of staff. It is suggested that Kenya's Ministry of Education introduce principal certificate courses similar to the "Ontario Ministry of Education Principal's course" (in Canada), which consists of two summer sessions, usually five weeks in length; and which is now a requirement for a principal certificate and hence, principalship (Pratt & Common, 1986). There is also a practicum report required.

The responses from the open-ended item (Other, please specify) suggest that the contents of the courses may include school and instructional management, teacher supervision, human relations,, leadership, curriculum implementation as well as educational politics and finance. Johnson (1993) suggested that "financial matters are becoming increasingly important for

administrators at the local level" (p. 27). Also, the Ministry of Education may need to empower the principals to tailor the inservice courses since they are closest to students in the classroom. Furthermore, it is important to produce well-constructed, intellectually challenging preparation courses that relate theory to practice but surpass the mere transmission of prescriptions for managerial success (Johnson, 1993). For as Duignan (1988) has proposed, educational administrators of the future will face a context of accelerating change requiring vision, flexible thinking, versatility and responsiveness.

Principal-led workshops that model the effective resolution of common problems and issues through informed debates and exchange of ideas is strongly recommended. Parkay and Hall (1992) argued that principals early in their careers could benefit from opportunities to interact with principals at other stages of development, both higher and lower. Such relationships could be designed according to the Peer-Assisted Leadership (PAL) programs advocated by Barnett (1985, 1986, 1990).

In brief, principal courses will prepare Kenyan secondary school principals in theories of administration and leadership styles which they could put into practice in their schools. The principal's leadership has been noted by renowned researchers (Barth, 1990; Parkay & Hall, 1992) to be key to school improvement, effective teaching and learning.

Implications for Further Research

This section highlights some possible areas for future research. Also, it presents questions that may be used to design studies for further research.

As a result of this study, there is a need to understand the world of the beginning principals (0 to 4 years experience) and younger principals (i.e., under 40 years of age) in order to get a clearer picture of professional socialization of principals. What experiences -- opportunities, challenges and problems do they see as related to the principalship? How do they establish their professional identities and promote their professional development?

A study in this area might improve current appointment policies and practices with regard to professional socialization and development of principals. The knowledge gained could be used to improve inservice programs for educational leaders of the 21st century.

There appears to be an urgent need to study women in educational administration. This perspective is consistent with Shakeshaft's (1989) fourth stage, that is, study women in their own terms. This will lead to an understanding of why they are under-represented in educational administration and how they could be encouraged to be leaders in educational institutions in record numbers. An identification of how women's participation could be improved through involving more of them in all areas of management positions,

policy- and decision-making levels of government infrastructure may be found. Appropriate research questions might be: To what extent have women who have completed a university degree (in education) or appropriate certification been empowered in educational administration in Kenya? What are their concerns, thoughts, feelings, and perceptions on leadership? To what extent have Kenyan women benefited from higher education?

The facet called "recognition of the principal's work" emerged to be important in this study, as it had in other studies of job satisfaction. The data indicated that it was related to many facets of job satisfaction and therefore, it raised several questions which future researchers might attempt to answer. For example, of what does recognition of principal's work consist? Does it have a specific meaning? What happens if the term is removed from job satisfaction instruments?

In this study, principals valued working relationships with teachers, relationships with students, social relationships with teachers and principal freedom to allocate teaching assignments. These factors were related positively to overall job satisfaction of principals. How job satisfaction is related to performance, school effectiveness and/or leader effectiveness in educational administration needs to be addressed both in theory and future research.

Using qualitative studies, researchers may need to pay more attention

to the psychological and behavioural nature of principals so as to get a better perspective of the comparison between their thoughts, feelings, and perceptions of their work.

Finally, due to the cultural and geographical differences, this study should be replicated with a larger sample of school principals representative of all eight administrative provinces in Kenya.

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A P P E N D I X A

Permission Letter

A P P E N D I X B

Survey Questionnaire

**PERCEPTIONS OF PRINCIPALS' ROLES
AND THEIR JOB SATISFACTION**

SCHOOL DATA

Please check (✓) the appropriate answer.

