

Andrews University

Digital Commons @ Andrews University

Dissertations

Graduate Research

2001

The Effectiveness of the High-School Academic Program in Preparing Graduates for Post-Secondary Education as Perceived by Alumni From Four Seventh-day Adventist Senior High Schools in Canada

Janice P. Maitland
Andrews University

Follow this and additional works at: <https://digitalcommons.andrews.edu/dissertations>



Part of the [Educational Assessment, Evaluation, and Research Commons](#)

Recommended Citation

Maitland, Janice P., "The Effectiveness of the High-School Academic Program in Preparing Graduates for Post-Secondary Education as Perceived by Alumni From Four Seventh-day Adventist Senior High Schools in Canada" (2001). *Dissertations*. 554.

<https://digitalcommons.andrews.edu/dissertations/554>

This Dissertation is brought to you for free and open access by the Graduate Research at Digital Commons @ Andrews University. It has been accepted for inclusion in Dissertations by an authorized administrator of Digital Commons @ Andrews University. For more information, please contact repository@andrews.edu.



Seek Knowledge. Affirm Faith. Change the World.

Thank you for your interest in the

**Andrews University Digital Library
of Dissertations and Theses.**

*Please honor the copyright of this document by
not duplicating or distributing additional copies
in any form without the author's express written
permission. Thanks for your cooperation.*

INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

**ProQuest Information and Learning
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
800-521-0600**

UMI[®]

Andrews University

School of Education

**THE EFFECTIVENESS OF THE HIGH-SCHOOL ACADEMIC
PROGRAM IN PREPARING GRADUATES FOR POST-
SECONDARY EDUCATION AS PERCEIVED BY
ALUMNI FROM FOUR SEVENTH-DAY
ADVENTIST SENIOR HIGH
SCHOOLS IN CANADA**

A Dissertation

Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

by

Janice P. Maitland

August 2001

UMI Number: 3058311

**Copyright 2001 by
Maitland, Janice Patricia**

All rights reserved.

UMI[®]

UMI Microform 3058311

**Copyright 2002 by ProQuest Information and Learning Company.
All rights reserved. This microform edition is protected against
unauthorized copying under Title 17, United States Code.**

**ProQuest Information and Learning Company
300 North Zeeb Road
P.O. Box 1346
Ann Arbor, MI 48106-1346**

**©Copyright by Janice P. Maitland 2001
All Rights Reserved**

THE EFFECTIVENESS OF THE HIGH-SCHOOL ACADEMIC
PROGRAM IN PREPARING GRADUATES FOR POST-
SECONDARY EDUCATION AS PERCEIVED BY
ALUMNI FROM FOUR SEVENTH-DAY
ADVENTIST SENIOR HIGH
SCHOOLS IN CANADA

A dissertation
presented in partial fulfillment
of the requirements for the degree
Doctor of Philosophy

by

Janice Patricia Maitland

APPROVAL BY THE COMMITTEE:


Chair: Lyndon G. Furst


Dean, School of Education


Member: Shirley Freed


Member: Paul Brantley


External: James Nash

8-15-01
Date approved

ABSTRACT

**THE EFFECTIVENESS OF THE HIGH-SCHOOL ACADEMIC
PROGRAM IN PREPARING GRADUATES FOR POST-
SECONDARY EDUCATION AS PERCEIVED BY
ALUMNI FROM FOUR SEVENTH-DAY
ADVENTIST SENIOR HIGH
SCHOOLS IN CANADA**

by

Janice P. Maitland

Chair: Lyndon G. Furst

ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

School of Education

Title: THE EFFECTIVENESS OF THE HIGH-SCHOOL ACADEMIC PROGRAM IN PREPARING GRADUATES FOR POSTSECONDARY EDUCATION AS PERCEIVED BY ALUMNI FROM FOUR SEVENTH-DAY ADVENTIST SENIOR HIGH SCHOOLS IN CANADA

Name of researcher: Janice P. Maitland

Name and degree of faculty chair: Lyndon G. Furst, Ed.D.

Date completed: July 2001

Problem

Questions have been raised regarding the preparation of high-school students for postsecondary studies. This study was designed to measure the effectiveness of the high-school academic program in preparing graduates for postsecondary education as perceived by alumni from four Seventh-day Adventist senior high schools in Canada.

Method

Respondents were asked to indicate their level of agreement for each of 18 statements on a Likert-type (survey) instrument, strongly disagree (1) to strongly agree

(5), measured against a scale--1-2.5, minimally effective; 2.51-3.5, moderately effective; and 3.51-5, highly effective. Mean scores and standard deviation scores were calculated to answer the first research question. Four other research questions were answered by testing 90 hypotheses to determine their level of significance, using one-way Analysis of Variance (ANOVA). The standard set for rejecting the null hypotheses was any level of significance less than .05. The population size was 1,020, while the sample population was 204. Of the 204 survey forms that were mailed, a total of 82 respondents (29 males and 53 females) returned usable survey forms.

Results

The respondents perceived the academic program as mostly moderately effective in preparing graduates for postsecondary studies. There was a difference in perception of library facilities based on ethnic origin ($p < .008$). There were differences in perception between those who did not take additional courses before attending college/university and those who took additional courses towards: library facilities ($p < .005$), study habits ($p < .047$), and academic preparation ($p < .015$). Differences in perception occurred between those who attended college/university immediately after high school and those who did not attend immediately, and between those who attended private postsecondary institutions and those who attended public postsecondary institutions only towards: academic preparation for postsecondary studies ($p < .041$) and ($p < .001$). Finally, those who attended public postsecondary institutions perceived that courses were too difficult ($p < .011$) in contrast to those who attended private postsecondary institutions.

Conclusions

There is a great deal of homogeneity in perception among students who attended four of the nine Seventh-day Adventist senior high schools in Canada regarding the effectiveness of the high-school academic program. However, gender did not affect the perception of alumni.

TABLE OF CONTENTS

LIST OF TABLES		vi
ACKNOWLEDGMENTS		vii
Chapter		
I. INTRODUCTION		1
Background of the Study		1
Statement of the Problem		6
Purpose of the Study		8
Theoretical Framework		8
Research Questions		13
Hypotheses		14
Significance of the Study		14
Assumptions of the Study		16
Delimitations of the Study		16
Definition of Terms		17
SDA Institutions		17
SDA Schools in Canada		18
Organization of the Study		19
II. REVIEW OF LITERATURE		20
Historical Foundations of Canada		20
Ontario		22
British Columbia		23
Prairie Provinces (Alberta, Manitoba, & Saskatchewan) ...		25
The Public School System in Canada		27
Stage One		28
Stage Two		28
Stage Three		29
Stage Four		30
Secondary Education in Canada		30
Introduction		30
Major Changes		31
Academies		36

Secondary Schools	37
Provincial Diploma Requirements	38
Seventh-day Adventist Education in Canada	39
Introduction	39
Seventh-day Adventist Secondary Schools	40
Issues and Short Studies	48
Longitudinal Studies	65
Other Studies	72
Systems Approach in Education	82
Summary	82
III. METHODOLOGY	86
Description of the Target Population	86
Sampling Procedures	88
Instrumentation	90
Data Collection Procedures	93
Hypotheses	95
Limitations of the Study	110
IV. PRESENTATION AND ANALYSIS OF DATA	111
Introduction	111
Research Questions	112
Research Question 1	112
Research Question 2	116
Research Question 3	128
Research Question 4	136
Research Question 5	145
V. SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS	155
Purpose of the Study	155
The Problem	157
Theoretical Framework	157
Literature Review	158
Methodology	160
Findings of the Study	162
Research Question 1	162
Highly Effective Program Aspects	163
Moderately Effective Program Aspects	171
Minimally Effective Program Aspect	181
Research Question 2	183

Research Question 3	185
Research Question 4	187
Research Question 5	188
Conclusions	190
Implications	191
Recommendations	194

Appendix

1. LETTERS TO PRINCIPALS AND ALUMNI	197
2. QUESTIONNAIRE AND COMMENTS	200
3. TABLE 7	210
4. RAW DATA	212
5. PROVINCIAL HIGH-SCHOOL DIPLOMA REQUIREMENTS	228
6. MAP OF CANADA	232
SELECTED BIBLIOGRAPHY	234
VITA	243

LIST OF TABLES

1.	Perception of Various School Aspects	118
2.	Effectiveness Based on Gender	123
3.	Effectiveness Based on Ethnic Origin	129
4.	Effectiveness Based on Additional or No Additional Courses	137
5.	Effectiveness Based on Immediacy of Postsecondary Attendance	146
6.	Effectiveness Based on Attendance at Private or Public Post-secondary Institutions	154

ACKNOWLEDGMENTS

First, I am deeply grateful to my committee chair, Dr. Lyndon Furst, who made himself available to assist me even by using the latest technology, and who patiently guided me through this challenging exercise. Thanks also, to the other committee members, Dr. Paul Brantley and Dr. Shirley Freed, for their support and help. Thanks, too, to Dr. Jerome Thayer for his “open door” policy and his kind assistance in processing the data using SPSS.

Next, to my family members: my wholehearted expression of gratitude to my loving and supportive husband, Fitzroy, who not only encouraged me but also challenged me to think about “probability.” Thanks to my mother, Eileen, and my son, Ron, who never stopped believing that I could complete what I started.

I am very appreciative of the assistance of my daughter, Karlene, and Arlene Belle at CAA, who carefully and patiently processed the three mailings of the survey. Thanks to Betty, my lovely cousin, for her technical expertise.

Lastly, I express my gratitude to the principals of the four academies for giving permission for me to obtain the alumni lists, and to all the participants, without whose responses I would not have been able to conduct this study.

CHAPTER I

INTRODUCTION

Background of the Study

High school is the link between the elementary and the tertiary levels of education. Whether this link is strong or weak, the effects of its strength or weakness will be demonstrated as students enroll at the tertiary level. The high school, then, must aim at effectively administering a program that is of good quality and that adequately prepares its graduates for the next level, because whatever it produces will result in ripple effects at the tertiary level if students make that choice. Society expects that effective (quality) schools would offer effective academic programs.

The term “effective” has been used interchangeably with “quality” in attempting to describe an effective school. Several definitions for school effectiveness have been proposed, all of them in some way related to a developed model of school effectiveness. Most models also include the notion of school improvement since the two concepts seem almost inseparable.

Reynolds et al. (1996) state that since the mid-1980s researchers, policy-makers, and practitioners have expressed considerable interest in school effectiveness as well as school improvement. One of the organizations which has been prominent in this field is the International Congress for School Effectiveness and School Improvement (ICSEI).

Its goal has been to “create an intellectual setting where knowledge can advance through cross-cultural and interdisciplinary collaboration” (p. vii). Considerable research effort concerning effective schools has resulted in the identification of common characteristics of effective schools and the establishment of criteria for measuring school effectiveness.

According to Cheng (1993), a few of the definitions advanced are: “A school is effective if it can achieve its stated goals,” if “it can acquire needed resources and inputs,” and if “the schooling process can be smooth and healthy” (as cited in Scheerens & Baker, 1997, p. 12).

Sammons, Hillman, and Moritmore (1995) state that effective schools have 11 characteristics, including “professional leadership, shared vision and goals, a learning environment, concentration on teaching and learning, a home-school partnership and monitoring progress” (as cited in MacGilchrist, Myers, & Reed, 1997, p. 6).

MacGilchrist et al. (1997) have proposed their own model of effectiveness. They contend that there are “three essential core characteristics of an effective school: professional high quality leadership and management; a concentration on teaching and (pupil) learning; and a learning organization” (pp. 6-7).

Walberg’s model of school effectiveness proposes nine factors in his theory of educational productivity: “ability, development, motivation, quantity and quality of instruction, home environment, classroom and school environment, peer group and mass media” (Scheerens & Bosker, 1997, p. 39). Creemer’s model is composed of several characteristics under four main headings: “Quality of instruction,” “Curriculum,” “Grouping procedures,” and “Teacher behavior” (Scheerens & Bosker, 1997, p. 43). The model also indicates that there must be consistency in adopting the characteristics for

effectiveness. The model proposed by Scheerens (1990; as cited in Scheerens & Bosker, 1997, p. 46) is an integrated one of cross-level relationships vertically as well as horizontally. Under the main heading of Process, there are the school and classroom levels. Inputs and outputs are outgrowths of the “process.” Above the process is the context of the process. Scheerens and Bosker propose their own model of school effectiveness. Characteristics of the effective academic program include quality of instruction, student motivation and study habits, and classroom environment.

Creemers, Peters, and Reynolds (1989) state:

Following the publication of the well-known Coleman et al. (1966) report, many researchers attempted to relate school inputs (e.g., number of books in the library) to school outputs (student achievement). However, this research ignored what took place in the schools (e.g., do teachers take advantage of libraries by allowing students to use them?). It is now clear that the utilization of resources is far more important than the level of resources available. There is now considerable research showing that the school students attend can make a substantial difference in their education. (p. 6)

With respect to outputs, Reynolds et al. (1996) express the belief that all kinds of criteria are possible, from general academic outcomes to the well-being of students. In fact, they theorize that almost everything can be used as a criterion for quality (effective) schools.

Edmond’s (1983) research findings indicate that the characteristics of effective schools are:

Leadership of the principal reflected by continuing attention to the quality of instruction; a pervasive and broadly understood instructional focus; an orderly, safe climate conducive both to teaching and learning; teacher behaviors that convey an expectation that all students are to achieve at least minimum mastery; the use of measures of pupil achievement as the basis for program evaluation. (as cited in Creemers et al., 1989, p. 6)

Effective schooling, or effective education, which includes an effective academic program, however, does not exist in a vacuum. Martin and Macdonell (1978) state that

Canadian Society is a product of its past and the continuing processes of people interacting with their social, political, and economic environments. In fact, many aspects of Canadian education can be understood only in relation to these different environments in which it developed.

The British North American Act of 1867, comprising 147 sections within 11 parts, addresses itself to three constitutional powers: executive, legislative, and judicial. Section 93 gives each provincial legislature exclusive rights to make laws in relation to education. Each of the 10 provinces developed its own educational system. Education in Canada, therefore, is a provincial prerogative. Martin and Macdonell (1978) highlight the growth of the Canadian education system in the following overview:

During the last 100 years, Canadian education has developed from the privilege of the few to the right of many, from small log schoolhouses to large multi-million dollar complexes. By the 1970s, there were about 19, 000 elementary and secondary schools in Canada with more than 275, 000 full-time teachers and a student enrolment of almost 6 million. (p. 20)

Seventh-day Adventists have established in Canada an educational system of their own. The Seventh-day Adventist (SDA) Church in Canada's (formerly Canadian Union) education policies are based on the philosophy articulated by a prominent church leader, Ellen G. White. She advances the theory of the business of education as a holistic one—physical, social, mental and spiritual. She believed that the purpose of education is “to restore in man the image of his Maker, to bring him back to the perfection in which he was created, to promote the development of body, mind, and soul, that the divine purpose in his creation might be realized” (White, 1903/1952, pp. 15-16).

Chadwick (1982) agrees with the holistic concept of education. Here is how he expressed his belief:

Finally, in the area of psychology of teaching and learning, there seems to be a greater concern for the students' "moral and physical well-being" with a reemphasis on the development of the "total child." Though it is true that the spiritual areas still are relegated to the moral or aesthetic qualities, educators more and more re-emphasize the necessity of dealing with the child as a total person rather than simply as an intellectual being. (p. 151)

The purpose of Canadian Seventh-day Adventist schools is additionally more clearly defined in the *North American Division Working Policy* amended in 1995 on Elementary and Secondary Education:

The church-related secondary school, predicated on the results obtained through the elementary school with character building as an under girding structure, will endeavor to operate realistically for each student in the upgrading and maintenance of health; in the command of fundamental learning processes; in the teaching of worthy home membership; vocational skills; civic education, worthy use of leisure; and ethical maturity. The secondary school implementing the Church philosophy will seek for objectives of spiritual dedication, self-realization, social adjustment, civic responsibility, and economic efficiency. (p. 165)

Certainly, education administrators in the Seventh-day Adventist school system, in seeking to carry out the mandate for the holistic development of students at each rung of the education level, will need to aim at effective and adequate preparation of all students at the elementary, secondary, and tertiary levels. Students need to be able to function reasonably well in today's pluralistic society. Schools assist in that preparation by examining the goals and objectives of each level and working towards fulfilling them by providing the tools necessary for movement towards the next level of preparation.

In light of the title and focus of this study, it seems necessary to address the issue of perception. Conclusions and recommendations in this study hinge on my understanding, and that of the readers, of perception and the role it plays in the lives of students.

Glenn and Nelsen (1989) define perception as “the conclusion we reach as the result of an experience after we have had time to reflect on that experience” (p. 51). They believe that perceptions form the basis for comprehending the unique world of each individual. They further state that according to perceptual psychology, once normally developing human beings pass the age of 8, they increasingly become creatures of perception. From that point on, their perception is the key to what they are and what they do. In their discussion about perception, however, the authors have omitted the spiritual dimension and the influence that belief in God can exert on one’s perception.

Statement of the Problem

The secondary school program provides a bridge between elementary school and college or university, in addition to the preparation for school-to-work programs. It is often at the postsecondary level that career decisions made during secondary school are pursued. All students pursuing postsecondary education studies deserve a fair chance to succeed in higher education. Inadequate preparation, in effect, deprives students of that chance.

The problem of inadequate academic preparation for postsecondary education has become a concern in practically every aspect of national life in the United States as it has in Canada. The report entitled *A Nation at Risk*, from the National Commission on Excellence in Education by Goldberg and Harvey (1983), addressed the secondary school academic program and incited comments from all sectors of the society. In Canada, the Provincial Committee on Aims and Objectives of Education in the Schools of Ontario (1968) produced the Hall-Dennis Report which resulted in a number of changes to the high-school curriculum.

The Council of Ministers of Education, Canada (CMEC)¹ (1993), clearly expressed their awareness of the challenges of the public education system and its need to be current, relevant, and effective:

We are well aware of the challenges to the education system posed by our rapidly changing world: globalization of the economy, openness with regard to other cultures, pressing needs for skilled labour, and technological advances that are having an impact on our daily lives as well as the job market. These changes require constant adjustments to our educational practices to ensure high quality, accessibility, mobility, and accountability. (p. 1)

Over the years, several Commissions on Excellence have been set up by provincial Ministries of Education to study the effectiveness of the high-school academic program in preparing its graduates for postsecondary studies and also for the world of work (Nyberg & Lee, 1978).

Canada's education systems have in the past faced some outstanding issues and challenges which continue to plague the society. In acknowledging some deficiencies among Canadian students, MacInnis (1995), noted:

In addition to strengthening skills in traditionally important subjects such as reading, writing, mathematics, and science, Canada's education systems must also help students to develop skills in other important areas such as the arts, social sciences, and civics. Skills needed across these subject areas—such as critical and creative thinking, problem solving, and the ability to use technology—are also essential. These skills are important at all levels of learning, and parents, educators, business, and labour have recognized them as critical for the future success of Canada's students. Their development is fundamental to the curriculum reforms in each province and territory. (p. 10)

Morris (2000) states that for years professors have complained about high-school graduates who are unprepared for serious academic pursuits, but they have never seen it as bad as it is these days. Professor Dewdney of the University of Western Ontario

¹The Council of Ministers of Education, Canada (CMEC), was created in 1967 to provide a forum for the ministers of education and their advisors to be able to discuss issues and develop partnerships with their counterparts in other provinces and territories.

remarks that he has asked colleagues both in Canada and in the United States about the situation and the answer is always the same: “Yes, we have noticed a marked decline in the ability of students to read and to write clearly and grammatically” (para. 11).

Professor Dewdney further notes that there is something terribly wrong in Canada’s public school system and universities are being forced to “pick up the slack.” “We’ve had to do some dumbing-down in our own courses” (para. 13).

There has been no known empirical study conducted in Canada among alumni from the four Seventh-day Adventist senior high schools in this study who have pursued postsecondary studies, to determine their perception of the effectiveness of the high-school academic program.

Purpose of the Study

The purpose of this study was to evaluate the effectiveness of the high-school program in preparing students for postsecondary education, as perceived by alumni from four Seventh-day Adventist senior high schools in Canada over a 6-year period from 1986–1992, every year for 6 years. It sought to discover how effective the alumni perceived the academic program to be in preparing them for studies at private or public colleges or universities. The study’s findings were used as an indicator of the effectiveness of the program.