1. Which of the following best describes the setting of your school?
 rural Municipality
 town other (please specify) _____
 2. In which type of school system is your school located?
 maintained school assisted school
 private school Harambee school
 other (please specify) _____
 3. What is your Ministry approved student enrolment? _____
 4. What is your actual student enrolment? _____
 5. Number of teachers employed in your school. _____
 6. Your school is managed by
 Ministry approved Board of Governors Parents' Body
 Church organization Private Board
-

PERSONAL DATA

7. Your gender female male
8. Your age on January 1, 1992
 under 30 50-59
 30-39 60 or older
 40-49
9. To which position do you aspire in your long-term career plans? (Please check one)
 Principalship
 District Education Officer
 Consultant or Inspector at the central office
 Teaching position in a college or university
 Provincial Education Officer
 Position in Ministry of Education headquarters
 other (please specify) _____
10. Years in your present position? (Count the present year as a full year) _____
11. Years of experience as a teacher before attaining your present position. _____
12. Years of post-secondary education you have completed.
 (count the present year as a full year) _____

ADMINISTRATIVE TASKS AND RESPONSIBILITIES

Please rate your level of involvement in each of the areas listed below according to the following scale:

1 - None

2 - Low

3 - Medium

4 - High

Circle the selected number.

- | | | | | | |
|----|---|---|---|---|---|
| a) | Formal evaluation of teachers | 1 | 2 | 3 | 4 |
| b) | Informal developmental evaluation of teachers | 1 | 2 | 3 | 4 |
| c) | Appointment/transfer of teachers | 1 | 2 | 3 | 4 |
| d) | Choice of school programs | 1 | 2 | 3 | 4 |
| e) | Evaluation of instructional programs | 1 | 2 | 3 | 4 |
| f) | Management of instructional resources | 1 | 2 | 3 | 4 |
| g) | Management of non-instructional resources | 1 | 2 | 3 | 4 |
| h) | Development of school budget | 1 | 2 | 3 | 4 |
| i) | Management of school finances | 1 | 2 | 3 | 4 |
| j) | Operation of school building-physical aspects | 1 | 2 | 3 | 4 |
| k) | Supervision of student behaviour | 1 | 2 | 3 | 4 |
| l) | Maintenance of students records | 1 | 2 | 3 | 4 |
| m) | Development of school-community relations | 1 | 2 | 3 | 4 |
| n) | Development of system-wide policies at the district/division/
county/municipal level | 1 | 2 | 3 | 4 |
| o) | School fund raising | 1 | 2 | 3 | 4 |
| p) | Development of school projects | 1 | 2 | 3 | 4 |
| q) | Parent-teacher association | 1 | 2 | 3 | 4 |

JOB SATISFACTION

General Importance

Please assess the importance of each of the following work factors for job satisfaction of principals, using this scale:

- N - not important** **S - slightly important**
M - moderately important **E - extremely important**

Personal Satisfaction

Please also assess your degree of satisfaction with each work factor using this scale:

- Highly Dissatisfied** **Moderately Dissatisfied** **Slightly Dissatisfied** **Slightly Satisfied** **Moderately Satisfied** **Highly Satisfied**
1 **2** **3** **4** **5** **6**

Circle the selected letter and number.

WORK FACTOR	IMPORTANCE FOR JOB SATISFACTION	YOUR SATISFACTION
Working Conditions		
1. The salary the principal receives	N S M E	1 2 3 4 5 6
2. Fringe Benefits under the contract	N S M E	1 2 3 4 5 6
3. Other fringe benefits	N S M E	1 2 3 4 5 6
4. The number of hours you must work as a principal	N S M E	1 2 3 4 5 6
5. The principal's office space	N S M E	1 2 3 4 5 6
6. The physical conditions of the school	N S M E	1 2 3 4 5 6
7. Availability of clerical staff to assist the principal	N S M E	1 2 3 4 5 6
8. The way in which consultation between board and teachers concerning working conditions is conducted in the school system.	N S M E	1 2 3 4 5 6
9. Other (please specify) _____	N S M E	1 2 3 4 5 6

WORK FACTOR	IMPORTANCE FOR JOB SATISFACTION	YOUR SATISFACTION
Personnel-Related Matters		
10. The principal's working relationship with teachers	N S M E	1 2 3 4 5 6
11. The principal's social relationship with teachers	N S M E	1 2 3 4 5 6
12. The teaching competence of teachers	N S M E	1 2 3 4 5 6
13. The competence of teachers in handling of other professional duties	N S M E	1 2 3 4 5 6
14. Attitudes of teachers toward ongoing professional improvement	N S M E	1 2 3 4 5 6
15. The opportunity the principal has to help teachers and students to succeed	N S M E	1 2 3 4 5 6
16. Attitudes of teachers towards change	N S M E	1 2 3 4 5 6
17. Satisfaction and morale of the staff	N S M E	1 2 3 4 5 6
18. Other (please specify) <hr/>	N S M E	1 2 3 4 5 6
Student-Related Matters		
19. The principal's relationships with students	N S M E	1 2 3 4 5 6
20. The attitudes of students toward education	N S M E	1 2 3 4 5 6
21. Satisfaction and morale of students	N S M E	1 2 3 4 5 6
22. Achievement of students	N S M E	1 2 3 4 5 6
23. Other (please specify) <hr/>	N S M E	1 2 3 4 5 6
Role-Related Matters		
24. The principal's freedom to change the school program	N S M E	1 2 3 4 5 6
25. The principal's freedom to allocate teaching assignments	N S M E	1 2 3 4 5 6

WORK FACTOR	IMPORTANCE FOR JOB SATISFACTION	YOUR SATISFACTION
26. The principal's involvement in hiring teachers for the school	N S M E	1 2 3 4 5 6
27. Authority associated with the principal's position	N S M E	1 2 3 4 5 6
28. The principal's involvement in budget preparation	N S M E	1 2 3 4 5 6
29. The principal's responsibility for formal teacher evaluation	N S M E	1 2 3 4 5 6
30. The principal's involvement in decision making at the board of governors level	N S M E	1 2 3 4 5 6
31. Prestige associated with the principal's position	N S M E	1 2 3 4 5 6
32. Other (please specify) _____	N S M E	1 2 3 4 5 6
District-Related Matters		
33. The principal's relationship with the District Education Officer	N S M E	1 2 3 4 5 6
34. The principal's relationship with the Provincial Education Officer	N S M E	1 2 3 4 5 6
35. The principal's relationships with other Central office staff	N S M E	1 2 3 4 5 6
36. The principal's involvement in decision making at the district/division/county/municipal level	N S M E	1 2 3 4 5 6
37. Availability of support to assist the principal with problems	N S M E	1 2 3 4 5 6
38. Opportunities for useful in-service education for the principal	N S M E	1 2 3 4 5 6
39. Board of Governors expectations of the principal	N S M E	1 2 3 4 5 6
40. The methods used to evaluate principals	N S M E	1 2 3 4 5 6

WORK FACTOR	IMPORTANCE FOR JOB SATISFACTION	YOUR SATISFACTION
41. Attitudes of District Education Officers towards teachers and administrators	N S M E	1 2 3 4 5 6
42. Other (please specify) _____	N S M E	1 2 3 4 5 6
Occupation-Related Matters		
43. Attitudes of parents toward the school	N S M E	1 2 3 4 5 6
44. Principal's social position in the community	N S M E	1 2 3 4 5 6
45. Achievement of the principal's own professional objectives	N S M E	1 2 3 4 5 6
46. The principal's sense of accomplishment as an administrator	N S M E	1 2 3 4 5 6
47. Recognition of the principal's work	N S M E	1 2 3 4 5 6
48. Opportunities for advancement as an administrator	N S M E	1 2 3 4 5 6
49. The effect of the job on the principal's personal life	N S M E	1 2 3 4 5 6
50. Successful completion of projects and tasks	N S M E	1 2 3 4 5 6
Other Matters		
51. Other work factors contributing to job satisfaction or dissatisfaction that are not identified above (please specify).		
a) _____	N S M E	1 2 3 4 5 6
b) _____	N S M E	1 2 3 4 5 6
c) _____	N S M E	1 2 3 4 5 6
Overall Job Satisfaction		
52. Your overall feeling of satisfaction with your job	N S M E	1 2 3 4 5 6