Theoretical Framework

The term “system” refers to an organism that is whole with many interconnected parts, e.g., the human body (system). Betts (1992) defines a system as “a set of elements that function as a whole to achieve a common purpose” (p. 38). A systems-design

approach to education (commonly referred to as a system) presupposes that the synthesis of the interconnected parts of the system contribute to the emergence of the whole system—that the essential quality of the part resides in its relationship to the whole (Banathy, 1991). The high-school program consists of several interconnected parts—one of those being the academic program, with its interconnected parts (courses, instruction, evaluation and assessment, grades).

The whole systems design notion requires both coordination and integration. All parts need to be designed at a specific system level of the organization interactively and simultaneously. This concept seems to be in direct contrast to the “incremental-piecemeal,” “disjointed,” “part-oriented,” “inside-focused” approach which was practiced by education reformers in the past (Banathy, 1991, p. 13). This new way of thinking is integrally linked with visioning as societal evolutionary and developmental changes occur in the society. Simply stated, systems-design thinking requires visioning, developing and articulating a mission, then creating a design. Systems thinking contributes to the “understanding of the true nature of education as a complex and dynamic system that operates in ever-changing environments and interacts with a variety of other societal systems” (Banathy, 1991, p. 32).

Betts (1992) states that a healthy system is constantly searching for ways and means to maintain a dynamic balance through self-regulating mechanisms. In this regard, therefore, the system must be able to import energy across its boundary or have a capacity to create new sources of energy. Such a system he terms an open, rather than a closed, system. A closed system is one that cannot generate a sufficient amount of energy internally to replace what is lost to entropy and will eventually die. Schools are

generally regarded as open systems (“heuristic—formulating their own goals under some overall policy,” or “purpose-seeking—ideal-seeking, guided by their vision of the future”) (Banathy, 1991, pp. 36-37).

Katz and Kahn (1966) explain that the primary types of energy that schools possess are financial and intellectual. They argue:

Schools tend to be more mechanistic than organized as evidenced by rigid structures that tend to treat all elements similarly: class periods of fixed length, a single textbook for all students in a class, classes of the same size for different subjects. (as cited in Betts, 1992, p. 40)

Wien and Dudley-Marling (1998), in discussing an alternative vision for education as a spiral, coil, or mobius strip and its application, expressed it in these terms: “Using systems theory as a foundation, no person or object is seen in isolation, nor is any learning a discrete bit, but each is seen always in relation to other possibilities or part of the community” (p. 415). In this regard, therefore, teachers, students, administrators, parents, and the community must function in tandem as the various parts of the human body in contributing to an effective program. One model of quality schools that could be of value in enhancing the use of the systems theory in education and in the preparation of high-school students for postsecondary studies is the Total Quality Schools (TQS) model (Arcaro, 1995b).

The systems theory along with the literature review on preparation for postsecondary studies, with the adaptation of Malcolm Baldrige’s National Quality Award as presented by Arcaro (1995b), provides the theoretical framework for this study. The adapted model for Total Quality Schools (see Figure 1) provides education administrators with focus and direction that are necessary for a total quality school program, of which the academic program is an interconnected part.

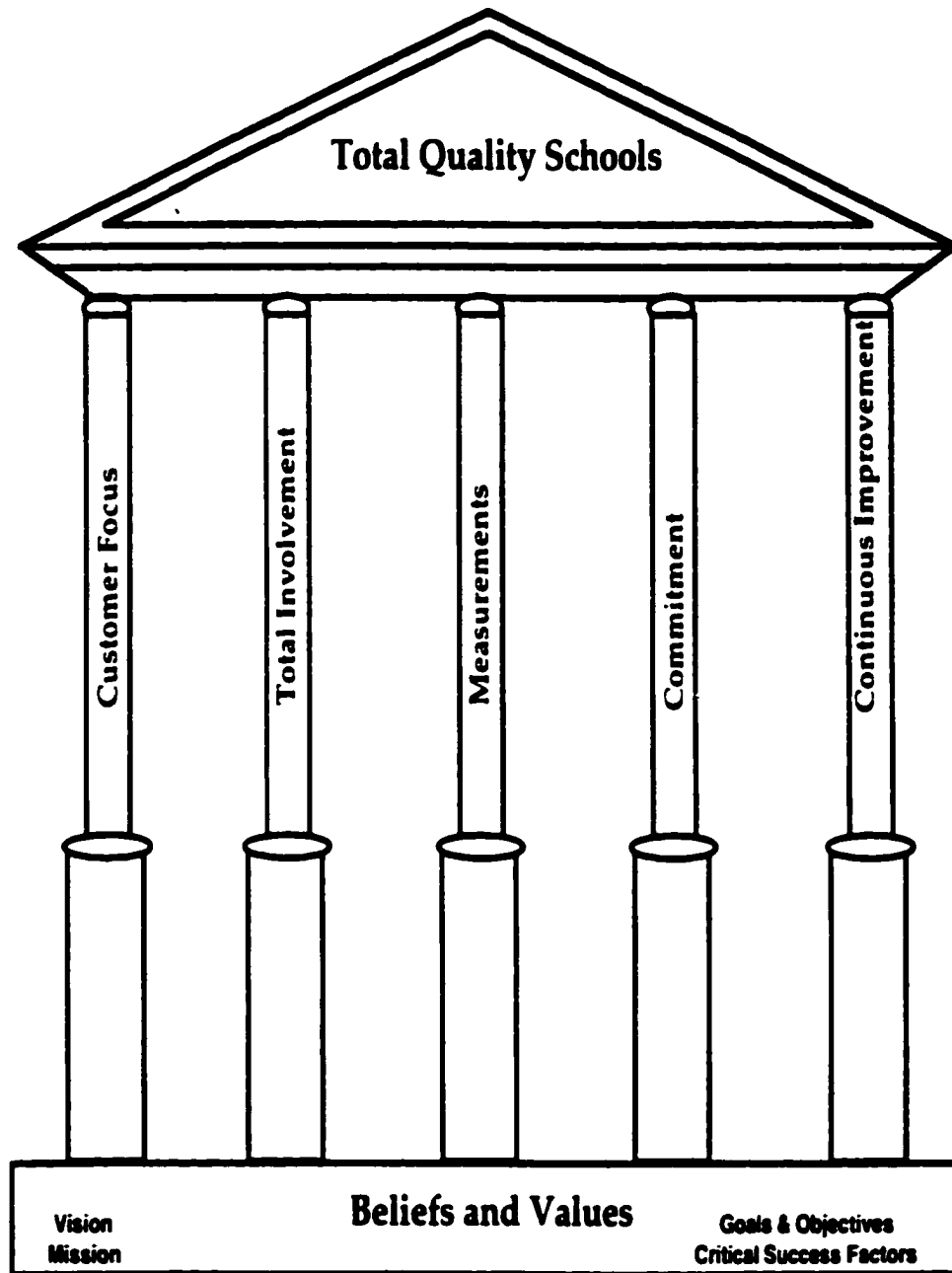


Figure 1. Total Quality Schools model.

Note. From *Quality in Education* (p. 10), by J. S. Arcaro, 1995b, Delray Beach, FL: St. Lucie Press. Copyright 1995 by St. Lucie Press. Reprinted with permission.

The proposed Total Quality Schools (TQS) model, adapted from Malcolm Baldrige's own adaptation of the model for education, presents five characteristics: customer focus, total involvement, measurement, commitment, and continuous improvement. Arcaro believes that if these characteristics are manifested in a school, it can be defined as an effective school. He calls the five characteristics "pillars of quality" (p. 29). The school as an open system, with administrators designing the quality of academic program they desire, can use Arcaro's all-encompassing model which speaks to the whole issue of effective programming as defined in the following characteristics:

1. Customer focus refers to students and their families as customers. This concept views everyone both as a customer and a supplier.

2. Total involvement includes everyone—all stakeholders—the School Board, superintendent, principal, teachers, parents, and the community.

3. Measurement is necessary for improving effectiveness. Without measurement, schools cannot really meet the quality standards (its objectives and goals), and cannot determine its progress and level of efficiency.

4. Commitment is required at the local school level as well as at the school board level. If the principal and the teachers are not committed to quality (effectiveness), positive changes may not be effected.

5. Continuous improvement is definitely tied to measurement and evaluation, and is necessary in order to maintain effective school programs (pp. 28-30).

This study focused on the customers (graduates) of four Seventh-day Adventist senior high schools. The survey instrument was used to measure the graduates' perception of the effectiveness of the high-school academic program in order to provide

feedback for education administrators for continuous improvement of the secondary school program. Total involvement and commitment by parents and teachers contribute to effective programming in schools.

Research Questions

There were five research questions answered during this study:

1. What is the graduates' perception of the various aspects of the high-school academic program?
2. Are there differences in graduates' perception of the effectiveness of the high school academic program based on demographic factors?
3. Are there differences in perception of the effectiveness of the academic program between graduates who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses?
4. Are there differences in perception of the effectiveness of the high-school program between graduates who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school?
5. Are there differences in perception of the effectiveness of the high-school academic program between graduates who attend private postsecondary institutions and those who attend public postsecondary institutions?

Question 1 was answered by calculating mean scores and standard deviations from data received in response to 18 statements on the survey instrument. Questions 2-5 were answered by using Analysis of Variance (ANOVA) and by testing hypotheses to determine the significance on all 18 statements. The standard set for rejection of the null hypotheses was any observed level of significance less than .05.

Hypotheses

The hypotheses that were tested are stated in the positive:

Hypothesis 1. There is a difference between males and females in their perception of the effectiveness of the high-school academic program in preparing students for postsecondary studies.

Hypothesis 2. There is a difference between different ethnic origins in their perception of the effectiveness of the high-school academic program in preparing students for postsecondary studies.

Hypothesis 3. There is a difference in perception of the effectiveness of the high-school academic program between graduates who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses.

Hypothesis 4. There is a difference in perception of the effectiveness of the high-school academic program between graduates who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school.

Hypothesis 5. There is a difference in perception of the effectiveness of the high-school academic program between graduates who attend private postsecondary institutions and those who attend public postsecondary institutions.

Significance of the Study

Seventh-day Adventists operate a worldwide system of education from the elementary to the tertiary level. The church invests large sums of money every year to train, educate, and provide administrators and educators to operate the system. The

Board of Regents, which is the accrediting body for the Seventh-day Adventist schools in North America, conducts evaluations in the schools at stated periods, in an attempt to ensure that the education objectives are being met and that curriculum guidelines are being followed (General Conference of Seventh-day Adventists, 1994).

In Canada, the provincial Ministry of Education evaluates and inspects high schools to determine whether or not they are following the Ministry's curriculum guidelines. The old adage says, "The taste of the pudding is in the eating." Similarly, the best test of the viability of any school system is to ask those who have experienced it. Parents should feel justified in their choice to send their children to a Seventh-day Adventist secondary school; educators ought to hear that they are delivering a good quality program; constituents should be convinced that the investment they are making in financially supporting the high school is producing satisfactory results in that its graduates are well prepared to compete at the tertiary level with any or all graduates from other secondary schools. It was therefore necessary to elicit from the Canadian graduates from four senior high schools their perception of the effectiveness of the academic program.

I have observed that a large percentage of graduates from the two Seventh-day Adventist high schools in Ontario proceed immediately after graduation to postsecondary institutions in Canada and in the United States of America, while others attend later. The results of this study may be valuable in assisting education administrators in examining their school programs in terms of the perceived needs of students in preparing them for postsecondary studies. This study can also act as a catalyst for further study of other

Seventh-day Adventist schools in Canada, the North American Division, and other Divisions of the world.

Assumptions of the Study

This study assumes the following:

- 1. Seventh-day Adventist high-school administrators are committed to excellence and continuous improvement, and want to administer effective academic programs.**
- 2. All alumni who participated in this study completed the high-school requirements and received the diploma for the province in which they were enrolled.**
- 3. All respondents answered the questions honestly.**
- 4. The results of this study accurately reflect the respondents' perception of the effectiveness of the academic program in the four Seventh-day Adventist senior high schools in this study.**

Delimitations of the Study

This study scientifically tested the effectiveness of the high-school academic program in preparing graduates for postsecondary education, as perceived by alumni who graduated 1986-1992 from four Seventh-day Adventist senior high schools in Canada. There is a definite link between academic preparation in high school and students' performance in college and/or university. However, this study did not examine the statistics on graduates' performance, only their perception of their preparedness for postsecondary studies, which they pursued.

This study also acknowledges that the high-school program prepares many

students for the world of work with or without immediate plans for further academic pursuits. However, the study did not collect data on preparation for the world of work. The study is further delimited to four of the nine senior high schools in the Seventh-day Adventist school system in Canada because alumni listings were not available from five of the high schools.

Definition of Terms

The following terms are defined as used in this study.

Seventh-day Adventist Church Institutions

General Conference: The central governing organization of the Seventh-day Adventist Church and is located in Silver Springs, Maryland. It oversees the worldwide work of Seventh-day Adventists through sections called divisions, which operate within a specific territory assigned by the General Conference. The work of the General Conference is further divided into departments, which give special attention to the various facets of church life and service. These departments generally have representation on every level of church organization from the local church to the General Conference.

Board of Regents: The General Conference of Seventh-day Adventists denominational accrediting authority for all educational institutions and programs operated in the name of the Seventh-day Adventist Church. It consists of an international board chaired by the Director of Education of the General Conference. The board is a quasi-independent organization responsible for the improvement and strengthening of the

Church's educational programs and processes, and the accreditation of denominational member institutions.

Division: A geographic region so divided for administrative purposes of the Church. A division is comprised of conferences, and is part of the General Conference of Seventh-day Adventists. There are 11 divisions worldwide that comprise the General Conference.

North American Division: A unit of church organization comprised of the United States, Canada, and Bermuda. It is subdivided into nine Unions.

Canadian Union: Renamed the Seventh-day Adventist Church in Canada in 1985. The Canadian Union is a subdivision of the North American Division of Seventh-day Adventists comprised of all the Conferences/Missions/Associations throughout Canada.

Conference: The smaller economic and legal administrative unit in the Seventh-day Adventist Church. It is comprised of a number of local churches and/or districts within a given geographic area.

Seventh-day Adventist Schools in Canada

Elementary School: Grades Junior/Senior Kindergarten or Grades 1-6.

Junior Academy: Junior/Senior Kindergarten to Grade 10 or Grades 1-10.

Secondary School (high school used interchangeably with academy): Grades 9-12.

Senior Academy: Junior/Senior Kindergarten-Grade 12, or Grades 1-12.

Tertiary Level: College, or University.

Alumni: Used interchangeably with "graduates." Grade 12 graduates from a

Adequate Preparation: Refers to mastery of reading, writing, and mathematical skills expected at the appropriate level for high-school graduates, as well as the successful completion of the high-school diploma at a level which enables the person to pursue postsecondary studies, without any additional coaching or remedial work for the purpose of attaining the expected level of performance.

Organization of the Study

This study contains five chapters. Chapter 1 presents the introduction and the framework, research questions, hypotheses, significance of the study, assumptions of the study, delimitations of the study, and definition of terms.

Chapter 2 reviews the literature related to the study.

Chapter 3 describes the methodology. Included is information about the sample, data collection, instrumentation, hypotheses, and procedure for analyzing the data.

Chapter 4 analyzes the data and discusses the findings.

Chapter 5 contains the summary, conclusions, implications, and recommendations for further research.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this study was to examine the effectiveness of the high-school academic program in preparing graduates for postsecondary education, as perceived by alumni from four Seventh-day Adventist senior high schools in Canada. A literature search revealed a paucity of literature in the area of perceptions of high-school alumni regarding academic preparation for college or university. The majority of studies found focused on the transition from school to work with a section on academic preparation.

This literature review will present a short history of the three provinces (Ontario, British Columbia, and the Prairie Provinces including Alberta), which house the four schools in this study. Following this will be a short history of Seventh-day Adventist education in Canada, issues and short studies on academic preparation, some longitudinal studies and other studies, culminating with a brief summary.

Historical Foundations of Canada

The school has been seen as an institution that concerns itself with being a “social agency of reform” (Titley & Miller, 1982, p. 2). Because of its relationship to political, social, cultural, and religious institutions, therefore no meaningful discussion of its foundations can be discussed without reference to its relationship with those institutions.

Society has always had its expectations and views of what schools should and should not accomplish. Communities have greatly influenced schools through their culture, language, values, and heritage.

Canada is a vast land-mass over 3,000 miles wide, larger than the United States and Alaska put together, a little bigger than Europe, nearly a third larger than the island-continent of Australia. It extends from the temperate climate of the lower Great Lakes, from tobacco fields, peach orchards, and grape vineyards, to the coldest Arctic regions, where the granite-hard subsoil never thaws. To the east and west this massive land is flanked as well by great islands in the sea, Newfoundland and Vancouver Island. To the north so much empty space remains that even since the Second World War, aerial surveys have discovered unknown territories at the top of Hudson Bay as big as the province of Prince Edward Island to add to the map of Canada. Canadian history largely records a struggle to build a nation in the face of stern geographic difficulties (Careless, 1953/1963, p. 3).

Canada has had a very intriguing and interesting history which reflects an amazing degree of variety among its peoples. Canada possesses some features that identify its uniqueness. Titley and Miller (1982) describe “the true North strong and free” in the following manner:

The world knows that Canada is a land of immigrants and their descendents. It should also come to understand that because of this a Canadian today is someone who (unlike the essentially unilingual American) is likely to be able to speak more than one language: English-French, but not necessarily English-French [*sic*]. . . . Most Canadians also realize that Canada is a land of minorities, but what very few seem to appreciate is that all minorities stand or fall together!

Most Canadians probably realize that multiculturalism is today’s equivalent for two older terms, ‘mosaic’, which had wide currency between the two world wars, and ‘cultural pluralism’, a term very popular since the 2nd world war. Multiculturalism then, is associated with pluralism, diversity, and variety, which

if it is confidently maintained, are the essence of Canada's national identity. (pp. 210-211)

Ontario

Upper Canada, which became Ontario, was as much a child of the American Revolution as the United States itself, for it was settled first by the Loyalists. Ten thousand arrived in 1783, and because of their presence along the northern shores of Lake Ontario, and, later, Lake Erie, the province was carved out of Quebec in 1791. Prior to the arrival of the Loyalists, the land that became Canada was part of the great wilderness hinterland where the French, and after them the Scottish traders who formed the North West Company, moved at will. There were Indians who nomadically lived in the area, and the traders and *voyageurs* passed through but nobody had settled there. In 1673 the French built a military post called Fort Frontenac, which was later inhabited by Europeans, and in 1764, the British built a similar post at Fort Erie on the west bank of the Niagara River (Woodcock, 1979).

The Loyalists were Germans, Mennonites by religions, whose ancestors had been offered asylum in Pennsylvania by William Penn. During the American Revolution they had been pro-British, but because of their pacifist convictions had taken no part in the fighting. They settled in the Kitchener-Waterloo, and this part of Ontario still remains surprisingly German in its domestic customs, largely because of the traditionalism of the Mennonites. Otherwise, the early immigration into Upper Canada was composed almost entirely of peoples of British stock. (Woodcock, 1979, p. 137)

The Loyalists built Kingston near Fort Frontenac, and Newark, the first capital of Upper Canada which became Niagara-on-the Lake, was built near Fort Erie. In 1793, Governor Simcoe of Upper Canada supervised the building of a small village named York which had been selected as the new capital, and which, after being destroyed by the

Americans in the War of 1812, eventually grew into the city of Toronto (Woodcock, 1979, p. 137).

The first group after the Loyalists were American farmers who were not Loyalists but were looking for free land. Thousands of them made their way to Upper Canada by river, lake, and boats from New York, Pennsylvania, and Vermont. After the War of 1812, American immigrants were discouraged, but immigrants from Britain were still encouraged by land that was granted to them, for it was hoped that some type of aristocracy after the British model would develop (Woodcock, 1979, p. 138).

In 1912, Ontario acquired its present area of 244,000 square miles, with its northern boundary extending to Hudson's Bay. However, by 1852, settlement had already reached up the Ottawa River where farmers worked for most of the year in the forests. In 1857, Ottawa, formerly Bytown, and renamed in 1855, became the capital of Canada (Woodcock, 1979, p. 147).

Partly because of the growth of manufacturing in Ontario, fewer immigrants of British origin flocked to Ontario. Instead, there began a great influx of Germans, Italians, Portuguese, Greeks, East Indians, and Caribbean peoples, making Toronto a cosmopolitan city. These people recognize English as the general language of communication, but they have largely maintained their culture, traditions, customs, festivals, and eating habits. Slowly they broadened the tastes of Ontarians to include a variety of foods as they opened many different types of restaurants (Woodcock, 1979).