A P P E N D I X C**Table C-1****The Pearson Correlation Co-efficient Matrix**

Table C-1 The Pearson Correlation Co-efficient Matrix

17:44:45 LAKEHEAD UNIVERSITY

* * * * * M U L T I P L I C A T I O N * * * * *

Correlation:

	WORK1S	WORK2S	WORK3S	WORK4S	WORK5S	WORK6S	WORK7S	WORK8S	PERS10S	PERS11S	PERS12S	PERS13S	PERS14S
WORK1S	1.000	.600	.506	.424	.326	.236	.232	.391	.094	.103	.249	.221	.189
WORK2S	.600	1.000	.793	.364	.402	.182	.253	.329	.116	.124	.214	.226	.164
WORK3S	.506	.793	1.000	.383	.443	.273	.339	.377	.152	.139	.229	.244	.189
WORK4S	.424	.364	.383	1.000	.443	.247	.336	.347	.205	.115	.314	.216	.090
WORK5S	.326	.402	.443	.443	1.000	.275	.275	.421	.172	.164	.175	.148	.165
WORK6S	.236	.182	.273	.247	.275	1.000	.443	.357	.265	.250	.224	.165	.212
WORK7S	.232	.236	.275	.247	.275	.443	1.000	.338	.129	.137	.213	.221	.207
WORK8S	.391	.329	.377	.347	.421	.338	.338	1.000	.335	.202	.332	.225	.377
PERS10S	.094	.116	.139	.205	.172	.265	.129	.335	1.000	.661	.292	.292	.193
PERS11S	.103	.124	.139	.115	.164	.250	.137	.202	.661	1.000	.395	.270	.189
PERS12S	.249	.214	.229	.314	.172	.224	.232	.396	.292	.396	1.000	.509	.252
PERS13S	.221	.226	.244	.225	.146	.165	.225	.370	.292	.370	.509	1.000	.311
PERS14S	.189	.164	.189	.189	.155	.212	.207	.189	.193	.189	.252	.311	1.000
PERS15S	.239	.215	.203	.179	.175	.344	.319	.422	.456	.457	.359	.293	.353
PERS16S	.281	.200	.195	.253	.167	.207	.201	.353	.371	.331	.383	.371	.303
PERS17S	.255	.194	.251	.094	.158	.253	.293	.352	.371	.316	.371	.384	.399
STUD19S	.091	.119	.172	.113	.077	.157	.221	.292	.466	.482	.319	.220	.113
STUD20S	.265	.310	.319	.153	.171	.235	.234	.428	.305	.245	.251	.259	.347
STUD21S	.277	.347	.352	.079	.245	.316	.350	.464	.272	.218	.180	.212	.377
STUD22S	.251	.309	.234	.104	.200	.333	.390	.452	.271	.218	.260	.202	.337
ROL226S	.190	.231	.274	.137	.093	.155	.137	.228	.201	.231	.172	.181	.083
ROL225S	.162	.195	.187	.247	.150	.215	.242	.263	.387	.582	.188	.271	.122
ROL227S	.144	.153	.214	.124	.057	.151	.195	.263	.199	.172	.162	.233	.074
ROL228S	.099	.311	.329	.065	.104	.219	.202	.339	.189	.160	.237	.145	.195
ROL229S	.172	.281	.337	.089	.102	.170	.185	.277	.184	.172	.274	.302	.147
ROL230S	.171	.276	.279	.185	.111	.153	.156	.261	.164	.179	.294	.281	.209
KOLE31S	.145	.174	.106	.144	.104	.149	.036	.356	.334	.166	.113	.200	.241
ROLE31S	.167	.252	.286	.153	.013	.075	.100	.408	.056	.081	.149	.190	.057
DIST33S	.246	.251	.304	.213	.327	.361	.217	.412	.321	.408	.138	.297	.259
DIST34S	.179	.215	.176	.210	.270	.306	.113	.423	.335	.386	.138	.283	.230
DIST35S	.103	.200	.192	.202	.221	.338	.157	.447	.372	.339	.202	.262	.194
DIST36S	.039	.179	.178	.094	.058	.175	.058	.477	.202	.344	.289	.387	.237
DIST37S	.291	.335	.345	.273	.224	.365	.219	.541	.299	.291	.367	.387	.359
DIST38S	.291	.335	.345	.273	.224	.365	.219	.541	.299	.291	.367	.387	.359
DIST39S	.347	.323	.353	.322	.272	.246	.262	.411	.129	.119	.328	.295	.259
DIST40S	.322	.320	.320	.322	.272	.246	.262	.411	.129	.119	.328	.295	.259
DIST41S	.322	.320	.320	.322	.272	.246	.262	.411	.129	.119	.328	.295	.259
OCCU43S	.215	.057	.176	.043	.105	.357	.324	.352	.264	.199	.254	.156	.379
OCCU45S	.062	.323	.323	.322	.272	.246	.262	.411	.129	.119	.328	.295	.259
OCCU46S	.262	.323	.323	.322	.272	.246	.262	.411	.129	.119	.328	.295	.259
OCCU47S	.197	.239	.197	.171	.155	.317	.270	.454	.321	.258	.150	.212	.344
OCCU48S	.260	.260	.306	.153	.306	.335	.206	.359	.151	.247	.138	.174	.344
OCCU49S	.333	.452	.430	.333	.271	.372	.314	.362	.153	.154	.270	.330	.346
OCCU50S	.356	.452	.430	.333	.271	.372	.314	.362	.153	.154	.270	.330	.346
OCCU51S	.194	.305	.399	.197	.284	.273	.314	.362	.396	.329	.275	.232	.349
OVER52S	.384	.444	.333	.179	.182	.157	.213	.371	.192	.207	.309	.213	.216