British Columbia

The Continental Divide, for many British Columbians, is a mental as well as a

geographical barrier, which makes them feel isolated from the rest of Canada. British Columbia's history began apart from that of the greater part of the country in a number of striking ways that are rooted first of all in the uniqueness of the terrain. Apart from a small amount of dry land plateaus like the Cariboo and Chilcotin region, all that the rain-forest-covered mountains leave for British Columbians to inhabit are narrow valleys and river deltas and offshore islands (Woodcock, 1979).

British Columbians see themselves as divided from the rest of Canada by Geography—there is always a mountain to be circumvented if one travels any distance—by traditions, by personal interests and even by class interests, and this has always made them a politically volatile people, not to be tamed by the mass Canadian parties whose organizations are based on the Ontario-Quebec axis. Instead, they are liable to give their loyalties rather capriciously to populist local leaders with whom they can make some kind of personal identification. (Woodcock, 1979, p. 196)

Part of the fractionable character of British Columbian society can be attributed to historical causes and especially to the fact that the province had its own separate history of settlement by sea from Britain and Asia and by land from California even before it entered Confederation. When the colony joined Canada in 1871, the island capital of Victoria was undoubtedly more English in its way of life than any other part of Canada, and long continued so, while the main dissident element in the city was American rather than Canadian, for most of the merchants had come up from San Francisco bringing with them a Californian style of architecture (Woodcock, 1979, p. 197).

The first White man to actually acquire land in British Columbia was Captain John Meares in 1788. By 1789 Spaniard Martinez displaced Meares and erected a fort that lasted until the Spanish withdrew in 1795. Several forts were built in different locations including Fort Vancouver in 1825, built on the north bank of the Columbia in

the hope that it would give the British a fair claim to what is now the state of Washington. When Vancouver Island became a Crown Colony in 1849, Fort Victoria was its capital. The fur trade began to decline and instead some industries were initiated. Gold was discovered in the rivers of the interior and as the word spread to the United States, a cosmopolitan migration began with miners streaming in to try their luck.

There were Americans, Frenchmen, Italians, several Hungarians, Poles, Danes, Swedes, Spaniards, Mexicans. Out of the first 450, there were 60 British subjects and about 100 Americans by birth, including 40 blacks who had been persecuted by Southerners in California. The remaining 300 were Europeans who had arrived late in California and wanted to try their luck elsewhere. During that first season few people arrived either from Britain directly or from the Canadian and Maritime provinces. (Woodcock, 1979, p. 207)

British Columbia records a sad and despicable part of its history in its treatment of Chinese who arrived first from California during the Fraser Valley gold rush of 1858. The British Columbian workers used politicians to persuade the federal government to impose "an iniquitous \$500 poll tax on Chinese immigrants." This did not deter the Chinese immigrants who continued to land in British Columbia, for in 1903 1,500 Chinese, 2,000 Sikhs and 8,000 Japanese entered the province. These groups established their own communities and opened businesses. Riots and discriminatory legislation resulted which eventually stemmed the flow of Asian immigrants. In 1942 all the Japanese on the coast of British Columbia—even if they were naturalized or Canadian born--were forcibly evacuated and resettled in the ghost mining towns of the interior while all of their property was sold to greedy Whites (Woodcock, 1979).

Prairie Provinces (Alberta, Manitoba, & Saskatchewan)

"It is for historical rather than geographical reasons that one talks of the three provinces as a single region" (Woodcock, 1979, p. 161).

Woodcock (1979) colorfully describes the topography of the Prairies:

Manitoba's north-eastern triangle is typical Shield country of lakes, rock outcrops, lodge-pole forest, and muskeg, reaching up to the Arctic waters of Hudson's Bay at Churchill; one does not emerge on to the flat open plain until one is very close to Winnipeg. Central and northern Saskatchewan is rolling parkland with lush natural grass and many small woods and lakes. Even in southern Saskatchewan the plains are broken by the Great Sand Hills near Swift Current and the strange and beautiful enclave of the Cypress Hills, exempt from the last Ice Age and so the home of exotic creatures such as the horned toad and the kangaroo rat. By the time one reaches Alberta on the long day and night that it takes to traverse these provinces by rail, the land has risen in a series of steppes from near sea level at Winnipeg to more than two thousand feet in most of Alberta (Calgary's elevation, in fact, is more than three thousand feet), and the western edge of the province rises through wooded foothill country to the eastern slopes of the Rockies, many of whose highest peaks are within Alberta. (p. 161)

The physical characteristic that all the Prairie Provinces share is its openness in every direction. In social terms, the features these provinces most strikingly share are their rapid and relatively recent settlement, and the unique mixture of races that has resulted. The populations of Alberta and Saskatchewan multiplied almost fivefold in the great immigration decade between 1901 and 1911. As a result of this flood of people to the Prairie grain lands, the "founding" races were dislodged from their majority situation, as they were nowhere else in Canada.

The great mingling of the peoples in the Canadian Prairies really began in the 1880s, and it was an extraordinarily quick process, virtually ending with the outbreak of the Great War in 1914, by which time all the good land had been settled. Almost all the Prairie farmers with central or eastern European ancestry were in fact born in Canada, and the chances are that their fathers also were born here (Woodcock, 1979).

The Prairies had not been the recipients of a large influx of immigrants. The Pacific Railway was built and there was wheat, but still not much settling took place.

"With the Prairie railways, the Canadian Pacific and its successors, there was a necessary

“symbiosis between settlement and transportation” (Woodcock, 1979, p. 172). However, it was not until Clifford Sifton became Minister of the Interior in 1896 that the greatest flood of immigrants arrived on the Prairies. He began concentrating on getting the Austrians and the Russians to believe that not only was Canada offering them free land but they were also obtaining freedom. The Ukrainians were used to farming the steppes and would not be necessarily bothered by the climatic extremes in the Prairies.

By 1910 some 75,000 Ukrainians had settled. Later Czechs and Slovaks, Poles and Hungarians, Serbs and Croats also arrived in considerable numbers, and all of them preserved something of their native culture, retaining their languages, publishing their own newspapers, and even maintaining literary traditions. (Woodcock, 1979, pp. 172, 175)

For the early settlers this was a wild country.

It was a life whose harshnesses women and men shared in equally, for the women who settled as pioneers on the Prairies had to do everything that their predecessors in Ontario had done, in addition to enduring greater remotenesses and a far harsher climate. (Woodcock, 1979, p. 181)

Yet, despite all these dangers and discomforts, and largely because of a survival code of cooperation and mutual support, the settlers converted the Prairie provinces in a surprisingly short time from a harsh frontier to a more-or-less stable agricultural economy that already existed in 1905 when Saskatchewan and Alberta were separated from the Northwest Territories and turned into provinces.

The Public School System in Canada

The British North American Act (BNA) of 1867, section 93, made the provinces responsible for their educational system. The public school system in Canada could be simplified by treating its development in stages.

Stage One

Phillips (1957) states: "The first stage of the development of the public school system extends to about 1840 in eastern Canada, to about 1870 in Manitoba and British Columbia, and about 1885 in the territories that became Saskatchewan and Alberta" (p. 179). For the common people there were five types of schools that were organized and operated through philanthropists—church or parish schools, charity schools, monitorial schools, Sunday schools, and infant schools. For the privileged few there were Latin grammar schools and private schools. Secondary schools, which were called academies, were either established by middle class people or by religious denominations. These schools offered a wider curriculum than the common schools (Phillips, 1957).

Stage Two

The second stage extended to about 1870 in eastern Canada and up to 20 or 50 years later in the west. During this stage educational authority was centralized, and there was local taxation as well as free schools. Elementary education was universal, but for secondary school it was a transition period from social exclusiveness to public support. Elementary education was expanded and people were being educated to assume responsibility for organizing and administering the affairs of the schools. In the early 20th century, the Midwest was experiencing an influx of immigrants, so this second stage was repeated in the Prairie Provinces after World War I (Phillips, 1957).

In this stage of development, the basic institution of provincial systems was the common school. Initially, government grants and fees financed it, but later the fees were replaced by local taxation from personal property. School was now free for everyone with the provincial authority overseeing the operation of the schools. It was during this

stage, also, that the “unpopular” grammar schools were taken over by public authority and stripped of their social distinction. Universities, which had previously been operated mostly by private organizations, evolved as a more public venture and anyone who could qualify could gain access to them (Phillips, 1957).

Stage Three

The third stage from about 1870 to 1900 focused on developing the efficiency of the administration and operation of the school system. Provincial departments of education were organized, and programs to provide better training for teachers were developed. The central education offices now provided authorized textbook lists along with resources, which were published in *Circular 14*. This period saw the genesis of school inspectors and the supervision of examinations. Ontario under the dynamic leadership of Reverend Egerton Ryerson, its first Superintendent, developed a pattern of education that was copied by most of the other provinces (Phillips, 1957).

Both elementary and secondary schools were maintained partially by local taxes and partially by provincial grants. Elementary school was free and universal and compulsory in almost all provinces. Secondary school was cheap and accessible to all. In some less populated areas, the secondary school was attached to the elementary school as a department, while in the urban areas the high school had its own building. However, secondary level was differentiated from the elementary by an entrance examination, which had to be taken prior to enrolling in high school. In addition, in the high school one had to take algebra, geometry, and foreign languages (Phillips, 1957).

Stage Four

The fourth stage ran from 1900 to the end of the century. During this stage several developments occurred in the provinces, many of them simultaneously. Those departments of education that had not previously established a department of education or appointed a minister of education did so. This period saw a number of changes in curriculum offerings—expansion to include more practical courses and the availability of further education to those who previously did not have the opportunity, particularly if they were not necessarily academically inclined.

Kindergarten was added in several areas, and vocational and technical courses at the secondary level provided more options for students with varying abilities. The number and size of secondary schools greatly increased, as did other educational services (Phillips, 1957).

Secondary Education in Canada

Introduction

In 1841 secondary schools were only available to certain social classes of people and therefore attendance in these schools was limited. By 1871 high schools were superimposed upon elementary schools, but by 1901 the high schools were attended by many preparing to be teachers, by a smaller number intending to enter university, and by some others. Later, an expansion occurred that was nothing short of spectacular.

In British Columbia during a 30-year period (1901-1932), the secondary enrollment increased in the ratio to 20 to 1. In Ontario between 1900 and 1950 the population doubled, and enrollment in secondary grades increased to six times the earlier figure. Secondary enrollment, which was less than 5% of total school enrolment in 1900,

was now more than 23% in 1950. This phenomenon was occurring all over Canada.

Phillips (1957) suggests some of the causes for the school enrollment explosion:

Greater wealth, smaller families, less need for immediate wage earning, more need in business for educated employees, fewer jobs in depression years, new secondary school courses of utilitarian value, more consideration of pupils' interests and needs, and the cumulative effect of a growing appreciation of the value of education in successively better-educated generations. (p. 184)

Almost all of the provinces, with the exclusion of Newfoundland, developed their education systems following a fairly regular pattern—elected trustees and centralized authority to prepare curriculum and prescribe textbooks. In nearly all of the provinces since Confederation, offices were created for the education department to be headed by a minister of education and a deputy minister. Three of the major accomplishments of the 19th century were the organized inspection of schools, a teaching training program, and free schools paid by homeowners' taxes. All provinces had secondary education (Phillips, 1957).

Secondary education was available only to a restricted minority, and it provided a common general training in the classics and humanities for the elite. In every province the purpose of the secondary school was clear: it was to prepare this academic and social elite for the university. (Wilson, Stamp, & Audet, 1970, p. 322)

Major Changes

The evolution of the secondary school in English Canada from a college-preparatory to a more general orientation can be traced back to the Ontario regulations of 1871. That year the name "grammar school" was changed to "collegiate institute" and the "high school." The collegiate institute was to concentrate on the classical or university entrance course, while the high school would launch a new English or "commercial course" for students who were bound for the world of work. In practice this

original plan did not work because the schools were anxious to have multi-course offerings with core subjects and electives (Wilson et al., 1970).

Gradually the curriculum offerings broadened as the philosophy of the high school began to change. By the mid-1870s French, history, and science had been added to the previous program of English, mathematics, and classics. Before the end of the century, geography, bookkeeping, and German began to appear, while mathematics and science were subdivided into their component parts. In 1900 even more significant changes occurred, for agriculture, home economics, industrial arts, technical and commercial education, arts, music, and physical training appeared in the schools of the major cities (Wilson et al., 1970).

Other changes occurred, for example, in the teaching of English; the emphasis shifted from a "concentration on the grammatical and philological minutiae to a concentration on the literary merits of major prose and poetry works" (p. 323). In mathematics, the emphasis shifted from rule memorization and complicated mechanical operations to an understanding of mathematical reasoning. Science passed from the descriptive and textbook stage and became more a subject of experiment and observation as schools acquired laboratory facilities (Wilson et al., 1970, p. 323).

Secondary school education was becoming more accessible economically, but there was still much prejudice against female students. Some felt that girls could not handle classical studies. However, the women's rights movement resulted in an awareness of the abilities of females, and high schools for girls were established. Some still had a problem with co-educational schools. It was said that the same methods of discipline could not be administered to female and male students. On the other hand,

advocates of co-education believed that it would be better for discipline to be administered in mixed classes.

By 1914 co-education was an accepted fact in English-speaking Canada although in a few places boards of education still provided separate schools for girls. Gradually fees were abolished, and with wider educational opportunities, the curriculum continued to undergo changes. More commercial subjects were demanded but there was opposition to this by some sectors of the community (Wilson et al., 1970).

Now with the decline in prejudice against the female student there was another hurdle to cross—the passing of an entrance examination. This exam was written after 7 or 8 years of elementary school. After a student had passed and gained entrance into secondary school, there was an intermediate examination, then senior matriculation and special examinations for entry into the normal schools and the various professions. In the Maritimes and in Western Canada, a 3 or 4-year high-school course became the usual pattern. Ontario did not remain in step with the other provinces for they expanded their high-school program to 6 years although, shortly after World War I, they shortened it to either 4 or 5 years depending on whether one chose junior or senior matriculation (Wilson et al., 1970).

In Ontario from 1872 the schools had to have at least two teachers; and from 1874 they had to be separated from the elementary schools and be distinct high schools with boards of their own. By 1890 Ontario had a very solid system of education. Several solid brick buildings had been built with adequate heating for the winter months. Phillips observes: “At the top, since 1875 there had been a minister of education. At the bottom,

after 1883, was the Toronto youngster entering a kindergarten in September” (Phillips, 1957, p. 225).

Those who went to high school attended either one of the 31 collegiate institutes having an average of over 300 students enrolled or one of the 89 high schools having an average of over 100. At high school all students studied English—grammar, composition, and literature—and history, geography, arithmetic, and algebra. Two-thirds studied geometry, drawing, and bookkeeping. More than one-third studied French, less than one-third Latin, about one-quarter physics, and about one-sixth chemistry. Very few, by this time were studying Greek; in fact there were about twice as many studying German. (Phillips, 1957, p. 225)

The Ontario education system owes much to Ryerson. He believed that everyone should have free access to education in order to banish ignorance in the society. His primary objective was to establish “common schools” for all and a high school system for further study or for desired preparation to university. The Ontario school system served as a model for other provincial school systems (Thomas & Putman, 1969).

Secondary school teachers were more respected than those who taught at the elementary level, and the salaries of the teachers at the secondary level were also considerably higher than that of the elementary teachers. Standards for entry into the profession were also different. For elementary teachers it was high-school graduation and a brief training period, while for the secondary teachers a university degree was required. Following complaints of poor teaching practices in the secondary school, the requirements were changed to a university degree and one year of professional training (Wilson et al., 1970).

Between 1870 and 1914 education became more centralized. The name of the central authority varied in provinces. In Prince Edward Island and New Brunswick it was boards of education; Nova Scotia, Quebec, and British Columbia had councils of public instruction; and in Ontario, Manitoba, Saskatchewan, and Alberta there were departments

of education. There were the appointments of superintendents and inspectors who, by the end of World War I, were greatly feared by teachers. Curriculum decisions did not involve the local authorities but were made at the central office. Textbooks were standardized. The public complained that the cost of textbooks was too high especially as books had to be changed to keep abreast of the changing courses. The trend in declining attendance was an indication that if schools were to benefit the masses it would have to be compulsory as well as free. These ideas sparked much controversy and eventually truant officers had to be appointed to ensure school attendance (Wilson et al., 1970).

During the earlier progressive era, Canada adopted many of the American innovations (e.g., new mathematics) but in the use of primary sources in teaching history and of inquiry methods in geography, Canadian curriculum reform in these subject areas was initially probably ahead of that in the United States. Canadian education was suffering from a lack of Canadian teachers and depended heavily on American teachers. It was believed that Canada did not do a good job of “transmitting positive values about education to those classes which did not formerly have a high educational level” (Wilson, 1981, p. 144).

The widely publicized Hall-Dennis report in Ontario entitled *Living and Learning* (Provincial Committee on Aims & Objectives of Education in the Schools of Ontario, 1968) heralded a child-centered regime. The report contained 258 recommendations emphasizing individualization, continuous learning, and maximum flexibility in curriculum facilities and scheduling. It talked about levels of difficulty and grades and course categories such as vocational, technical, academic, and commercial. The report

further suggested that the curriculum be organized around general areas such as environmental studies, humanities, and communications. From this point onwards, the decentralization of the curriculum in Ontario began (Wilson, 1981).

Hodgett's 1965-68 survey of the teaching of history and civics (Canadian studies) resulted in the inclusion of more Canadian content in the curriculum. By 1980 there was an abundance of Canadian teaching materials. Another result of Hodgett's survey was the founding in 1970 of the Canadian Studies Foundation, which was largely responsible for the exploding of the curriculum. As a spin-off from all the activity taking place with the investigation and revision of curriculum, in 1976 the Minister of Education for Ontario, Honourable Thomas Wells, announced the establishment of a "core curriculum." Simultaneously, British Columbia's Minister of Education also called for a core curriculum stating that the citizens demanded that government "take a more positive role in defining what should be taught in our schools and in assessing the results of that teaching" (Wilson, 1981, p. 147). Alberta's Harder Report of 1977 suggested that the objectives of education be confined to what the schools do (Wilson, 1981).

Other provinces expressed their intentions to revamp their curriculum, stating as a reason the decline in basic skills among students. Employers were also raising an outcry that school standards were lax and that the students were leaving high school without the basic skills to perform well in the world of work.

Academies

Academies were schools established for a select group of students by those who were more prosperous in a community. The parents wanted a practical education for their children. Those who subscribed to the academies had certain things in common:

“They either lived in the same town, or belonged to the same church, or were united in their opposition to the assumptions of special privileges in education by a single church” (Phillips, 1957, p. 196).

Secondary Schools

Secondary schools in Canada can be classified according to the locus of control. There are three varieties: (1) public, (2) federal, and (3) private. The publicly controlled schools are those operated by local school boards, and often include both academic as well as vocational programs. These local educational authorities exist in all provinces. Schools for native Indian students are referred to as federal schools when the federal government operates them, and generally follow the curriculum of the province in which they are located. The Department of Indian Affairs and Northern Development administers the program in those schools. This is true of all provinces except Newfoundland. Some integration of Indian children into the public school systems occurred in 1960 and 1961, and again in 1970 and 1971 (Martin & Macdonell, 1978).

Martin and Macdonell (1978) point out that there is no standard governing the secondary education in Canada as a whole, but there are variations and general commonalities in inter-provincial curriculum programs. It is still true today that because each province is responsible for and funds its own education program, there is absolutely no standardization among provincial requirements for the completion of the high-school diploma. There is no federal office or national ministry of education. Canada is one of the few countries in the world without such an office.

Religious organizations or other bodies are responsible for the administration and control of private schools. There is a variety of private schools in Canada. The Ministry

of Education gives permission for some individuals to run their own brand of private school, but inspects other secondary schools whose students upon completion of provincial requirements receive the high-school diploma.

Provincial Diploma Requirements

There are inter-provincial variations in that high schools include three to five grades and are further subdivided into junior high schools, senior high schools, and junior-senior high schools. Grade 12 is the highest grade in most provinces. In Newfoundland and in Quebec it is Grade 11, and in Ontario, it is Ontario Academic Credits (OACs), taken as a part of or after the completion of Grade 12. Six OACs are part of the entrance requirements for an Ontario university (Ontario Secondary Schools, Intermediate and Senior [OSSIS], 1986).