21-May-73 correlation coefficient
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VMS V5.4

MULTIPLE REGRESSION

	PERS155	PERS166	PERS175	STUD195	STUD205	STUD215	STUD225	ROLE245	ROLE255	ROLE265	ROLE275	ROLE285	RGLE295
WORK15	.239	.281	.252	.071	.265	.244	.351	.150	.162	.144	.099	.172	.171
WORK25	.215	.200	.194	.119	.310	.347	.309	.281	.195	.193	.311	.381	.276
WORK35	.208	.195	.251	.172	.125	.362	.284	.274	.187	.329	.311	.337	.279
WORK45	.179	.163	.094	.118	.125	.070	.104	.137	.247	.124	.065	.089	.185
WORK55	.175	.167	.150	.177	.171	.246	.280	.053	.250	.097	.194	.102	.111
WORK65	.319	.207	.253	.221	.234	.316	.333	.155	.215	.151	.219	.170	.156
WORK75	.425	.201	.293	.292	.428	.350	.464	.137	.242	.195	.202	.185	.156
WORK85	.455	.353	.352	.456	.365	.275	.492	.261	.263	.189	.339	.277	.261
PERS115	.457	.331	.315	.432	.245	.218	.218	.231	.382	.172	.189	.172	.179
PERS125	.359	.383	.371	.319	.251	.180	.260	.172	.160	.162	.160	.274	.194
PERS135	.293	.371	.384	.220	.259	.212	.233	.181	.271	.237	.145	.302	.281
PERS145	.302	.302	.299	.113	.311	.147	.337	.052	.122	.074	.195	.147	.309
PERS155	1.000	.412	.404	.442	.238	.399	.429	.247	.402	.200	.216	.237	.305
PERS165	.404	1.000	.463	.455	.413	.387	.406	.150	.251	.157	.189	.146	.275
PERS175	.302	.255	.330	.330	.413	.529	.433	.301	.335	.308	.330	.276	.323
STUD205	.442	.302	1.000	.339	1.000	.319	.297	.353	.379	.307	.276	.258	.201
STUD215	.338	.412	.418	1.000	.642	.702	.642	.214	.165	.259	.280	.230	.239
STUD225	.339	.327	.529	.642	1.000	.725	1.000	.340	.252	.252	.280	.265	.260
STUD235	.429	.405	.433	.237	.642	.725	1.000	.285	.191	.259	.311	.315	.360
ROLE245	.402	.251	.335	.373	.117	.260	.260	1.000	.309	.510	.542	.492	.364
ROLE255	.402	.251	.335	.373	.117	.260	.260	1.000	.309	.510	.542	.492	.364
ROLE265	.200	.189	.308	.275	.165	.252	.191	.364	.261	.369	.237	.276	.284
ROLE275	.219	.189	.330	.275	.240	.268	.259	.510	.369	1.000	.573	.529	.491
ROLE285	.305	.275	.323	.275	.240	.280	.315	.542	.237	.573	1.000	.580	.491
ROLE295	.241	.279	.193	.179	.141	.216	.135	.389	.235	.309	.428	.287	.212
DIST135	.262	.279	.193	.179	.141	.216	.135	.389	.235	.309	.428	.287	.212
DIST145	.289	.270	.206	.143	.181	.143	.125	.180	.266	.207	.273	.238	.252
DIST155	.289	.270	.206	.143	.181	.143	.125	.180	.266	.207	.273	.238	.252
DIST165	.306	.274	.193	.179	.141	.216	.135	.389	.235	.309	.428	.287	.212
DIST175	.306	.274	.193	.179	.141	.216	.135	.389	.235	.309	.428	.287	.212
DIST185	.254	.259	.240	.207	.234	.317	.355	.343	.346	.247	.354	.370	.407
DIST195	.166	.240	.257	.205	.310	.310	.359	.302	.086	.247	.393	.392	.272
DIST205	.172	.240	.257	.205	.310	.310	.359	.302	.086	.247	.393	.392	.272
DIST215	.306	.274	.193	.179	.141	.216	.135	.389	.235	.309	.428	.287	.212
DIST225	.306	.274	.193	.179	.141	.216	.135	.389	.235	.309	.428	.287	.212
DIST235	.428	.472	.343	.292	.369	.386	.436	.284	.285	.098	.240	.240	.243
DIST245	.355	.320	.349	.229	.312	.423	.384	.346	.200	.240	.331	.389	.353
DIST255	.351	.352	.307	.104	.406	.469	.417	.268	.284	.218	.305	.337	.343
DIST265	.307	.332	.307	.104	.406	.469	.417	.268	.284	.218	.305	.337	.343
DIST275	.312	.359	.307	.104	.406	.469	.417	.268	.284	.218	.305	.337	.343
DIST285	.312	.359	.307	.104	.406	.469	.417	.268	.284	.218	.305	.337	.343
DIST295	.312	.359	.307	.104	.406	.469	.417	.268	.284	.218	.305	.337	.343
OVER525	.312	.359	.307	.104	.406	.469	.417	.268	.284	.218	.305	.337	.343

on THINK1:: VMS V5.4

21-May-83 correlation coefficient
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	ROLE005	ROLE015	DIST335	DIST345	CIST355	DIST365	DIST375	DIST385	DIST395	DIST405	DIST415	OCCU435	OCCU445
WORK15	.145	.167	.246	.172	.103	.029	.287	.251	.347	.322	.276	.216	.045
WORK25	.174	.252	.291	.215	.200	.179	.345	.335	.323	.282	.180	.097	.226
WORK35	.106	.286	.304	.176	.152	.173	.345	.345	.323	.310	.224	.076	.207
WORK45	.144	.153	.218	.210	.205	.094	.273	.231	.312	.122	.193	.043	.092
WORK55	.164	.013	.227	.224	.224	.024	.366	.136	.312	.245	.164	.205	.108
WORK65	.146	.075	.361	.306	.386	.175	.366	.259	.372	.236	.244	.357	.172
WORK75	.326	.088	.217	.113	.157	.058	.219	.262	.246	.236	.215	.324	.200
WORK85	.396	.088	.412	.423	.447	.200	.541	.411	.615	.380	.360	.352	.101
PERS115	.334	.321	.321	.336	.329	.302	.292	.129	.279	.109	.088	.264	.292
PERS125	.185	.081	.408	.386	.329	.344	.291	.119	.303	.151	.171	.199	.371
PERS135	.113	.149	.133	.138	.202	.285	.367	.328	.306	.293	.281	.254	.036
PERS145	.200	.150	.297	.233	.262	.342	.387	.295	.314	.278	.314	.156	.122
PERS155	.241	.057	.252	.230	.154	.239	.237	.250	.161	.294	.238	.379	.081
PERS165	.291	.062	.328	.289	.250	.306	.420	.224	.161	.166	.375	.396	.428
PERS175	.250	.079	.283	.310	.274	.219	.324	.229	.333	.166	.310	.310	.170
PERS185	.254	.159	.326	.205	.153	.291	.419	.240	.299	.241	.280	.345	.187
STUD115	.207	.141	.343	.114	.273	.276	.333	.207	.305	.174	.342	.187	.344
STUD215	.135	.215	.318	.143	.246	.186	.322	.314	.343	.310	.330	.422	.207
STUD315	.187	.136	.285	.125	.169	.203	.421	.317	.310	.295	.286	.462	.291
STUD415	.136	.126	.255	.125	.237	.233	.342	.355	.359	.225	.238	.525	.285
ROLE215	.235	.143	.365	.291	.226	.262	.346	.066	.302	.285	.166	.124	.254
ROLE315	.415	.203	.207	.194	.275	.345	.354	.247	.291	.078	.174	.154	.285
ROLE415	.505	.423	.273	.208	.331	.336	.354	.353	.364	.295	.278	.252	.098
ROLE515	.346	.212	.233	.137	.359	.222	.370	.252	.401	.434	.165	.199	.279
ROLE615	.340	.217	.253	.135	.269	.442	.407	.272	.309	.319	.185	.251	.243
ROLE715	.257	.237	.454	.471	.462	.325	.346	.318	.433	.267	.286	.302	.302
ROLE815	.471	.100	.106	.072	.134	.122	.261	.353	.213	.117	.158	.089	.260
DIST342	.482	.646	.646	.646	.646	.422	.482	.253	.488	.233	.487	.300	.379
DIST352	.471	.072	.666	.100	.754	.416	.459	.391	.458	.238	.283	.158	.389
DIST362	.482	.134	.595	.794	.100	.528	.535	.482	.521	.351	.337	.227	.359
DIST372	.345	.122	.422	.416	.528	.100	.553	.427	.340	.318	.404	.173	.273
DIST382	.345	.261	.433	.450	.553	.553	.100	.552	.610	.421	.456	.395	.305
DIST392	.313	.233	.393	.331	.422	.427	.552	1.000	.546	.537	.404	.274	.191
DIST402	.453	.213	.488	.458	.521	.340	.610	.546	1.000	.460	.454	.296	.248
DIST412	.257	.117	.233	.233	.351	.421	.421	.537	.460	1.000	.485	.378	.062
DIST422	.285	.153	.437	.233	.227	.454	.656	.604	.454	.685	1.000	.273	.177
OCCU432	.292	.089	.300	.128	.227	.173	.395	.274	.296	.378	.273	1.000	.360
OCCU442	.302	.130	.379	.289	.259	.273	.305	.191	.248	.062	.177	.360	1.000
OCCU452	.440	.130	.500	.463	.436	.392	.305	.414	.523	.392	.348	.388	.468
OCCU462	.413	.137	.419	.473	.462	.421	.493	.338	.470	.292	.260	.414	.426
OCCU472	.350	.155	.414	.298	.311	.318	.397	.278	.355	.292	.259	.386	.395
OCCU482	.252	.213	.347	.198	.283	.283	.412	.222	.430	.560	.366	.442	.281
OCCU492	.273	.267	.284	.251	.326	.217	.406	.469	.472	.274	.297	.317	.291
OCCU502	.253	.253	.253	.251	.163	.247	.506	.276	.431	.253	.318	.474	.395
OCCU512	.413	.349	.258	.271	.251	.222	.359	.266	.234	.398	.273	.491	.362