In 1987 the Ontario Ministry of Education revised the high-school diploma requirements. This change affected the high-school curriculum in all Ontario public high schools, separate high schools, and independent and private high schools that offer the Ontario Secondary School Diploma. The requirements for completion of the high-school diploma changed from 27 credits for the Secondary School Graduation Diploma (SSGD), to 30 credits for completion of the Ontario Secondary School Diploma (OSSD) (OSSIS, 1986). Students enrolled in high school prior to September 1987 were allowed to graduate with the earlier diploma requirements. Those students who enrolled in high school beginning September 1987 were required to work towards completion of the new diploma. With the new requirements came more streamlining of courses and greater and more stringent curriculum demands. In order to complete the OSSD a student had to successfully complete a total of 30 credits (16 compulsory courses and 14 electives). In

Alberta, students in high school were required to successfully complete 100 credits in order to receive their high-school diploma. In British Columbia, the requirement for completion of the high-school program was 21 credits (12 compulsory courses and 9 electives) (see Appendix 5).

Seventh-day Adventist Education in Canada

Introduction

The Seventh-day Adventist schools in Canada are part of a worldwide education system, which began in the United States of America. The first recorded attempt at education for children in an organized way was that of a private school at Buck's Bridge, New York, in 1853 with one teacher, possibly Martha Byington (Cadwallader, 1975). Another account states that the education system began when the first school opened in 1857 in Battle Creek, Michigan, in a church building (Olsen, 1925, p. 331). Ellen G. White, a prominent leader of the church, had given this advice: "They should encourage the church of which they are members to establish a church school where the children within their borders could receive an all-round, practical Christian education" (White, 1913/1941/1943, p. 173).

The idea of opening Seventh-day Adventist schools and the advice that Ellen White had given became more germane after the great disappointment of 1844 when the children of Adventists were being persecuted at the public schools. They were being called "Millerites" because William Miller had mistakenly taught that the second coming of Jesus was going to occur in October of 1844, and these children's parents were part of the Millerite Movement. In addition, the parents felt that the teachings in the public schools did not harmonize with what they were teaching their children at home and at

church (Olsen, 1925). Prior to the need for schools being expressed there had also been a wave of educational reform that had swept over America, and articles appeared in the secular papers about the shortcomings of public school education (Cadwallader, 1975).

The church leaders did not anticipate how widespread would be the education system that began in such a humble manner. Cadwallader (1975), in regard to the development of an education system, states:

This may seem to some like a small beginning. But a beginning however small, is something. . . . As the mustard seed among plants, we expect this school will come to occupy an important place among the agencies in operation for the advancement of truth. (p. 204)

Indeed the system has grown and spread to all parts of the world. Statistics in 1999 indicated that there are 5,846 schools in this worldwide system of education (Seventh-day Adventist Church, 2001). This education system includes the Canadian Seventh-day Adventist school system.

Seventh-day Adventist Secondary Schools

The Canadian Union Conference was voted into existence in 1901. The first office was started in Montreal in December 1903 (Monteith, 1983). It was later renamed “The SDA Church in Canada.” It is the headquarters for the Seventh-day Adventist organization in Canada. Kingsway College, a senior high school in Ontario, is managed and operated by the SDA Church in Canada.

The first secondary Seventh-day Adventist school in Canada, the Fitch Bay High School, opened in 1894 in Quebec. This school remained in operation until 1914 (Monteith, 1983). It was 1903 before another secondary school was opened. In that year two academies appeared—Lornedale Academy in Ontario and Farmington Industrial

Academy in the Maritimes. Several other secondary schools were opened and closed in similar fashion, as were the elementary schools. Both Lornedale Academy, currently Kingsway College, located in Oshawa, Ontario, and Alberta Industrial Academy in Alberta have survived and are still in operation (Monteith, 1983). Later, the Alberta Industrial Academy was changed to Canadian University College.

Kingsway College located in Oshawa, Ontario, is a boarding academy, which was founded in 1903 on a 50-acre farm at Lorne Park between Toronto and Hamilton in Ontario. The school, which was named Lornedale Academy, was a 12-room house building converted into a comfortable dormitory with one room for classroom use. Over time, the school enrollment grew and buildings were erected to accommodate its growth. In 1912 the school relocated to Terwillergar farm in Oshawa and its name was changed to Buena Vista Academy. In May 1914, ownership of the academy was transferred to the Eastern Canadian Union, at which time it was renamed Oshawa Missionary College. Its curriculum was extended to include the freshmen and sophomore years of college. The school was then renamed Kingsway College, a name it still carries today although it is now a senior high school (Monteith, 1983).

Crawford Adventist Academy, whose history seems not to have been well documented, was founded in 1953 as an elementary school in Ontario, in a room in the house of a medical doctor. Over time the school outgrew the house and was relocated to its present facilities in Willowdale, Ontario. Malcolm Graham (1981) was the Director of Education for the SDA Church in Canada and wrote in the *Canadian Union Messenger* that the school had expanded its school program from Grade 10 to Grade 12 in order to provide educational opportunities to all of the approximately 2,000 children and youth in

Metropolitan Toronto who were nurtured by more than 20 Seventh-day Adventist churches in the city and its environs.

Currently, Crawford is a senior academy. Its original name, Toronto Junior Academy, was officially changed to Crawford Adventist Academy in June 1981 in memory of Dr. Erwin A. Crawford, a medical doctor who had a keen interest in Christian education and who was one of its founders. Graham (1981) wrote of Dr. Crawford, "His personal generosity of both time and funds helped to establish our school here in Willowdale" (Graham, 1981, pp. 8, 9). Crawford Adventist Academy is now the largest senior, day high school in the Seventh-day Adventist school system in Canada. During the years 1986-1990, its high-school graduates received the Ontario Secondary School General Diploma (OSSGD). However, from 1987 onward, students entering high school began to pursue requirements to receive the Ontario Secondary School Diploma (OSSD) (OSSIS, 1986). Students from Crawford Adventist Academy also receive a diploma signifying their attendance and completion of requirements for the Seventh-day Adventist school system, of which a major requirement is the completion of one religion course during each year they are enrolled at the school.

H.C. White, Director of Education, British Columbia Conference, reported that the school system in B.C. began with the organization of a school in Pitt Meadows in 1904 which later became the Manson Academy (Warner, 1975). In the spring of 1971, the Abbotsford, Aldergrove, Chilliwack, Langley, Mission, Open Door (Clearbrook), Korean, Surrey, White Rock, and many other Seventh-day Adventist churches in the metro-Vancouver area were operating several small schools in the Fraser Valley. These churches decided to consolidate their efforts to form Fraser Valley Adventist Academy.

The school operated in Langley in the first year with 79 students in Grades 1-10.

Currently, the school stands on a 7.5-acre parcel of land, which was purchased in the fall of 1971. In the 1972-73 school year permission was obtained for a Grade 12 and the first Fraser Valley Adventist Academy (FVAA) graduating class occurred in 1975. The school is located in Aldergrove, British Columbia, and is a senior high school, Grades 1-12 (Hamilton, 2001).

Parkview Adventist Academy, which is a senior high school, is situated on the campus of Canadian University College in College Heights, Alberta. This boarding high school was originally part of the former Canadian Union College, but it was officially identified as a separate entity on July 1, 1982. It continues to share some staff and facilities with Canadian University College.

Farmington Industrial Academy began in the Maritimes in 1903 and grew from a family school. Originally the school was started in 1899 by Miss Curth and conducted in the home of Daniel Dimock. The large farmhouse, which stood on 100 acres of improved land and 150 acres of timberland, was converted into a school. In order to fund the school, the St. John members sold 400 copies of *Christ's Object Lessons*. The site was not suitable for a school, so another parcel of land (200 acres) was purchased and a building erected on the new site. In the fall of 1905 the school was opened. In 1919 the school was again relocated to a 200-acre farm. In the face of rising indebtedness, the Maritime Conference decided to cut back the school program from 12 grades to 10 and to recommend to students that they attend the Lornedale Academy in Oshawa to complete their high-school education. The school opened and closed a number of times until finally it closed its doors permanently in 1932 (Monteith, 1983).

The Manitoba Conference opened the North-western Training School (Portage Plains Academy), the first academy to be opened in Western Canada on November 22, 1904. It was located 3 miles east of Portage la Prairie on a 130-acre farm. The students were mainly Russians and Germans, so an interpreter had to assist in their registration. The enrollment grew and the building was expanded. It offered a 3-year program with a variety of subjects. Later the enrollment began to decline and the school closed in 1909 partly due to the inability to find a new principal after the first one left because of ill health (Monteith, 1983).

Thirty miles east of Vancouver at Pitt Meadows in the Fraser Valley, the British Columbia Conference established their first academy—Manson Academy. It was housed on a 320-acre farm and was donated by William Manson for an industrial school. The school opened on June 15, 1904, with 10 students, by G. E. Johnson. Mr. Johnson erected a building to serve a dual function as a school and as a church. The students paid no fees but were required to help with the farm duties for 1 1/2 hours every afternoon. In 1907 the school became an academy under the principalship of L. B. Ragsdale. The school building was later expanded to three stories. The academy found itself sinking in debt, and in an attempt to pay off its debt and avoid any further debt, it began selling off acres from the farm. Eventually the school was closed in 1915, but with only 40 acres left of the original 320. William Aikenhead bought the land and today no trace of the property remains (Monteith, 1983).

Currently known as Canadian University College, the Alberta Industrial Academy changed its name three times. The school was first housed in the Record Building of the Burman Library, which served as the school library. The force behind the establishment

of this school was C. A. Burman who was at the time serving as president of the Alberta Conference. He saw it as a 3-month experiment of a kind of colporteurs' training school beginning January 1, 1907. It, however, closed on March 21. The church leaders felt that the school had been a success and decided to re-open it in the fall. In order to facilitate this plan they purchased a farm that was about 1 mile or more west of Leduc. There were already some buildings on the property but they erected additional buildings. Enrollment grew and more buildings were constructed (Monteith, 1983).

The academy remained at Leduc for only 2 school years and in 1908 the Conference decided to move it to Lacombe where they were establishing a sanatorium and where work would be available for the students. Plans for the sanatorium did not Materialize, so the school acquired the barn for the 1909-10 school year. A dormitory for the girls was followed by a boys' dormitory. In 1910 there were 63 students, but the school experienced steady growth until in 1917 the enrollment rose to 236. The attendance dropped in 1918 to 147 but by 1920 the enrollment rose again to 263. In 1919 the academy was made a junior college and in 1920 its name was changed to that of Canadian Junior College. During this time renovations and additions were made to the buildings.

In 1930 there was a major catastrophe when two former students who had been disciplined set fire to the administration building and it was destroyed. The College continued to struggle with fluctuating attendance while rebuilding the administration building. There were other challenges as the years rolled by—municipal taxes, decreasing enrolment, and low student morale. In the face of what seemed like no easy solution, the Union conference committee suggested that both Kingsway College and

Canadian Union College be rolled back to academies and establish a college near to Branson Hospital in Toronto. This suggestion met with much opposition and nothing was done to implement the report (Monteith, 1983).

Most of the academies modelled their curricula after the American system.

In 1917, the Alberta Government forced the Alberta Industrial Academy to adopt the Alberta course of study. Eleven years later the Oshawa Missionary College of its own volition adopted Ontario's curriculum, giving the students an opportunity to write the departmental examinations. In Saskatchewan some of the students wrote the provincial examinations but the Maritime Academy was never provincially certified. (Monteith, 1983, p. 196)

The academies were extremely serious and strict about whom they admitted to their schools. In 1917 the following admission requirements were published in one of the academy's bulletins:

The school is open to all well-designing men or women, whether or not they make a profession of religion provided only that they come with a sincere purpose to improve their time diligently in study, and to comply with the regulations of the school. This is not a reform school and parents should not send their children whom they cannot control at home. (Monteith 1983, p. 196)

Tuition was quite low and most schools required that students engage in some type of labor. Parents were given a long list of items that their children should bring to school with them. The schools had very strict rules about amusement and association with other students. In the early years organized sports were discouraged, but some years later the rules were somewhat relaxed in most academies.

The teachers possessed limited qualifications and it was not until 1917 that a principal with a degree was given charge of the Oshawa school. It was believed, however, that the teachers in the Seventh-day Adventist high schools were not far behind in the qualifications that their public school counterparts had (Monteith, 1983).

The secondary schools in the Seventh-day Adventist educational system in

Canada now operate as privately owned, government-inspected schools. Students graduate from these schools with two diplomas—one issued by the Adventist school system, the other from the province and signifies completion of provincial Ministry of Education requirements.

Organizationally, there is a Director of Education at the Seventh-day Adventist (SDA) Church in Canada, and a Superintendent of Education in each provincial Conference. The Seventh-day Adventist secondary school system in Canada has its own unique challenges in its bid to offer and maintain a competitive and viable academic program. In the provinces of Alberta, British Columbia, and Ontario, the Seventh-day Adventist churches appropriate a substantial portion of their monthly budget to maintain its schools.

Currently the Conferences that comprise the SDA Church in Canada manage an educational system with schools distributed among them as follows: The British Columbia/Yukon Conference operates 10 elementary schools, 14 junior academies, and two senior academies. The Alberta Conference operates two elementary schools, eight junior academies, and one senior academy. The Manitoba-Saskatchewan Conference that merged in 1932 operates two elementary schools and five junior academies. Ontario Conference operates one senior (day) academy, two junior academies, and nine elementary schools. The Quebec Conference operates one senior (day) academy. The Maritime Conference operates five elementary schools, one junior academy, and one senior academy. The Newfoundland Mission currently operates one elementary school and four junior academies (*SDA Church in Canada Schools Directory, 1999-2000*).

Issues and Short Studies

For many years, there has been mutual concern from high schools, as well as colleges and universities, about the academic preparation of high-school graduates to pursue postsecondary studies. Provincial governments in Canada (which are responsible for education) have tinkered and experimented with high-school curricula in an attempt to design curricula that are relevant to the functioning of students in today's society, as well as produce a program that is academically balanced and of good quality.

Glasser (1993) set some criteria related to the curriculum (academic program) that he believed should be used to measure a good quality (effective) school. He stated,

In a quality school information will not be taught unless it falls into one or more of the following categories:

1. Information directly related to life skills.
2. Information that students express a desire to learn.
3. Information that the teacher believes is especially useful.
4. Information required for college. (p. 22)

Glasser's criteria might help solve the problem of prescribing what to teach, but there is no guarantee that it will necessarily meet the needs of the students. Suppose students did not express a desire to learn anything? Suppose the teacher believes information is useful but the students do not feel the same way? There seems to be some merit, therefore, in having consensus on what must be taught with teachers at the forefront of the planning. That is the process that the Ministries of Education in Canada have followed in planning curriculum for their provinces—teachers have been heavily involved in writing, making comments, and giving suggestions.

MacInnis (1995), Chair of the Council of Ministers of Education, Canada (CMEC), stated that the question to be answered is how well are Canadian elementary and secondary schools, colleges/technical institutes, and universities preparing students

for life, work, and the challenges of the future? He believes that around the world people are wrestling with a variety of approaches to make education and training both influence and fit the times in which we live. In response to his question, Canadian provincial and territorial education systems at the time of writing were developing and implementing ways to meet the challenge of making education more relevant to the demands of the 21st century.

Since education is and has always been the responsibility of each province and territory, over time, each province and territory has developed unique educational structures and institutions that take into consideration its particular historical and cultural heritage. In addition, while similar in many ways, these structures and institutions also reflect the circumstances of regions separated by great distances.

According to MacInnis (1995):

It is vitally important that the education systems in Canada be accessible, of high quality, and relevant to people's lives. What do students' think about their school experiences? Will they be able to judge the choices and opportunities that become available to them? (p. 11)

In answer to the question "How relevant do students find their education program?"

MacInnis (1995) reported the following: "A 1993 Statistics Canada survey of high school graduates showed that 80 percent believed their courses had been useful, 79 percent found most of their classes interesting, and 81 percent were satisfied with the variety of courses that were available" (p. 11). Finally in his report MacInnis couched his vision of the Canadian education system in the following statement:

We believe that the future of our society depends on informed and educated citizens who, while fulfilling their own goals of personal and professional development, contribute to the social, economic, and cultural development of their community and of the country as a whole. (p. 13)

Forecasting the future, MacInnis expressed the belief that in the years ahead Canada will need an increasing number of well-educated people—people who can solve the political, economic, and social problems that face society, and who can boost Canada's economy as a result of being well educated. In addition, the social and political problems that face the country will require thoughtful and informed consideration. Everyone will benefit if educational excellence can be made possible, not just for the few, but for all students. In Canada, the dropout rate among high-school students in public schools is approximately 33% (MacInnis, 1995), a very disturbing fact to ponder.

What happens to the 33% who are part of the statistical dropout rate? Do these persons eventually go to college? Do they enter the job market and find themselves useful employment? Do they leave high school with the necessary skills to enter the job market? Some of these dropouts cannot and do not aspire to attend college because they lack the necessary skills for entrance to postsecondary institutions.

This study discovered that a common theme running through the literature, relative to academic preparation in high school for entrance into college or university, is that institutions of higher learning are concerned that some high-school graduates are enrolling in college inadequately prepared for the rigorous and demanding programs of tertiary education. In a bid to address this concern, some high schools as well as colleges have instituted remedial courses and programs especially in English and Mathematics.

The Illinois State Board of Education and Illinois Board of Higher Education (1988) conducted a study in 1983 among students who were entering Illinois public universities, in response to concerns expressed by postsecondary institutions that there

were significant increases of remedial courses needed by students entering colleges and universities ill prepared. They also studied the universities' admissions policies. The Boards concluded that the adoption of minimum subject requirements for admission to baccalaureate programs by the universities was necessary in order to improve access to public postsecondary institutions for high-school graduates. They argued that this would increase chances for success in college for Illinois students. The Boards also stated in their report that improving the preparation of students for success in college and increasing the number of potential students who are appropriately prepared for baccalaureate studies along with expanding the choices of programs and majors that are available to college-bound students are major goals for both secondary and postsecondary (tertiary) education in North America. In other words, both levels of education are in tandem with each other as far as what needs to be achieved by high-school students. As a result of its findings, the Boards suggested a number of changes in the required courses that college-bound students need to complete in preparation for postsecondary studies (p. 8).

In the 1970s, colleges and universities in the United States required that graduating high-school students demonstrate competence in basic skills of writing, reading, mathematics, and other subjects. High schools were experimenting with curriculum. The college curriculum was undergoing change (Carnegie Commission on Higher Education, 1972) in an attempt to correct the problem of academically underprepared students. "This problem had been addressed as early as 1896 when John Dewey presented the conflicting demands for adequate preparation imposed on high

school students by colleges and universities, but the topic did not receive full national attention until the 80s” (Carter-Wells, 1989, p. 3).

Carter-Wells (1989) states that in 1980 The College Board, New York, conducted a study to consider this problem in terms of its historical, demographic, and social context. Some indicators of the problem that were cited were the decline in students’ college admissions test scores over 17 years in language, study, and computing skills, low minimum competency test results; the high-school dropout and unemployment rates, an overly diversified curriculum with a lack of integration of instruction from the high school to college level; and increasingly diverse student bodies with a large number of limited English-speaking students. “Three additional problems were cited: a high student-counsellor ratio with poor student advisement, secondary school finance problems, and teacher lay-offs with low morale” (p. 3).

The indicators are similar in the Canadian public school system. Like the United States of America, the concern of postsecondary institutions is that there are too many students who are not adequately prepared for postsecondary studies. Colleges and universities are claiming that students are entering without proper reading, writing, and mathematical skills, and therefore questioning the effectiveness of the high-school academic programs in preparing high-school graduates for higher education. Several reports on universal testing of students for postsecondary education have voiced concerns about the linkage between high school and the academic preparation for postsecondary programs. The high-school academic preparation is the foundation for postsecondary students and must be perceived to be solid, strong, and relevant. If the high-school program is to be effective in this preparation, it must provide the skills and knowledge

required to be successful in college or university. The transition from secondary school to postsecondary studies must be facilitated by education.

Fagan and Spurrell (1995) state:

Never in Canada's history has there been such an overriding concern with educational standards and academic achievement. The public is demanding that students leave school with a solid foundation in communication skills, mathematics, science, technology, and global understanding. The widely held belief that education is the key to a viable economy and global competitiveness has placed the system under great public scrutiny. National assessment and accountability efforts, designed to promote learning and measure the effectiveness of this country's education systems, are thriving. (p. 1)

In Canada, students who are adequately prepared and have completed a well-chosen set of courses at the high-school level have greater flexibility in choosing universities or colleges along with greater flexibility in selecting programs of study at the postsecondary level. In order to guarantee some measure of success, all things being equal, the academic program must be effective—it must meet its goals, one of which is to adequately prepare students for postsecondary studies. Many students have been limited in their choice of college or university or have been unable to pursue their choice of program. Many inadequately prepared college students have dropped out in frustration or have failed their courses. Many who did graduate from high school had such poor records that they could not go on to graduate or professional study (Carter-Wells, 1989).

Cox (1982) clearly states that institutions of higher education are dissatisfied with entering students' lack of skills and knowledge. In her bid to discover what can be done about this important concern, she investigated the kind of collaborative efforts that would be necessary on both the part of postsecondary institutions and that of the high schools. It is her belief that if postsecondary institutions should decide to enforce tougher

admissions standards that it may rule out some poorly prepared students, but would not solve the problem of inadequate preparation or ineffective high-school programs.

Cox (1982) found that, between 1976 and 1980, there were substantial increases in the number of college students enrolled in remedial mathematics and writing courses. Incidentally, she also discovered that most of the students in the remedial courses were in the top 12.5% of their high-school graduation class and met all of the university's admissions requirements. In 1979–80, the University of California spent an astounding \$5 million plus on remediation of basic skills deficiencies among undergraduates (Cox, 1982).

Mike Harris, Premier of Ontario, attempted to address similar concerns which were voiced by postsecondary institutions as well as businesses by setting up a Commission on Excellence to study Ontario's secondary school system. Similar Commissions have been appointed over the years in other provinces. In response to the Commission's recommendations, and in an attempt to stem the tide of continual complaints about the effectiveness of the high schools in preparing students for further studies, the Premier implemented a number of changes to the Ontario secondary school system that affected the students who enrolled in high schools in September 1999. This revised program is being dubbed the "New Secondary School Reform." Each succeeding year the next grade level will be the recipient of the changes that affect that particular grade level. Some of the changes include mandatory completion of a minimum of 40 hours of community service and the passing of a literacy test, which a student first writes in Grade 10 (*Ontario Secondary Schools [OSS]*, 1999). These changes and others are all geared to improve students' preparation for postsecondary studies. The revision calls for

more accountability both on the part of the secondary schools and the students. The program is more demanding and rigorous.

Academic preparation ranks high on the list of importance in the face of the challenge to adequately prepare students for college and/or university studies, and ultimately for the workplace. It is because of its importance that it is necessary for every education system, be it private or public, to examine and to continually evaluate the effectiveness of its academic program along with other parts of the school program. In Canada, there are several linkage programs from secondary school to college and university to help ensure a smooth and efficient transition. However, the assumption is usually that students have developed and mastered basic skills as well as study habits in the high school.

In a joint project in New Mexico, Morgan and Matthews (1987) conducted a study among college students who were enrolled in developmental and remedial courses. The study resulted in initiating a project to improve academic preparation of high-school students for college in New Mexico. It also highlighted the challenge of high schools to provide an effective academic program that adequately prepares a wide range of graduates for postsecondary education. The purpose of the study was to identify competencies needed by students who were entering college in New Mexico. The study found that too many students were entering college without the knowledge, skills, and attitudes necessary for success in college. Findings revealed that overall more than 40% of freshmen were enrolled in one or more remedial courses during the 1984 semester. It was concluded that there were three significant factors contributing to this high participation rate "lack of adequate preparation in high school, criteria used for

admissions and criteria used for placement into the courses” (p. 3).

In a related study, Page and Page (1984) researched principals’ perceptions of their role and how effective their academic preparation was for that role. Findings of the study revealed that the principals were quite satisfied with their academic preparation for their job positions. Though conducted at a different level, the study provides some parallels in the area of academic preparation as it relates to one’s performance and job placement.

The question of effective programming and adequate preparation for postsecondary studies has many sides and angles. High schools face some challenges in trying to meet the demands of the many and varied personalities that are in their school population. Jacobs (1985) conducted a study among 530 college freshmen at a large Midwestern university to elicit from them their perceptions of their academic preparation for college, the adequacy of their high-school preparation, and the skills they believed needed more emphasis in the high school. The sample was composed of students who had completed approximately one and one-half semesters of college work, and chosen from a wide variety of classes. Participation on the part of the student was completely voluntary and anonymity was guaranteed. The self-reported GPAs of the freshmen surveyed indicated that most had performed satisfactorily during their first semester of college. Forty percent had GPAs of B or better with another 45% receiving a GPA equivalent to a C or C+. Those students who took an academic preparatory curriculum in high school tended to receive significantly higher GPAs than the students in a general or career-oriented curriculum. In addition, those students with higher ranks in the high-school class received higher GPAs at the university. The students indicated a wide

variety of intended majors with business attracting the largest number (39%) (Jacobs, 1985).

Regarding the students' perceptions of their high-school preparation, almost half (48%) of the students believed that they "learned a lot" in most of their high-school subjects while 31% said they "learned a lot" in about half of their subjects. Forty-one percent of the freshmen said that most of the academic skills they needed to do well in college were deliberately learned in their high-school classes. A combined 39% felt that "few" to "about half" of the necessary skills were worked on in high school. Significant differences appeared in the responses received from females and males regarding the subject area in which they felt they received the best preparation. The freshmen recommended that the best way to prepare for college is to study hard in high school and to acquire good study habits (Jacobs, 1985).

Graduates of public and private schools differed significantly in several respects. Students from public high schools were more likely to agree that their high school should have been tougher and more demanding, that they would have learned more if there had been more discipline, that there should have been more required writing, and that they were not better prepared for college than were the students from private high schools.

Jacob's study (1985) seemed like a castigation of the public school system in that students felt there was not enough discipline and the school could have offered more challenging courses. The study pointed out a significant difference between private and public schools, and certainly is a boost for private schools who traditionally have had a reputation for being more disciplined than public schools, and more demanding of their students. One can hardly argue about the two factors "discipline" and "more challenging

courses” that were perceived by the students as translating into a better academic preparation for college. Yet, I have heard students in high school sometimes complain about the quantity of home assignments, and at other times about the strict discipline they claim to experience, particularly in private schools.

Using the Ontario secondary school system as an example, during the period examined by this study, it was assumed that where schools offered advanced-level courses, students who took those courses and acquired the minimum average for university entrance programs would most likely apply to universities to pursue degree programs of their choice. If students completed courses mainly at the general level of difficulty, it was assumed that those students were planning to enroll in community college programs to receive diplomas. In actual fact, it did not work that way, particularly in Ontario. Many students were interested in gaining university entrance and the numbers switched quickly around to more students wanting to take advanced courses and fewer at the general level than had previously been envisioned. Schools exercised the option to offer (at their discretion, if time allows) the “Advanced Placement” (AP) courses prepared in the United States of America at Princeton, New Jersey, for students wishing to enroll in colleges or universities in the U.S. The Advanced Placement courses are demanding, and students in Canada who wish to write the examinations must often receive additional tutoring since not all of the course content is included in regular course offerings (*OSSIS*, 1986).

The secondary program is similar in other provinces, according to the Student Transfer Guide (*Secondary Education in Canada*, 1983). However, when students complete their high-school diploma in Canada and choose to attend a university in the

United States of America, the level of difficulty chosen in high school courses makes little difference to their acceptance at universities or colleges. This is also true for enrollment at Seventh-day Adventist colleges and universities in the U.S.

In Alberta, Canada, Krahn and Lowe (1996) conducted a study of high-school graduates in that province in which they examined the students' educational achievements, further education plans, perceptions of the relevance of their high-school education, career goals, paid and volunteer work experience, and acquisition of work-relevant skills. Roughly 51% of them had grades in the 65-79% range. And 73% of them were in academic programs. When asked to evaluate their high-school education, 74% of them felt that their communication skills and reasoning skills had improved in high school. However, the study did not report the level of those skills upon graduation and how adequate or inadequate they may have been for entrance into the postsecondary institutions of their choice.

On behalf of the Alaska State Department of Education, the McDowell Group (1994) conducted a major six-part study on secondary education in rural Alaska (1993-1994). Part one of the study attempted to evaluate rural secondary education in Alaska, and is the part of the study in which I was interested, because it parallels this study's interest in academic preparation for college/university. The study examined the effectiveness of the students' educational experience in preparing them for college, trade school, and employment.

Approximately 300 surveys were mailed to students who had graduated from the Mt. Edgecumbe (boarding) High School since 1986. One hundred fifty-two (152) graduates completed the survey. The results of the survey revealed that 97% of Mt.

Edgecumbe's High School graduates believed that the quality of education received at MEHS was better than what they would have received in their home communities. Approximately half of the graduates (51%) indicated that the academic program of MEHS was of an acceptably high standard and that they would want their own children to attend that high school because of the academic challenges they received at Mt. Edgecumbe. Three-quarters (73%) of MEHS graduates felt that the school did a good job in preparing them to continue their education (McDowell Group, 1994).

The Alaskan study should be encouraging for Mt. Edgecumbe High School. However, it would have been particularly interesting if a comparison had been made between the Mt. Edgecumbe High School (a boarding school) and other day schools that were also included in the study but this was beyond the scope of the study. The Alaskan study did not examine students' perceptions but students' responses were based on their performance, which is the difference between the Alaskan study and this study. Students in the Alaskan study rated the program, for the most part, highly effective.

Another similarity between the Alaskan study and this study is the time lapse between the students' completion of high school and the time when the study was conducted. That approximately half of the students surveyed indicated that they would definitely want their children to attend the high school they attended because of their own academic experience makes a statement about the satisfaction and rating levels of Mt. Edgecumbe's alumni. This may suggest that perhaps there is a positive correlation between graduates' satisfaction level of the academic program and the decision to enroll their children at the school which they attended.

In a related study conducted by Hilde (1970) on the effectiveness of the Seventh-

day Adventist secondary curriculum in the Pacific Union Conference, California, in preparing its students for service, the survey method was used. Four different groups were involved in the study—educational, medical, ministerial, and upper-division college students from colleges within the Pacific Union Conference with a total of 787 respondents.

In seeking to discover how the different groups rated the effectiveness of the curriculum, Hilde (1970) found that although the largest percentage of responses were returned by alumni, they were generally not satisfied with the program of the school. Two other groups, ministerial and educational, rated the effectiveness of the program higher than the students, and the medical groups rated it the least effective. The most negative comments about the program came from alumni. Students often can point out flaws and see inconsistencies that are sometimes overlooked by other groups. When one is on the inside looking out, oftentimes the view is different. Hilde (1970) points out the need for improvements in the school's curriculum.

At the college level, but parallel nonetheless, is a study conducted by Karlen (1979) among Essex County College alumni. A mail survey method was used with her sample consisting of 326 graduates from the College. The purpose of the study was to collect demographic data, determine employment and educational status and anticipated needs for future services, as well as to solicit evaluations of personnel service programs and the quality of academic preparation provided at ECC. The survey obtained a 49% return rate (159 students). Most students (81%) planned to continue their education and 73% had already been accepted at other institutions. A relatively high percentage studies, (approximately 85%) indicated that ECC prepared them well for their future academic

although 27% of respondents requested personal or academic counselling.

The study by Karlen (1979) paralleled the interest of this study in the area of preparation for future studies and the fact that the study sought to discover students' perception of the quality of the academic preparation. It might have been interesting to discover what percentage of the 85% who indicated they were well prepared for future academic studies actually received academic counselling.

Gross and Frechtling (1983) conducted a rather extensive study among the 1981 high-school graduating classes of the Montgomery County Public Schools in Maryland, 1 year after graduation. The survey collected information about the postsecondary institutions the graduates planned to attend and the kind of jobs they hoped to obtain; the students' perceptions of the quality of the courses taken in high school and of their preparation in academic skill areas; and students' perceptions of the effectiveness of counselling services.

Of the 8,678 MCPS graduates to whom surveys were mailed, 2,627 returned surveys, which represented only a 30% rate of return. Gross and Fretchling (1983) stated that this response rate, while comparable to and even higher than that of other graduate surveys, was lower than desirable. Respondents were grouped by race, sex, and achievement level to determine the extent to which the respondent sample reflected the composition of the students in the class of 1981.

Low-achieving males were slightly underrepresented and White middle and high-achieving females were overrepresented in the respondent sample. Students with the highest achievement level responded most frequently (45% of the sample compared with 31% of the population), while those with low or no test scores responded least frequently

(30% of the sample compared with 47% of the population). The disproportions that are evident in this study, though unexpected, are often found in surveys of this kind, which places certain limitations on the generalizations that can be drawn, and must be kept in mind when interpreting the findings (Gross & Frechtling, 1983, p. 5).

The data showed that the vast majority (88%) of the graduates continued their education in postsecondary institutions, with 75% attending 4-year colleges and universities. Significant differences in postsecondary school attendance were found when the data were examined by race and sex. Black males and females and Hispanic females were less likely to continue in school after graduation than were students from the other race and gender groups. Nonetheless, well over 70% of these students reported that they were continuing their education. Those not attending school in 1981-82 were generally employed in business/office jobs, sales, or food/restaurant jobs.

With the exceptions of foreign languages and mathematics, MCPS courses were rated as "good" or "very good" by over 80% of the students responding; and on the average, courses were given a "good" rating. Students felt less prepared in the academic skill areas (writing papers, taking notes in class, using the library, completing homework, studying for texts, and managing time) than in the content areas. The counsellors received mixed ratings from the students.

Although the response rate for Gross and Fretchling (1983) was low, the findings of the respondents are of interest to this study because it sought to discover students' perceptions of the quality of the high-school courses taken, as well as perceptions of their academic preparation for college/university. The study would have been more reliable had a larger response rate been achieved. There seemed to be mixed messages on the

ratings given to courses. While most courses were perceived to be “good” or “very good,” there was a qualifier in that students did not feel as well prepared in the academic courses as in the content courses.

For decades everyone else besides educators have sought to give advice about education. Sometimes the advice has been worthwhile. Too often the advice of many of the “crusaders” has resulted in turmoil for educators. Too few of the critics of education have thought to engage in some positive action that perhaps might fix the very broken cisterns of which they complain.

As part of an Education Equality Project, the College Entrance Examination Board (1983), having learned of concerns by the colleges and universities that some undergraduate students were enrolling without having mastered some basic skills, decided that perhaps they could make a positive contribution in this area. The Board believed that their efforts would result in assisting students, parents, and teachers in the important preparation process for postsecondary studies. By involving teachers, the Board therefore embarked on researching and writing a book on preparation for college in which they described the knowledge and skills needed for effective work in six basic academic competencies: “reading, writing, speaking and listening, mathematics, reasoning, and studying” (para. 1). Also presented in the book are outlines of what college freshmen need to know and be able to do in the subject areas: “English, the arts, mathematics, science, social studies, and foreign languages” (para. 1).

The Board makes some suggestions for desired results of high school education—the learning that all students need to be adequately prepared for college. The book summarized the combined judgments of hundreds of educators in every part of the

country (The College Entrance Examination Board, 1983).

Longitudinal Studies

Longitudinal studies, though time-consuming, sometimes are often very effective in terms of results. This study reviewed some longitudinal studies that included some data related to academic preparation.

The U.S. Department of Health, Education, and Welfare conducted a major national longitudinal study of the high-school class of 1972 (1976). The study focused on students' perceptions of high school, and was designed to provide an ongoing and updated database containing statistics on a national sample of seniors as they moved out of the American high-school system into the critical years of early adulthood. There were actually four follow-up studies that examined different aspects relating to the graduating class of 1972. It began with an administered survey of these young adults conducted in the spring of 1972 prior to them leaving school. This was followed by the first of a series of periodic mail and personal interview follow-up surveys. The purpose of the first follow-up survey, which began in late October 1973 and ended in April 1974, was to obtain information about the young adults' basic educational and vocational activities in both October 1972 and October 1973, and their continuing or revised plans, aspirations, and attitudes.

Schools for physically or mentally handicapped students, schools for legally confined students, and schools (such as area vocational schools) where students were also enrolled in other schools included in the sampling frame were excluded from the study. The study design also excluded certain categories of students such as early graduates and adult education students. Students were asked to complete a questionnaire dealing with

factors relating to future education and career development. They indicated their perceptions of high school in the following areas: General School Characteristics, School Practices, Teaching Techniques, and Guidance Counselling. No question was asked about academic preparation, but concerning the quality of academic instruction, 66% indicated that it was good or excellent (U.S. Department of Health, Education and Welfare, 1976, p. 7).

The follow-up study conducted in 1973-1974 revealed that curriculum placement (the courses and program of study in which students enrolled) appeared to have virtually no relation to other types of postsecondary education. It also seemed to indicate that college attendance was as strongly related to ability (as measured by a composite score based on four aptitude tests) as it was to the high-school curriculum (U.S. Department of Health, Education, and Welfare, 1976).

The 1973-1974 follow-up study is of interest to me because, in Seventh-day Adventist secondary schools, teachers are aware of the fact that a large percentage of students choose to pursue postsecondary education immediately after completion of their high-school program. Student perception is their reality and could often be very revealing. Among students in Seventh-day Adventist schools a wide range of academic abilities surface, and there is the possibility that one could overlook students' abilities as they relate to performance. Even if a school offers an effective academic program, a student's ability could preclude the enrollment in certain courses. A student's limitations, study habits, and willingness to put forth maximum effort all influence performance results and possibly the student's perception of program effectiveness.

In the Salt Lake City School District, Utah, a high-school follow-up-survey,

conducted over a 6-month period, examined the effectiveness of the school's program by researching some different factors. The study examined the views, outcomes, and recommendations of members of the graduating classes of 1986–87, 1989–90, and 1990–91 of Salt Lake City School District's high schools (Hall, 1992).

In order to give every former student an opportunity to respond to and eliminate research problems associated with sampling size and bias, the survey instrument was sent to every former student. Of the 3,900 survey instruments mailed to potential respondents, 1,010 were undeliverable and 1,292 surveys were returned for an overall district response rate of 43.36%. Of the respondents, 53% were in school and working, 19% were in school without a job, and 19% were working and not in school. Fifty-two percent had pursued a college preparatory program while in school, and 64.3% had completed some postsecondary education below the bachelor's level (Hall, 1992, p. 9).

The respondents offered the following recommendations: increase practical "real-life" courses; increase career guidance in planning for the future, raise teacher expectations for students, increase college preparatory/advance placement programs, and increase emphasis on developing writing skills (Hall, 1992). The sampling procedure for this study seemed questionable and it is not recommended. Henry (1990) observes, "Using random selection removes subjective judgment from the selection of the sample and enhances credibility" (p. 33).

There was a series of three related studies conducted among alumni of the College of Staten Island to determine the current educational and employment activities of recent alumni. Two studies were on student attrition and student satisfaction. The third study was conducted by Picciano (1980) to determine the students' satisfaction with CSI in

preparing them for the above activities. The particular section of the study that is relevant to this study is the section on the school's ability to prepare the students for further education. The population selected for the study included all January, June, and August graduates of the 1979 school year. All students who received a degree were included in the study, and a questionnaire was mailed to them. Most of the population would have received their degrees approximately 1 year earlier than the survey distribution, which was conducted in April through June 1980. The 1979 alumni also represented a large enough population (1,548) to survey. Responses received totalled 836. Since these students were recent alumni, the expected return rate was 40–60% to which the study conformed by receiving a 55.3% response rate.

The study was concerned that college enrollment was declining and that the prediction for a possible turnaround in the trend was bleak. College professors and administrators felt that they had to defend the value of a college education, for they still believe that a college education is the key to employment. They realize that in order to attract students, colleges have to sell more rigorously their academic programs and the value of these programs.

The most important finding was that 55.8% of the respondents are continuing their education at the College of Staten Island (Picciano, 1980, p. 28). This is a very positive outcome and seems to suggest that their prior educational experiences were satisfactory. The result is therefore a credit to the institution. Similarly, if alumni from this study, who live in the area of the schools they attended, choose to send their children to those schools, that gesture would send a powerful message to stakeholders as well as to the society at large.

In contrast to the expressed concerns of the college professors and administrators in the United States, Canada in recent times, has been faced with some challenging questions about the value of university degrees. There was a slump in the hiring of persons with university degrees and an increase in the hiring of those who have completed 2 or 3-year community college diplomas. It appeared that the college skills were more practical and marketable. In light of the trends, some heated controversy ensued. Quickly the government and the universities began to engage in needs-assessment programs to determine what needed to be done and what modifications were forthcoming to equip university graduates with the skills they need in order to be employable and functional in society (MacInnis, 1995).

School-to-work transition is outside of the scope of this study, but Schneider, Seitchik, and Holdaway (1987) in conjunction with the Massachusetts Department of Education conducted a related follow-up study of the graduates of 1983 and 1984 that focused on school-to-work linkage. This study critically examined the part of the Schneider study, which sought to find out the students' perceptions of the academic training received through the vocational system. There were two primary components to that study. The first component bore no relation to this study. However, the second component was a survey of employers who directly supervised vocational education graduates. The objectives of this component were to measure overall levels of satisfaction with vocational graduates; measure the employers' perception of academic and technical preparation received by graduates; and compare graduates' perceptions and employers' perceptions along a number of related dimensions.