M U L T I P L E R E G R E S S I O N

	0CCU455	0CCU465	0CCU475	0CCU485	0CCU455	0CCU505	OVER525
WORK15	.262	.197	.260	.238	.355	.194	.384
WORK25	.329	.230	.290	.466	.462	.305	.444
WORK35	.380	.258	.306	.466	.480	.399	.338
WORK45	.266	.171	.153	.138	.354	.197	.179
WORK55	.269	.155	.255	.371	.280	.224	.182
WORK65	.317	.335	.372	.274	.314	.453	.167
WORK75	.235	.270	.206	.274	.323	.323	.218
WORK85	.454	.378	.399	.363	.363	.464	.371
PERS115	.321	.261	.151	.153	.279	.396	.192
PERS115	.316	.258	.247	.149	.154	.329	.207
PERS115	.262	.150	.138	.320	.275	.314	.309
PERS115	.241	.212	.174	.330	.275	.282	.213
PERS115	.323	.200	.344	.340	.267	.349	.210
PERS115	.472	.313	.355	.351	.307	.315	.312
PERS115	.406	.214	.320	.291	.352	.325	.359
PERS115	.343	.286	.249	.327	.307	.428	.305
STUD115	.292	.325	.229	.032	.104	.295	.376
STUD215	.369	.327	.232	.415	.406	.237	.318
STUD215	.386	.360	.423	.459	.346	.533	.415
STUD215	.436	.384	.417	.470	.374	.502	.398
ROLE215	.284	.349	.268	.205	.207	.258	.422
ROLE215	.293	.200	.284	.125	.199	.375	.295
ROLE215	.260	.220	.318	.196	.167	.196	.233
ROLE215	.331	.408	.305	.346	.308	.353	.388
ROLE215	.339	.345	.337	.442	.350	.347	.238
ROLE215	.460	.413	.350	.397	.355	.377	.320
ROLE215	.138	.417	.156	.252	.278	.358	.419
ROLE215	.200	.419	.114	.347	.234	.138	.349
DIST135	.463	.470	.298	.199	.261	.262	.271
DIST135	.435	.462	.311	.288	.356	.308	.251
DIST135	.392	.421	.318	.331	.214	.347	.222
DIST135	.500	.453	.397	.412	.408	.507	.359
DIST135	.414	.338	.378	.532	.472	.276	.366
DIST135	.523	.470	.355	.430	.472	.431	.334
DIST135	.392	.252	.419	.450	.274	.253	.398
DIST135	.343	.460	.259	.359	.297	.319	.273
0CCU435	.383	.414	.386	.442	.317	.474	.291
0CCU435	.463	.425	.395	.281	.291	.395	.362
0CCU435	.1000	.514	.592	.519	.360	.521	.437
0CCU435	.514	1.000	.575	.425	.365	.441	.353
0CCU475	.512	.575	1.000	.531	.366	.492	.506
0CCU435	.519	.425	.551	1.000	.557	.466	.380
0CCU435	.360	.385	.306	.537	1.000	.434	.304
0CCU215	.321	.453	.432	.465	.484	1.000	.428
OVER525	.437	.353	.506	.380	.304	.428	1.000