Of particular importance in the final portions of the survey was the quality of

technical and academic preparation received. The survey results indicated that technical and math preparation were, on average, rated quite highly by vocational education graduates. Four out of five gave their math education a favorable rating. Other academic subjects on the other hand were not perceived quite as favorably. Interestingly, employers were likely to rate graduates' academic preparation higher than the graduates rated their own academic preparation. This may suggest that since these graduates were taking technical/vocational subjects, perhaps they were actually weak in academic subjects or perceived themselves to be weak because they did not graduate from an "academic program."

Some additional points about the perceptions of vocational preparation must be noted. Female graduates generally rated both academic and technical offerings more positively than their male counterparts. Similarly, employers rated females higher than males with respect to both technical skills and academic preparation (Schneider et al., 1987).

Stavros (1991) conducted a follow-up study of 1989 graduates from the Detroit public schools. The purpose of the survey was to establish the graduates' occupational status at about 16 months after graduation, collect their perceptions of their high-school experiences, and record their postsecondary educational experiences. A survey questionnaire was used to collect the data. In order for a graduate to be considered a sample member, the student must have had a graduation code, a grade code range, a year-of-birth range, and enrollment in a high-school facility or program. There were 7,395 students whose records met these criteria and they became the sample of graduates. Questionnaires were mailed to all of them but only 23% (1,687) of the graduates returned

usable questionnaires, although the questionnaires were mailed out twice. As a consequence, it must be noted that the respondents are not a representative sample of the larger sample of graduates. However, Stavros's study provided some helpful insights for this study (Stavros, 1991, p. 10).

Regarding their high-school experiences, over 70% of the respondents said they had been in the college preparatory curriculum. Just under a third had participated in a co-op program, and one in five had availed him/herself of programs offered at one of the vocational technical centers. One in five felt that English was the one school subject that had helped them the most in their present situation, with slightly lesser proportions identifying business education or mathematics. When asked what school subject they would have liked to take more of, one-fourth chose computer courses, and fewer selected business education (15%) and mathematics (14%) (Stavros, 1991, p. 11).

Almost half of the students would have liked their high school to help them more in study habits. This response raises the question of its nurture. Other questions were related to career planning and job placement. School personnel were cited by just less than one-fourth as providing the most help in getting into a postsecondary educational program. The overwhelming majority of the respondents continued their education beyond high school. Only 1 in 10 did not further his/her education. Of those who did go on to postsecondary studies, 60% did attend a 4-year college or university (Stavros, 1991).

Stavros (1991) study engendered some curiosity about the validity of the study. First, the response rate was only 23%. Second, more of the respondents were likely to be female (71%) and younger (76%). Stavros points out that the respondents differed

statistically significantly from the total sample on a number of key descriptors, e.g., as cited above. Had there been more homogeneity in gender and age, perhaps the study would have been more generalizable.

Other Studies

A major research study of a highly diverse selected group of secondary schools in Canada was undertaken during the 1993-1994 school year. The Exemplary Schools Project is one of the largest educational research projects ever undertaken in Canada (MacKinnon, 1996). A total of 51 researchers (another source states 60) from across the country prepared 21 case studies. The Advisory Committee was comprised of 12 provincial and territorial government ministries responsible for elementary and secondary education and from national organizations of parents, trustees, teachers, and education administrators. The Canadian Education Association felt that this study was necessary because Canadian education faced a number of challenges in the 1990s that were of particular significance for secondary education.

The project, *Exemplary Schools in Canada: A Study of Effectiveness*, had two objectives:

1. To conduct research that would identify promising practices in a representative cross-section of Canadian regions and communities and provide information useful to provincial and school board policy makers about secondary schools or programs that offer significant evidence that students typically at risk of dropping out can be kept in school, achieve success and proceed to graduation.
2. To make a positive contribution to the improvement of secondary school student retention and achievement in Canada. (Gaskell, 1995, p. 12)

The study had no “particular construct or theoretical framework in terms of a definition of success, the evidence of success, and the factors that promote success”

(Gaskell, 1995, p. 23). However, the researchers allowed those involved in the schools to indicate through their perceptions what factors contributed to this success, and what obstacles and challenges they encountered.

Twenty-one schools were selected from over 260 nominations on the basis of their geographic distribution, type of community they served, and their school characteristics. A research team was assigned to each school. Each team spent a minimum of 20 days in the school collecting documents, observing the school, and interviewing key people in the school and the community. The schools, which were chosen from nine provinces and one territory, included 10 large urban schools with a diverse clientele, 7 small schools serving a primarily rural population, and 4 alternative schools. The set included both academic and comprehensive schools, minority-language schools, schools for Aboriginal students, large schools with over 1,500 students, and small schools with under 300 students (Gaskell, 1995).

Case studies were prepared, a national report was developed, a video produced, and a set of archives of resources established. The case studies and national report analyzed a wide variety of issues including the view of school success, links between knowledge and power, debates over issues of curriculum, social goals of schools, the role and work of teachers, patterns of teaching, and links with the community (Gaskell, 1995).

In the area of academic and social goals, the study found that academic success is determined largely by postsecondary entrance requirements and is defined in terms of the right courses and good grades. All schools, the study found, are preoccupied with developing and guarding a good reputation in the community (Gaskell, 1995). The study concluded that the pressure to graduate from high school and go on to postsecondary

education is increasing, particularly for economic reasons. Core academic subjects seem to offer the best opportunity for upward mobility, and performing well in these courses opens the door to further education. The study also found that some schools concentrate on the key academic courses, while others offer a wider choice. The smaller mainstream schools in the study “focus almost entirely on the core academic subjects” (p. 89).

Gaskell (1995) also states “In addition, each school offers a response particular to its context” (p. 89). However, “the high status of the academic courses is never far beneath the surface” (p. 102).

Among the policy implications for secondary schools in Canada, the study indicates “it is time for a serious re-thinking of secondary school curriculum . . . and closer links between the curriculum and the real-life context of secondary school students” (Gaskell, 1995, p. xii). Another implication of the study is that if high schools are to be more than “prep schools” for postsecondary institutions, they must strengthen their commitment to quality of opportunity to all students (Gaskell, 1995, p. xii).

Major restructuring of the curriculum has taken place in several provinces in the 1990s. The Council of Ministers of Education, Canada, has raised concerns about education, one major concern being the quality of schools. The Council asks whether the goals or intended outcomes of schools are clear and worthwhile, if the curriculum content is relevant and challenging, if expectations and standards are demanding, whether teaching is effective, and whether or not students are getting a good learning experience (Gaskell, 1995).

The study found that issues of the quality of education are not being ignored. At the national level the Council of Ministers of Education, Canada, has been looking for

ways to strengthen the links between research and practice. All provinces have been investigating issues related to the quality of education and looking at areas such as the core curriculum and a desire to improve standards, expectations, and ways to enhance access to learning and improve the effectiveness of instruction (Gaskell, 1995).

Regarding vocational/technical courses as part of the curriculum, Gaskell (1995) states:

The attempt to have more vocational knowledge incorporated into the curriculum is long-standing. In 1914, a federal royal commission recommended that schools expand their curriculum from the core academic subjects to include more technical and vocational options and the federal government offered money to the provinces to mount vocational programs in schools. In 1992, the Economic Council of Canada concluded that 'the options for the non-academic student have been neglected and . . . the general disrepute in which vocational programs are held is damaging. (p. 103)

The study found that most schools in the study have some sort of vocational curriculum, but for the most part it remains peripheral. In addition, Gaskell (1995) notes: "Schools try in all kinds of ways to connect students with the world of work and to offer practical, applied, or vocational as well as academic education. Some schools are trying to rethink and rehabilitate their vocational programs" (p. 103).

In the area of caring, motivation, and social learning, one teacher contact in the study made this comment: "What I'm trying to do is create a home for them. That's what it is. It's the physical, mental, emotional, social, and spiritual. That's what we do. We try to create a home for them here, a safe place" (Gaskell, 1995, p. 137). A parent had this to say: "The teachers treat every student fairly, not equally but fairly. . . . That's one of the things that makes this school successful. You have certain individuals who are willing to see to each [student's] needs" (p. 137). Gaskell (1995) remarks that in small,

homogenous schools, "creating a warm and personalized climate where social standards are shared seems relatively straightforward" (p. 139).

Another area of quality schools that the study examined was that of teaching and teachers and how communities of educators were built. The study found that the teachers in the schools in the study demonstrated a sense of commitment, were willing to spend extra time with students, and their teaching was "lively, engaging and informed" (Gaskell, 1995, p. 182). The study also found that where the schools have a good reputation in the community it is because of the interest that teachers take in the students and the care with which they approach the students, parents, and the community. Educators also emphasized the importance of active involvement by students, and the necessity to adapt teaching to needs and learning styles of various students.

According to Epstein (1987, 1990; as cited in Gaskell (1995), a substantial body of research suggests students do better when their parents are involved with their education. The study found that the secondary schools in the study want parent involvement, although they define it in different ways. In some communities, school staff wonder why parents do not participate more. Gaskell (1995) notes: "Relationships with parents are easier in small, homogeneous communities where values are shared" (p. 223).

As far as academic outcomes are concerned, in the case studies, the study found that examination results are the academic indicators with most force for schools. Achievement scores on standardized academic tests and students' results on examinations are the indices that matter most. "They are the focus of most accountability efforts" (Gaskell, 1995, p. 256).

The findings of the study on Secondary (Exemplary/Quality) Schools in Canada in the 90s, aptly demonstrate the application of the Total Quality Schools model with its five pillars (Arcaro, 1995b). The main reason for the study is that the Canadian Education Association is committed to and believes in continuous improvement (one pillar), and in order for continuous improvement to be implemented, there must be some measurement (a second pillar) of the system. The method used for measuring exemplary schools was the case study. Merriam (1988) states that the case study is a research design that can be used to “study a phenomenon systematically” (p. 6). The researchers felt that this research design was the most appropriate method for the kind of information that they wanted to elicit from the participants. The study revealed that teachers in the schools were committed (a third pillar), and there was total involvement (a fourth pillar) from all stakeholders—parents, teachers, community, and students. The customer focus (fifth pillar) was obvious since delivery of services to the students was an integral part of the study.

The Royal Commission on Learning in Ontario, Canada, produced a report on secondary schools with some recommendations for change. Evans (1995) states that in order to implement change, a clear vision and a statement of purpose, which focuses on making changes in the curriculum and in instructional process to improve student-learning performance, are needed, as well as a high level of commitment to the vision by the majority of the teaching staff along with students and parents, and wide participation of school staff in decision making on planning and implementing changes (p. 65).

In light of the recommended restructuring of Ontario’s secondary education curriculum, Denby (1995) observes:

Effective system planning for change must take into account what we know about people, about organizations, and about learning. . . . Practice enlightened by theory is a powerful force. . . . At the system level, the leadership challenge lies in finding the balance between edict and invitation, menu and mandate, conformity and chaos. (pp. 14-15)

Restructuring and change can hardly be efficiently accomplished without a system vision that focuses on its customers and enlists total involvement of all parts of the system. Dilamarter (1995) reports that a committee which reflected total involvement at every level of the school system, was formed to design recommendations for change to the secondary school curriculum, and this change focused on the student in the classroom. Dilamarter (1995) cites *Towards Tomorrow*: “It takes an entire village to educate a child,” and observes that the report focuses on the school’s mandate, and stresses the need for partnerships with parents, individuals, and organizations. It also emphasizes technology, particularly computers (p. 13).

At the University of Western Ontario, a professor of computer science shook his head in disbelief because a first-year student showed up in his statistics class and, according to Morris (2000), Professor Dewdney reported: “This kid didn’t even know what an average was. We’re talking about basic statistics which they should have had in high school. But it’s just not there” (para. 2). This was not the only case of apparent inadequate preparation for university, but Morris (2000) also cites another incidence of a first-year English Literature student at the University of New Brunswick, Fredericton, who was asked to analyze “Alden Nowlan’s poem, *The Bull Moose*.” The student did not know that “bull moose” meant male moose but thought that the animal was a “cross between a bull and a moose” (para. 4), and therefore had an identity crisis.

Another student who enrolled in university was fresh from high school and quite

confident of her academic abilities. She was stunned when her grade for her first attempt at writing an essay resulted in a D. At the time of writing, Morris (2000) stated that the student was currently enrolled at the University of New Brunswick in pursuit of a master's degree in education. The student, however, reflecting on the D received for the essay stated that she was "devastated." "I realized that in my entire time in high school, I had written only one major essay, a history essay, and that was it. I really didn't have any experience in writing" (para. 8).

According to Morris (2000), many Canadian universities now offer remedial classes to help students bring up their skills to postsecondary levels, but for many students it is a long, hard haul. University administrators are requesting that professors be tolerant since demographics are changing and postsecondary institutions are now open to a wider proportion of the population rather than just the elite.

Deanne Dennison, head of the Canadian Association of University Registrars, observes: "Universities are more aware today that students come with different backgrounds and different skills development" and they want to work with students more quickly (Morris, 2000, para. 19). The incidence of inadequately prepared high-school graduates who attempt to pursue postsecondary studies could possibly be reduced if at the high-school level more stringent measures were aimed at assisting students with mastering the basic writing, reading, and mathematical skills. Morris (2000) further states that school teachers and professors point to all kinds of weaknesses in the school system, from "no-failure" policies, to crowded curricula where all kinds of extras are plugged in at the expense of basics.

In another related study on determinants of postsecondary participation, Butlin

(1999) found that high-school graduates who failed high-school math had lower odds of attending university versus not participating in postsecondary education, although the odds were not reduced for participating in community college or trade-vocational education. The study also found that same pattern for high average grades in high school. In addition the study found that there was a link between parents' educational attainment level and its influence on their childrens' participation in postsecondary education. Further, "high average grades in high school, the absence of difficulties with high school math and English, and not failing a grade in elementary school are also strong predictors of university participation versus no participation" (p. 26). Butlin (1999) also found that high-school graduates who used French most often had slightly lower odds of attending university but higher odds of attending college and trade-vocational than high-school graduates who spoke English most often. In additional, the study found that high-school students who attended rural high schools had lower odds of attending postsecondary institutions than those who attended high schools in urban areas.

A Toronto professor conducted a survey which revealed that high-school graduates entering her Canadian Studies courses were "spectacularly ill-informed about Canadian history" (Moore, 1997/1998, p. 53). The professor lambasted the high schools for failing to prepare students for postsecondary studies. She asks, "Is it too much to expect high-school graduates to know the date of this country's founding?" (p. 53). Moore (1997/1998) in critiquing the professor's survey points out that the survey did not ask why Canadian universities continue to accept students if they are so unprepared for higher education. He further states that when universities seem to welcome any warm

body that will become an income-unit. he questions what incentive is in place for high schools to expect more from their graduates.

Systems Approach in Education

Kaufman (1988) states that a systems approach to educational management allows the identification of three levels in planning: Middle-level planning which relates to inputs, processes, and products such as planning a curriculum in math, comprehensive-level planning such as planning for an entire high school, and holistic planning which is the widest scope such as an entire district strategic plan. Planning at the middle level for increased mastery of Mathematical skills or reading and writing skills will lead to increased results and ultimately better preparation of high-school graduates for postsecondary education.

Kaufman (1972) explains:

It is of critical importance to educational success that the individuality of each person be considered and preserved in the design and application of any functional educational process. Planning and the tools of a system approach focus on the learner and assure that each one's ambitions, capabilities, fears, hopes, and aspirations are considered and maintained. (pp. 2-3)

This is what in Arcaro (1995b) model is called the customer focus pillar. Concerns about mastery of basic skills in high school and students' preparation for postsecondary studies will take into consideration and indeed focus on effectively planning how best to meet the needs of students so that the chances of them being adequately prepared will be greater than ever.

A systems approach is a process for planned change but the process itself and its outcomes will be questioned. A school that is committed to continuous improvement will adopt an action-oriented systems approach to education. This requires "systematic and

formal planning, design, implementation, evaluation, and revisions” (Kaufman, 1972, p. 4).

There are four parts of the whole system-analysis planning: Mission analysis, which states the overall goals and measurable performance requirements for the achievement of system outcomes (e.g., adequate preparation of high-school students for postsecondary education); function analysis, which identifies and defines what is to be done to get each of the milestones in the mission analysis accomplished; task analysis, which is the “arbitrary end-point of the analysis of what is to be done. It differs from mission and function analysis only in degree, not in kind” (Kaufman, 1972, pp. 17-18). Methods-means analysis identifies possible strategies and tools for achieving each performance requirement.

Wohlstetter, Kirk, Robertson, and Mohrmann (1998) put their own slant on systems design and use the term “school-based management” (p. 46). They purport that this type of planning leads to innovation and performance improvement (which is what each education administrator presumably wants). They state: “Actively restructuring schools evidenced an ongoing dialogue about the school’s purpose, vision, and model of education” (p. 48). This is total involvement and demonstrates connectedness among participants. The connection also includes regular information on how well the school is doing—this is measurement (p. 48).

Summary

The literature review began with the historical foundations of Ontario, British Columbia, and the Prairie Provinces. It continued with a short history of the development of the public school system and secondary education in Canada. This was followed by a

short review of the development of Seventh-day Adventist education in Canada and of Seventh-day Adventist secondary schools. Next, issues and short studies were reviewed followed by longitudinal studies as they relate primarily to academic preparation of high-school students for postsecondary studies. Other studies and how the systems approach in schools can be applied completed the literature review.

The literature review revealed different findings about students' perceptions and performance at both the high-school level and, in some cases, at the college level. Some of the literature seemed to highlight the need for remedial programs in high schools to assist in the academic preparation for college/university studies. Having drawn the former conclusion, not all studies revealed that remedial courses were a factor in the preparation of students, although there seemed to be some linkage between remedial programs and the expected placement in college/university programs. A positive correlation also seemed to exist between those students who were enrolled in advanced placement courses or more academic courses and preparation and acceptance to the college/university of their choice. Some students' performance seemed to be linked to their socioeconomic status.

Other studies were interested in discovering what high-school alumni did after graduation and how well they were performing in their jobs. Most studies included a section on their survey for alumni to rate the high-school academic program. Results varied, and therefore the literature is not conclusive about the concerns of the colleges and universities regarding inadequate preparation of high-school graduates; however, even in the late 90s and in the year 2000 in Canada, some concerns about inadequate preparation of high-school students for postsecondary studies are being expressed.

A major research project on secondary schools in Canada was conducted in an attempt to discover indicators of exemplary (quality) schools. The Canadian Education Association conducted this project out of concern for secondary education as it relates to quality of schools. The Association believes that the findings of the study have several implications for policy makers in the Canadian public secondary education system.

In some studies, alumni perceived their high schools to have prepared them well for postsecondary studies, while others rated their preparation as moderately effective. Graduates from some technical/vocational courses tended to secure jobs after graduation much quicker than those who had taken more academic courses. However, the technical/vocational graduates in some studies tended to perceive their basic academic skills as poor.

The response rate among high-school graduates was quite unreliable—high in some instances and in others, fairly low. This highlights the challenge of surveying students who have graduated and changed their place of residence so that it is difficult to maintain an accurate mailing list of that type of population who can be very mobile. The longer the time lapse between the students' graduation date and a survey, the greater the probability that mailing addresses would be inaccurate, because of mobility among graduates.

Systems-design planning (approach) entails the establishing of a vision, a mission, goals, and objectives. In order to carry out mission analysis, function analysis, task analysis, and method-means analysis, Arcaro's model for Total Quality Schools with its five pillars (customer focus, commitment, continuous improvement, measurement, and total involvement) must all be utilized. The literature review indicated the application of

both the systems theory and five pillars of quality by various researchers to varying degrees.

CHAPTER III

METHODOLOGY

The purpose of this study was to examine the effectiveness of the high-school academic program in preparing graduates for postsecondary education, as perceived by alumni from four Seventh-day Adventist senior high schools in Canada. It seems axiomatic to posit that the high-school preparation could make a significant difference in the way students approach their studies and how well they apply themselves to postsecondary studies. The graduates' perception determines, to a large extent, the type of advertisement they give to the school system. Enrollment could increase or decrease depending on the impressions students make on others while they are enrolled in school, and when they graduate.

The four Canadian Seventh-day Adventist high schools represented in this study are senior academies--two are dormitory schools (students live in residence on school premises), and two are day school schools. They are located in the provinces of Ontario, British Columbia, and Alberta. In the study the schools are numbered 1-4 to protect their identity.

Description of the Target Population

The target population consisted of graduates (alumni) who have completed their

high-school diploma and graduated from any of the four selected Seventh-day Adventist senior high schools in Canada during the years 1986-1992. Graduates who attended any of the four Seventh-day Adventist high schools in this study but did not successfully complete the requirements to receive the high-school diploma did not qualify to be part of the population.

The study targeted the period 1986–1992. During this time, provincial changes were being made in the diploma requirements for students graduating from high schools. The Ontario Ministry of Education explained that changes were being implemented in order to meet concerns about inconsistencies in marks across the schools, and that there was need for accountability in the system. The high schools in Ontario offered their students the Ontario Secondary School General Diploma (OSSGD—1986-1990) and, from 1991, the Ontario Secondary School Diploma (OSSD) (*OSSIS, 1986*). In addition, students also received a diploma which indicated that they graduated from a Seventh-day Adventist school. In order to receive that diploma, students needed to take a religion course each year that they attended the school (*North American Division Education Code, 1995-96*). In British Columbia emphasis was being placed on performance evaluation of students. The B.C. Ministry of Education claimed that their changes were being made in response to public concerns, and that more accountability was needed to the public by the school system. In Alberta, the emphasis was on learning outcomes. The Alberta Ministry of Education felt the need to focus on learning outcomes versus the process of learning (Fagan & Spurrell, 1995). In addition, this period was selected partly because I was appointed as a Guidance Counselor in Ontario and developed a keen

interest in the program of study as prescribed by the Ontario Ministry of Education for completion of the high-school diploma.

The 7-year period seemed a reasonable amount of time to evaluate the effectiveness of the high-school academic program based on the perception of the alumni who had graduated and proceeded to the postsecondary level (college or university). All of those graduates would have possibly completed at least a diploma or a Bachelor's degree or received some other type of training, assuming that they did not drop out of the respective programs of study in which they enrolled. Others may have completed a master's degree, and still others could have completed a doctorate.

Canada is known for its multiethnic, multicultural mix of peoples. Therefore, at each of the four high schools in this study the cultural mix could have included any combination of the following: Black Canadians of West Indian origin, West Indian Blacks, Canadians of East Indian origin, Canadians of Chinese or Filipino origin, White Canadians, Native Indians, as well as other ethnic origins. However, the respondents reflected mainly Black Canadians of West Indian origin (landed immigrants, citizens by choice or by birth) and White Canadians (from a variety of ethnic origins—citizens by choice or by birth). The Black Canadian groups were collapsed into one group. The ethnic groups other than Blacks and Whites were represented by less than 10; therefore it was not statistically sound to include them in the sample.

Sampling Procedures

A simple random sampling procedure was followed. All graduates from four of the nine Seventh-day Adventist high schools who completed the high-school diploma requirements in their province during the years 1986–1992 qualified to be part of the

population sample if they pursued postsecondary education. Each alumnus had an equal chance of being selected to complete a self-administered survey form. The population size was 1,020 persons. Every fifth person from the graduates for each year 1986, 1987, 1988, 1989, 1990, 1991, and 1992 was randomly selected providing a possible sample of 204 alumni.

The study originally attempted to use as the target population, graduates from the nine Seventh-day Adventist senior high schools in Canada. However, only the four largest ones had lists of their graduates. The study therefore had to use the available population from the four high schools, which supplied alumni listings. The end result produced a fairly balanced sample in terms of geographic location—two schools were located in Eastern Canada and two were in Western Canada. In addition, as was mentioned before in this study, two of the schools were day schools (students lived off campus and attended school during the day), and two were dormitory schools (students lived on campus, attended school, and were allowed periodic leaves to visit relatives or friends).

Lists of alumni with their addresses were secured from the principals via the Development Officers of the four high schools. Each potential respondent was mailed a cover letter (see Appendix 1), the survey instrument (see Appendix 2), and graduates in Canada also received a postage-paid envelope for returning the survey form. After the initial mailing of the survey form, there were three follow-ups to the alumni. For those envelopes which were returned with no indication of a change of address, a revised cover letter was sent. For those envelopes returned stamped “undeliverable,” “moved,” or “no such address,” the high schools were contacted and new mailing lists requested. Only

one high school responded. Personal phone calls were made to some persons who initially comprised the sample. Internet searches for all unused returned surveys were conducted to locate new addresses for alumni, in an attempt to increase the response rate.

The expected rate of return for this study was 100%, but based on some studies conducted among similar populations (high-school alumni), this study was satisfied with an initial response rate of 42.15%. However, although 86 questionnaires were completed and returned, 4 were rejected because they did not meet the criteria for inclusion in the sample, leaving a total of 82 usable responses out of 204 that were mailed. The study analyzed data using the 40.19%. One hundred eighteen (118) questionnaires were returned as undeliverable.

Two similar studies, a follow-up survey conducted by Slark and Bateman (1982) and a 1978 graduate follow-up study by Karlen (1979), yielded response rates of 46% and 49% respectively. Another follow-up study of a high-school class conducted 1 year after graduation yielded a response rate of 30% (Gross & Fretchling, 1983). A fourth follow-up study of high-school graduates conducted in the Michigan public school system by Stavros (1991) yielded a 23% rate of return. Picciano's study of alumni 1 year after their graduation yielded a response rate of 29.9% (Picciano, 1980).

Instrumentation

Several types of survey instruments from a variety of studies were examined. Some of the instruments included questions and/or statements on some areas that were irrelevant to this study, e.g., careers followed or jobs pursued. After scrutinizing those instruments, it was decided that for purposes of this study, a self-administered, 5-point,

Likert-type survey instrument on which the respondents would rate their responses from 1-5, strongly disagree to strongly agree, would best serve its purpose.

The decision to use the survey method for this study was based partly on the fact that the graduates were no longer available as a group of students, and could not be found in one place. Rather, they were scattered all over North America, China, England, Bahamas, the Caribbean, and perhaps elsewhere. After examining other possible methods of conducting the research, and some similar studies conducted among alumni, it was decided that this method was the most practical, as well as the most cost effective.

The survey was adapted and modified from instruments used in four studies: McDowell Group, 1994; Hall, 1992; Picciano, 1980; and U.S. Department of Health, Education and Welfare, 1976. The instrument was then formulated using the research questions and hypotheses as guides in order to facilitate the efficient collection of the required data on graduates' perception about the academic preparation they received in high school for postsecondary studies.

The instrument consisted of a one-page survey form, which was divided into three sections: the first section contained 18 statements that are aspects of a high-school academic program and part of the graduates' high-school experiences. The second section contained five statements designed to collect demographic information; to obtain information on whether or not the graduates proceeded directly to college or university; whether or not they took additional high-school courses before attending college or university; and whether or not they attended private or public university or college. The third section of the survey invited the graduates to give comments or suggestions on improvement and/or enhancement of the academic quality of the high-school program.

This section was included to provide an opportunity for respondents to give comments and suggestions about areas of concern in the survey (see Appendix 2).

A non-probability, convenience sample, comprised of six alumni (three females and three males) conducted a pilot test of the survey instrument to determine its face as well as its content validity. Henry (1990) states that a “convenience sample is a group of individuals who are readily available to participate in a study” (p. 18). “Nonprobability samples are used for many research projects. These samples can be chosen for convenience or on the basis of systematically employed criteria” (p. 17). “Nonprobability sampling is a useful and expedient method of selecting a sample in certain circumstances. In many situations it is appropriate, and in some cases it is the only method available” (p. 23).

The six alumni were selected because of the following criteria: (1) they had all graduated from one of the schools in the study during the years 1986-1992; (2) they represented both genders; (3) they represented four of the ethnic groups that reflected the enrollment of the schools during the period examined by this study (Filipinos, Canadian Blacks, West Indian Blacks, Canadian Whites); (4) they all proceeded to postsecondary studies; (5) four of them had attended postsecondary institutions immediately after high school and two had taken additional high-school courses prior to attending postsecondary institutions; (6) four of them had attended private postsecondary institutions and two had attended public institutions; (7) their proximity to the researcher.

Each participant completed a survey form. Following this exercise, the group came together to discuss their impressions and understanding of the questions, and to

identify any flaws or ambiguity in the survey. Suggestions were made for correction, clarification, or modification to the instrument.

Data Collection Procedures

The Director of Education, Mr. Mike Lekic, at the Seventh-day Adventist Church in Canada was personally contacted, and he gave his verbal support and consent to conduct the study. A letter was sent to the principal of each of the four schools. The letter requested permission to obtain mailing addresses of graduated alumni for the years 1986–1992 from the school's Development Officer. Included in the letter was the title of the study and a promise to share results of the study, if the principal indicated a desire to receive them (see Appendix 1).

The self-administered survey, along with a covering letter and a self-addressed stamped envelope (for Canadian residents), were mailed to each potential respondent. Each survey form was coded by school, the year the student graduated, and an assigned number which held no significance, except to indicate the order in which the coding occurred. A matching code was placed on each return envelope.

Using Microsoft Word Excel software, the responses to the survey were compiled into a table. The data were analyzed using The Statistical Package for Social Sciences (SPSS) employing the following procedures:

1. Mean scores and standard deviation scores were calculated on responses to all 18 statements.
2. Analyses of Variance (ANOVA) were calculated to determine differences between the perceptions of the two groups of graduates categorized on the basis of ethnic origin, gender, those who took additional high-school courses prior to attending

postsecondary institutions and those who did not, those who attended postsecondary institutions immediately after high school and those who did not, and those who attended private or public institutions.

This study attempted to generate data to answer the following research questions:

1. What is the graduates' perception of the various aspects of their high-school academic program? To answer this question the mean scores and standard deviation scores of the responses were calculated. The respondents were instructed on the survey form to indicate their choices from 1=strongly disagree to 5=strongly agree. Using a scale of 1-5, graduates' perception of the effectiveness of the academic program in preparing them for postsecondary studies was interpreted as 1-2.5, minimally effective, 2.51-3.5, moderately effective, and 3.51-5, highly effective. All 18 statements (representing 18 aspects of the academic program) were rated using the above scale and the responses from the Likert-type scale.

2. Are there differences in the graduates' perception of the effectiveness of the academic program based on demographic factors? Using the data generated from the respondents' perception rating of the effectiveness of 18 aspects of the academic program this question was answered by testing null hypotheses 1-36.

3. Are there differences in the perception of the effectiveness of the academic program between graduates who take additional high-school courses prior to attending postsecondary institutions, and those who do not take additional courses? Using data generated from the respondents' perception rating of 18 aspects of the academic program, this question was answered by testing null hypotheses 37-54.

4. Are there differences in perception of the effectiveness of the academic

program between graduates who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school? Using data generated from the respondents' perception rating of the effectiveness of 18 aspects of the academic program, this question was answered by testing null hypotheses 55-72.

5. Are there differences in perception of the effectiveness of the academic program between graduates who attend private postsecondary institutions and those who attend public postsecondary institutions? Using data generated from the respondents' perception rating of the effectiveness of 18 aspects of the academic program, this question was answered by testing null hypotheses 73–90. The standard set for rejecting the null hypotheses was any level of significance less than .05.

Hypotheses

The study generated data which resulted in a critical analysis of the high-school academic program which is the foundation for postsecondary studies in colleges and universities. The hypotheses tested are here presented in null form:

Hypothesis 1. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: Curriculum offerings were sufficient.

Hypothesis 2. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: Courses were too difficult.

Hypothesis 3. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: School didn't offer the courses I wanted.

Hypothesis 4. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: More assistance was needed for students who were experiencing difficulty with courses.

Hypothesis 5. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: School needed more emphasis on academics.

Hypothesis 6. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: School needed more emphasis on vocational and technical courses.

Hypothesis 7. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: Library facilities were adequate.

Hypothesis 8. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: Classroom environment was conducive.

Hypothesis 9. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: Student guidance for course selection was adequate.

Hypothesis 10. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: Teachers were readily available to assist students with their course work.

Hypothesis 11. There is no difference between males and females in their

perception of the effectiveness of the academic program as it relates to this statement:

The quality of instruction was adequate.

Hypothesis 12. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: My study habits were good.

Hypothesis 13. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: Teachers were caring and supporting.

Hypothesis 14. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: Teachers were well qualified to teach their courses.

Hypothesis 15. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: My parents provided good academic help.

Hypothesis 16. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: The school's communication with parents was adequate.

Hypothesis 17. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: Academic preparation for post-secondary studies was adequate.

Hypothesis 18. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: I felt better prepared than the students I met from public schools.

Hypothesis 19. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: Curriculum offerings were sufficient.

Hypothesis 20. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: Courses were too difficult.

Hypothesis 21. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: School didn't offer courses I wanted.

Hypothesis 22. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: More assistance was needed for students experiencing difficulty with courses.

Hypothesis 23. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: School needed more emphasis on academics.

Hypothesis 24. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: School needed more emphasis on vocational and technical courses.

Hypothesis 25. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: Library facilities were adequate.

Hypothesis 26. There is no difference between ethnic origins in their perception

of the effectiveness of the academic program as it relates to this statement: Classroom environment was conducive to learning.

Hypothesis 27. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: Student guidance for course selection was adequate.

Hypothesis 28. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: Teachers were readily available to assist students with their course work.

Hypothesis 29. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: The quality of instruction was adequate.

Hypothesis 30. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: My study habits were good.

Hypothesis 31. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: Teachers were caring and supportive.

Hypothesis 32. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: Teachers were well qualified to teach courses.

Hypothesis 33. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: My parents provided good academic help.

Hypothesis 34. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: The school's communication with parents was adequate.

Hypothesis 35. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: Academic preparation for postsecondary studies was adequate.

Hypothesis 36. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: I felt better prepared than the students I met from public schools.

Hypothesis 37. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: Curriculum offerings were sufficient.

Hypothesis 38. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: Courses were too difficult.

Hypothesis 39. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: School didn't offer the courses I wanted.

Hypothesis 40. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to

attending postsecondary institutions and those who do not take additional courses as it relates to this statement: More assistance was needed for students who were experiencing difficulty with courses.

Hypothesis 41. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: School needed more emphasis on academics.

Hypothesis 42. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: School needed more emphasis on vocational and technical courses.

Hypothesis 43. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: Library facilities were adequate.

Hypothesis 44. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: Classroom environment was conducive to learning.

Hypothesis 45. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to

attending postsecondary institutions and those who do not take additional courses as it relates to this statement: Student guidance for course selection was adequate.

Hypothesis 46. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: Teachers were readily available to assist students with their course work.

Hypothesis 47. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: The quality of instruction was adequate.

Hypothesis 48. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: My study habits were good.

Hypothesis 49. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: Teachers were caring and supportive.

Hypothesis 50. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: Teachers were well qualified to teach their courses.

Hypothesis 51. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: My parents provided good academic help.

Hypothesis 52. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: The school's communication with parents was adequate.

Hypothesis 53. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: Academic preparation for postsecondary studies was adequate.

Hypothesis 54. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: I felt better prepared than the students I met from public schools.

Hypothesis 55. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it relates to this statement: Curriculum offerings were sufficient.

Hypothesis 56. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately

after high school and those who do not attend immediately after high school as it relates to this statement: Courses were too difficult.

Hypothesis 57. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it relates to this statement: School didn't offer the courses I wanted.

Hypothesis 58. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it relates to this statement: More assistance was needed for students who were experiencing difficulty with courses.

Hypothesis 59. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it relates to this statement: School needed more emphasis on academics.

Hypothesis 60. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it relates to this statement: School needed more emphasis on vocational and technical courses.

Hypothesis 61. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it relates to this statement: Library facilities were adequate.

Hypothesis 62. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it relates to this statement: Classroom environment was conducive to learning.

Hypothesis 63. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary secondary institutions immediately after high school as it relates to this statement: Student guidance for course selection was adequate.

Hypothesis 64. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: Teachers were readily available to assist students with their course work.

Hypothesis 65. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: The quality of instruction was adequate.

Hypothesis 66. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: My study habits were good.

Hypothesis 67. There is no difference in perception of the effectiveness of the

Academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: Teachers were caring and supportive.

Hypothesis 68. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: Teachers were well qualified to teach their courses.

Hypothesis 69. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: My parents provided good academic help.

Hypothesis 70. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: The school's communication with parents was adequate.

Hypothesis 71. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: Academic preparation for postsecondary studies was adequate.

Hypothesis 72. There is no difference in perception of the effectiveness of the

academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: I felt better prepared than the students I met from public schools.

Hypothesis 73. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: Curriculum offerings were sufficient.

Hypothesis 74. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: Courses were too difficult.

Hypothesis 75. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: School didn't offer the courses I wanted.

Hypothesis 76. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: More assistance was needed for students who were experiencing difficulty with courses.

Hypothesis 77. There is no difference in perception of the effectiveness of the program between those who attend private postsecondary institutions and those who

attend public postsecondary institutions as it relates to this statement: School needed more emphasis on academics.

Hypothesis 78. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: School needed more emphasis on vocational and technical courses.

Hypothesis 79. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: Library facilities were adequate.

Hypothesis 80. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: Classroom environment was conducive to learning.

Hypothesis 81. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: Student guidance for course selection was adequate.

Hypothesis 82. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: Teachers were readily available to assist students with their course work.

Hypothesis 83. There is no difference in perception of the effectiveness of the

Academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: The quality of instruction was adequate.

Hypothesis 84. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: My study habits were good.

Hypothesis 85. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: Teachers were caring and supportive.

Hypothesis 86. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: Teachers were well qualified to teach their courses.

Hypothesis 87. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: My parents provided good academic help.

Hypothesis 88. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: The school's communication with parents was adequate.

Hypothesis 89. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: Academic preparation for postsecondary studies was adequate.

Hypothesis 90. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: I felt better prepared than the students I met from public schools.

Limitations of the Study

This study was conducted among alumni from four Seventh-day Adventist senior high schools in Canada—two dormitory schools, and two day schools. Two were from Eastern Canada, and two were from Western Canada. All the subjects in the sample graduated from the high schools and proceeded to either public or private universities or colleges where they pursued postsecondary studies.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

The purpose of this study was to determine the effectiveness of the high-school academic program in preparing graduates for postsecondary education, as perceived by alumni from four Seventh-day Adventist senior high schools in Canada. Of the 204 survey forms that were mailed to potential respondents, 82 usable ones were completed and returned--29 males and 53 females.

Two categories of data were collected to answer five research questions. The quantitative data consisted partially of mean scores and standard deviation scores generated from respondents' rating of the items on the survey form used to answer the first research question. The other research questions were answered by testing 90 hypotheses using analyses of variance.

The qualitative portion of the data, which consisted of comments and suggestions regarding the effectiveness of the high-school academic program, was used to assist also in answering question 1. The comments and suggestions were written in the third section of the survey and were related to the 18 statements, which represent aspects of the high-school academic program. Of the 82 survey forms that were returned, 43 (approximately 52%) of the respondents wrote comments and suggestions regarding their experiences as

they relate to the effectiveness of the academic program. This subjective evaluation evaluation of the academic high-school program from the survey respondents was used by this study for comparison with their objective evaluation of the academic program provided in the quantitative data. The entire data set of comments and suggestions may be found in Appendix 2. Each respondent was assigned a number; when respondents are quoted in the following material the #'s provided at the end of the quotations are these respondents' assigned numbers.

Research Questions

Research Question 1

What is the graduates' perception of the various aspects of the high-school academic program?

Using the Statistical Package for Social Sciences (SPSS), this question was answered by calculating means and standard deviation (*SD*) on all 18 statements which comprised the survey instrument. The 18 statements represented various aspects of the academic program. The respondents were asked to indicate their level of agreement or disagreement with the statements regarding the effectiveness of the high-school academic program on a 1-5 rating scale, with 1 being "strongly disagree" and 5 being "strongly agree." The scale for interpreting the respondents' perception of effectiveness was set at 1-2.5, "minimally effective"; 2.51-3.5, "moderately effective"; and 3.51-5, "highly effective."

An analysis of the data revealed that respondents perceived the following

eight aspects of the academic program as highly effective (3.51-5): *Courses were too difficult* (4.09) had reverse polarity on the survey form where a low mean score indicated high effectiveness. There were no comments on this aspect.

Teachers were caring and supportive (4.04). Approximately 14% of the 43 respondents commented on this aspect, although some disagreement was evident. One person stated, "I believe School #2's teachers are one of a kind. The teachers are very concerned with the achievements of their students. All in all I had my best days at School #2" (No. 37). Another remarked, "Need more caring prayerful teachers who see all students as important, potentially filled with gifts from God, worthy of the best of their time and efforts" (No. 18).

Teachers were readily available to assist students with their course work (4.00); *teachers were well qualified to teach their courses* (3.79); *the quality of instruction was adequate* (3.78). Approximately 21% of the 43 respondents chose to comment on these aspects. Most of the respondents who commented believed that the teachers were not well qualified to teach in their subject areas. They also expressed the need for teachers to improve the quality and delivery of content. One respondent suggested, "Employ teachers with appropriate degree specialization to teach the appropriate courses, e.g., Biology major specialty teaching Biology, not Biology major teaching Physics" (No. 21). Another applauded the teachers with this comment, "I have worked in the public school system in NY State, and by comparison I realize that the educators in our system are well qualified, well-rounded individuals" (No. 39). One respondent wrote a concise comment

which captured that person's experience, "Teachers were relics; information was outdated" (No. 28).

Classroom environment was conducive to learning (3.70). There were no comments on this aspect of the program.

Curriculum offerings were sufficient (3.54). Approximately 37% of the 43 respondents commented and gave suggestions on curriculum offerings. Approximately 9% of the 43 respondents felt there should be more courses offered. One such comment was, "More selection of courses" (No. 13).

School needed more emphasis on academics (3.54). This aspect had reverse polarity. One respondent perceived the need for more emphasis on academics, "Stronger emphasis on academics—especially Math" (No. 14).

A second group of nine program aspects was perceived by respondents as moderately effective (2.51-3.5):

Academic preparation for postsecondary studies was adequate (3.44). For this aspect approximately 12% of the 43 respondents commented or gave suggestions. Most respondents stated the need for better preparation for postsecondary studies, e.g., "Academic levels were sub-standard for attending university" (No. 15). Contrast that comment, however, with this one, "Because of the help and extra guidance a small school could give—I felt better prepared for university" (No. 35).

My study habits were good (3.44). There was one comment on this aspect: "I didn't ever develop good study habits until my last year in university. . . . I think there

should be a short course on how to study with tests soon enough to demonstrate the value of good study habits” (No. 11).

My parents provided good academic help (3.32). There were no comments on this aspect.

The school's communication with parents was adequate (3.27). Approximately 7% of the 43 respondents commented on this aspect. For example, one respondent wrote, “More consistent school communication with out of province parents” (No. 29).

School didn't offer courses I wanted (3.26). This aspect had reverse polarity. There were no comments on this aspect.

More assistance was needed for students experiencing difficulty with courses (3.17) had reverse polarity. There was one comment regarding assistance with challenging courses. “Many teachers were good and available to help; others, usually for the courses I really had trouble with, did not make themselves available for outside help” (No. 11).

Student guidance for course selection was adequate (2.98). Approximately 12% of the 43 respondents commented on this aspect. One such comment was, “I think a guidance counselor will improve the program at School #1” (No. 32). Another respondent expressed the school experience this way, “I felt fortunate to have attended School #4-- because of the help and extra guidance a small school could give, I felt better prepared for university” (No. 35).

I felt better prepared than the students I met from public schools (2.95). Approximately 9% of the 43 respondents commented on this aspect. One person wrote,

“I felt better prepared for university. As far as learning potential—School #4 was top notch” (No. 35). Another stated, “Academic levels were sub-standard for university” (No. 15).

Library facilities were adequate (2.94). Not many respondents commented on this aspect although the ones who commented also mentioned other facilities. Approximately 7% of the 43 respondents wrote comments. Two of the comments were similar. “Better library facilities, more up-to-date equipment” (No. 36). “Library, science labs, computer labs need improvement.” The third comment was in relation to the use of the library rather than the adequacy of its facilities (No. 37).

Only one aspect of the academic program was perceived as minimally effective: *School needed more emphasis on vocational and technical courses* (2.45). This aspect had reverse polarity. Approximately 9% of the 43 respondents commented on this aspect. Comments expressed a desire for more technical vocational courses like this one, “Needed more technical and vocational courses” (No. 25). Another stated, “A variety of vocational subjects would be good” (No. 29). The data are summarized in Table 1.

Research Question 2

Are there differences in the graduates’ perception of the effectiveness of the high-school academic program based on demographic factors? Using the data generated from the respondents’ rating of their perception of the effectiveness of 18 aspects of the academic program, this question was answered by testing 36 null hypotheses: 1-18 for

gender and 19-36 for ethnic origin. The standard set for rejecting the null hypotheses is when the observed level of significance is less than .05.

Hypothesis 1. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: *Curriculum offerings were sufficient.*

For this statement, males indicated a level of agreement of 3.48 and females 3.57, with an F of .123 and $p = .726$; therefore the null hypothesis is accepted as tenable.

Hypothesis 2. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: *Courses were too difficult.*

For this statement, males indicated a level of agreement of 2.10 and females 1.81, with an F of 2.105 and $p = .151$; therefore the null hypothesis is accepted as tenable.

Hypothesis 3. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: *School didn't offer the courses I wanted.*

For this statement, males indicated a level of agreement of 2.83 and females 2.70 with an F of .204 and $p = .653$; therefore the null hypothesis is accepted as tenable.

Hypothesis 4. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: *More assistance was needed for students who were experiencing difficulty with courses.*

For this statement, males indicated a level of agreement of 2.72 and females 2.89 with an F of .345 and $p = .559$; therefore the null hypothesis is accepted as tenable.

TABLE 1
PERCEPTION OF VARIOUS SCHOOL ASPECTS
 (in descending order by mean scores)

Aspects	Mean	SD
2. Courses were too difficult.	4.09*	.88
13. Teachers were caring and supportive.	4.04	1.04
10. Teachers were readily available to assist students with their course work.	4.00	.98
14. Teachers were well qualified to teach courses.	3.79	1.02
11. The quality of instruction was adequate.	3.78	.86
8. Classroom environment was conducive to learning.	3.70	.86
1. Curriculum offerings were sufficient.	3.54	1.02
5. School needed more emphasis on academics.	3.54*	1.09
17. Academic preparation for postsecondary studies was adequate.	3.44	1.24
12. My study habits were good.	3.44	1.21
15. My parents provided good academic help.	3.32	1.38
16. The school's communication with parents was adequate.	3.27	1.19
3. School didn't offer courses I wanted.	3.26*	1.24
4. More assistance was needed for students experiencing difficulty with courses.	3.17*	1.19
9. Student guidance for course selection was adequate.	2.98	1.28
18. I felt better prepared than the students I met from public public schools.	2.95	1.29
7. Library facilities were adequate.	2.94	1.18
6. School needed more emphasis on vocational and technical courses.	2.45*	1.09

*Statements with reverse polarity mean scores converted.

Hypothesis 5. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: *School needed more emphasis on academics.*

For this statement, males indicated a level of agreement of 2.69 and females 2.34 with an F of 1.953 and $p = .166$; therefore the null hypothesis is accepted as tenable.

Hypothesis 6. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: *School needed more emphasis on vocational and technical courses.*

For this statement, males indicated a level of agreement of 3.45 and females 3.60 with an F of .378 and $p = .540$; therefore the null hypothesis is accepted as tenable.

Hypothesis 7. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: *Library facilities were adequate.*

For this statement, males indicated a level of agreement of 2.79 and females 3.02 with an F of .411 and $p = .411$; therefore the null hypothesis is accepted as tenable.

Hypothesis 8. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: *Classroom environment was conducive.*

For this statement, males indicated a level of agreement of 3.72 and females 3.68 with an F of .051 and $p = .822$; therefore the null hypothesis is accepted as tenable.

Hypothesis 9. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement:

Student guidance for course selection was adequate.

For this statement, males indicated a level of agreement of 2.79 and females 3.08 with an F of .916 and $p = .341$; therefore the null hypothesis is accepted as tenable.

Hypothesis 10. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to the statement: *Teachers were readily available to assist students with their course work.*

For this statement, males indicated a level of agreement of 3.86 and females 4.08 with an F of .885 and $p = .350$; therefore the null hypothesis is accepted as tenable.

Hypothesis 11. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: *The quality of instruction was adequate.*

For this statement, the males indicated a level of agreement of 3.69 and females 3.83 with an F of .496 and $p = .483$; therefore the null hypothesis is accepted as tenable.

Hypothesis 12. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: *My study habits were good.*

For this statement, males indicated a level of agreement of 3.14 and females 3.60 with an F of 2.851 and $p = .095$; therefore the null hypothesis is accepted as tenable.

Hypothesis 13. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: *Teachers were caring and supporting.*

For this statement, males indicated a level of agreement of 4.03 and females 4.04 with an F of .000 and $p = .989$; therefore, the null hypothesis is accepted as tenable.

Hypothesis 14. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: *Teachers were well qualified to teach their courses.*

For this statement, males indicated a level of agreement of 3.69 and females 3.85 with an F of .459 and $p = .500$; therefore the null hypothesis is accepted as tenable.

Hypothesis 15. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: *My parents provided good academic help.*

For this statement, males indicated a level of agreement of 3.34 and females 3.30 with an F of .018 and $p = .894$; therefore the null hypothesis is accepted as tenable.

Hypothesis 16. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: *The school's communication with parents was adequate.*

For this statement, males indicated a level of agreement of 3.41 and females 3.19 with an F of .672 and $p = .415$; therefore the null hypothesis is accepted as tenable.

Hypothesis 17. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: *Academic preparation for post-secondary studies was adequate.*

For this statement, males indicated a level of agreement of 3.31 and females 3.51 with an F of .481 and $p = .490$; therefore the null hypothesis is accepted as tenable.

Hypothesis 18. There is no difference between males and females in their perception of the effectiveness of the academic program as it relates to this statement: *I felt better prepared than the students I met from public schools.*

For this statement, males indicated a level of agreement of 2.97 and females 2.94 with an F of .005 and $p = .941$; therefore the null hypothesis is accepted as tenable.

None of the 18 statements regarding the effectiveness of the academic program exhibited any differences in perception based on gender. These data are summarized in Table 2.

Hypothesis 19. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *Curriculum offerings were sufficient.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 3.38 and Canadian Whites 3.62 with an F of .756 and $p = 3.38$; therefore the null hypothesis is accepted as tenable.

Hypothesis 20. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *Courses were too difficult.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 1.95 and Canadian Whites 1.88 with an F of .087 and $p = .769$; therefore the null hypothesis is accepted as tenable.

TABLE 2
EFFECTIVENESS BASED ON GENDER

Aspects	Male (N=29)		Female (N=53)		F	Sig.
	Mean	SD	Mean	SD		
1. Curriculum offerings were sufficient.	3.48	1.15	3.57	.95	.123	.726
2. Courses were too difficult.	2.10	.90	1.81	.86	2.105	.151
3. School didn't offer the courses I wanted.	2.83	1.23	2.70	1.25	.204	.653
4. More assistance was needed for students experiencing difficulty with courses.	2.72	1.00	2.89	1.30	.345	.559
5. School needed more emphasis on academics.	2.69	1.26	2.34	.98	1.953	.166
6. School needed more emphasis on voc/tech courses.	3.45	1.15	3.60	1.06	.378	.540
7. Library facilities were adequate.	2.79	1.26	3.02	1.13	.684	.411
8. Classroom environment was conducive to learning.	3.72	.84	3.68	.87	.051	.822
9. Student guidance for course selection was adequate.	2.79	1.26	3.08	1.28	.916	.341
10. Teachers were readily available to assist students with their course work.	3.86	1.09	4.08	.92	.885	.350
11. The quality of instruction was adequate.	3.69	1.00	3.83	.78	.496	.483
12. My study habits were good.	3.14	1.25	3.60	1.17	2.851	.095
13. Teachers were caring and supportive.	4.03	.98	4.04	1.07	.000	.989
14. Teachers were well qualified to teach their courses.	3.69	1.07	3.85	.99	.459	.500
15. My parents provided good academic help.	3.34	1.17	3.30	1.49	.018	.894
16. The school's communication with parents was adequate.	3.41	1.05	3.19	1.26	.672	.415
17. Academic preparation for post-secondary studies was adequate.	3.31	1.26	3.51	1.23	.481	.490
18. I felt better prepared than the students I met from public schools.	2.97	1.32	2.94	1.28	.005	.941

Hypothesis 21. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *School didn't offer courses I wanted.*

For this statement, the Canadian/West Indian Blacks indicated a level of agreement of 2.86 and Canadian Whites 2.68 with an F of .540 and $p = .465$; therefore the null hypothesis is accepted as tenable.

Hypothesis 22. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *More assistance was needed for students experiencing difficulty with courses.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 3.19 and Canadian Whites 2.69 with an F of 2.628 and $p = .109$; therefore the null hypothesis is accepted as tenable.

Hypothesis 23. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *School needed more emphasis on academics.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 2.33 and Canadian Whites 2.50 with an F of .361 and $p = .550$; therefore the null hypothesis is accepted as tenable.

Hypothesis 24. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *School needed more emphasis on vocational and technical courses.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 3.43 and Canadian Whites 3.63 with an F of .505 and $p = .479$; therefore the null hypothesis is accepted as tenable.

Hypothesis 25. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *Library facilities were adequate.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 2.33 and Canadian Whites 3.13 with an F of 7.354 and $p = .008$; therefore the null hypothesis is rejected as untenable.

Hypothesis 26. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *Classroom environment was conducive to learning.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement 3.52 and Canadian Whites 3.79 with an F of 1.380 and $p = .244$; therefore the null hypothesis is accepted as tenable.

Hypothesis 27. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *Student guidance for course selection was adequate.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 3.24 and Canadian Whites 2.87 with an F of 1.211 and $p = .275$; therefore the null hypothesis is accepted as tenable.

Hypothesis 28. There is no difference between ethnic origins in their perception

of the effectiveness of the academic program as it relates to this statement: *Teachers were readily available to assist students with their course work.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 3.95 and Canadian Whites 3.98 with an F of .012 and $p = .912$; therefore the null hypothesis is accepted as tenable.

Hypothesis 29. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *The quality of instruction was adequate.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 3.71 and Canadian Whites 3.79 with an F of .110 and $p = .741$; therefore the null hypothesis is accepted as tenable.

Hypothesis 30. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *My study habits were good.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 3.19 and Canadian Whites 3.58 with an F of 1.653 and $p = .203$; therefore the null hypothesis is accepted as tenable.

Hypothesis 31. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *Teachers were caring and supportive.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement

of 3.81 and Canadian Whites 4.08 with an F of .938 and $p = .336$; therefore the null hypothesis is accepted as tenable.

Hypothesis 32. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *Teachers were well qualified to teach courses.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 3.76 and Canadian Whites 3.88 with an F of .207 and $p = .650$; therefore the null hypothesis is accepted as tenable.

Hypothesis 33. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *My parents provided good academic help.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 3.05 and Canadian Whites 3.40 with an F of 1.010 and $p = .318$; therefore the null hypothesis is accepted as tenable.

Hypothesis 34. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *The school's communication with parents was adequate.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 3.43 and Canadian Whites 3.19 with an F of .574 and $p = .451$; therefore the null hypothesis is accepted as tenable.

Hypothesis 35. There is no difference between ethnic origins in their perception

of the effectiveness of the academic program as it relates to this statement: *Academic preparation for postsecondary studies was adequate.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 3.62 and Canadian Whites 3.44 with an F of .308 and $p = .581$; therefore the null hypothesis is accepted as tenable.

Hypothesis 36. There is no difference between ethnic origins in their perception of the effectiveness of the academic program as it relates to this statement: *I felt better prepared than the students I met from public schools.*

For this statement, Canadian/West Indian Blacks indicated a level of agreement of 3.05 and Canadian Whites 2.96 with an F of .063 and $p = .803$; therefore the null hypothesis is accepted as tenable.

For only 1 of the 18 statements: *Library facilities were adequate*, were there significant differences in perception based on ethnicity. For this statement, Canadian Whites indicated significantly higher effectiveness than Canadian Blacks, therefore hypothesis 25 was rejected as untenable, while all other hypotheses were accepted as tenable. These data are summarized in Table 3.

Research Question 3

Are there differences in perception of the effectiveness of the academic program between graduates who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses? Using the data generated from the respondents' perception rating of the effectiveness of 18 aspects of

TABLE 3
EFFECTIVENESS BASED ON ETHNIC ORIGIN

Aspects	Blacks (N=21)		Whites (N=52)		F	Sig.
	Mean	SD	Mean	SD		
1. Curriculum offerings were sufficient.	3.38	.80	3.62	1.12	.756	.388
2. Courses were too difficult.	1.95	.74	1.88	.94	.087	.769
3. School didn't offer the courses I wanted.	2.86	1.11	2.62	1.33	.540	.465
4. More assistance was needed for students who were experiencing difficulty with courses.	3.19	1.21	2.69	1.18	2.628	.109
5. School needed more emphasis on academics.	2.33	1.02	2.50	1.09	.361	.550
6. School needed more emphasis on voc/tech. courses.	3.43	1.08	3.63	1.14	.505	.479
7. Library facilities were adequate.	2.33	1.02	3.13	1.19	7.354	.008*
8. Classroom environment was conducive to learning.	3.52	.81	3.79	.89	1.380	.244
9. Student guidance for course selection was adequate.	3.24	1.26	2.87	1.33	1.211	.275
10. Teachers were readily available to assist students with their course work.	3.95	.86	3.98	1.04	.012	.912
11. The quality of instruction was adequate.	3.71	.90	3.79	.85	.110	.741
12. My study habits were good.	3.19	1.21	3.58	1.14	1.653	.203
13. Teachers were caring and supportive.	3.81	.87	4.08	1.13	.938	.336
14. Teachers were well qualified to teach their courses.	3.76	.89	3.88	1.10	.207	.650
15. My parents provided good academic help.	3.05	1.50	3.40	1.32	1.010	.318
16. The school's communication with parents was adequate.	3.43	1.36	3.19	1.14	.514	.451
17. Academic preparation for postsecondary studies was adequate.	3.62	1.12	3.44	1.27	.308	.581
18. I felt better prepared than the students I met from public schools.	3.05	1.16	2.96	1.39	.063	.803

*Level of significance for the study ($p < .05$).

the academic program, this question was answered by testing null hypotheses 37-54. The standard set for rejecting the null hypotheses is when the observed significance level is less than .05.

Hypothesis 37. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *Curriculum offerings were sufficient.*

For this statement, those who took additional courses prior to attending postsecondary institutions indicated a level of agreement of 3.29 and those who did not take additional courses 3.59 with an F of 1.020 and $p = .316$; therefore the null hypothesis is accepted as tenable.

Hypothesis 38. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *Courses were too difficult.*

For this statement, those who took additional courses prior to attending postsecondary institutions indicated a level of agreement of 1.86 and those who did not take additional courses 1.93 with an F of .072 and $p = .790$; therefore the null hypothesis is accepted as tenable.

Hypothesis 39. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses

as it relates to this statement: *School didn't offer the courses I wanted.*

For this statement, those who took additional courses prior to attending postsecondary institutions indicated a level of agreement of 2.79 and those who did not take courses 2.74 with an F of .019 and $p = .890$; therefore the null hypothesis is accepted as tenable.

Hypothesis 40. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *More assistance was needed for students who were experiencing difficulty with courses.*

For this statement, those who took additional courses prior to attending postsecondary institutions indicated a level of agreement of 3.36 and those who did not take additional courses 2.72 with an F of 3.393 and $p = .069$; therefore the null hypothesis is accepted as tenable.

Hypothesis 41. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *School needed more emphasis on academics.*

For this statement, those who took additional courses indicated a level of agreement of 2.00, and those who did not take courses 2.56 with an F of 3.127 and $p = .081$; therefore the null hypothesis is accepted as tenable.

Hypothesis 42. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *School needed more emphasis on vocational and technical courses.*

For this statement, those who took additional courses indicated a level of agreement of 3.71, and those who did not take courses 3.51 with an F of .386 and $p = .536$; therefore the null hypothesis is accepted as tenable.

Hypothesis 43. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *Library facilities were adequate.*

For this statement, those who took additional courses indicated a level of agreement of 2.14, and those who did not take courses 3.10 with an F of 8.394 and $p = .005$; therefore the null hypothesis is rejected as untenable.

Hypothesis 44. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *Classroom environment was conducive to learning.*

For this statement, those who took additional courses indicated a level of 3.43, and those who did not take courses 3.75 with an F of 1.649 and $p = .203$; therefore the null hypothesis is accepted as tenable.

Hypothesis 45. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *Student guidance for course selection was adequate.*

For this statement, those who took additional courses indicated a level of agreement of 2.43, and those who did not take courses 3.09 with an F of 3.185 and $p = .078$; therefore the null hypothesis is accepted as tenable.

Hypothesis 46. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *Teachers were readily available to assist students with their course work.*

For this statement, those who took additional courses indicated a level of agreement of 4.07, and those who did not take courses 3.99 with an F of .088 and $p = .767$; therefore the null hypothesis is accepted as tenable.

Hypothesis 47. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *The quality of instruction was adequate.*

For this statement, those who took additional courses indicated a level of 3.43, and those who did not take courses 3.85 with an F of 2.886 and $p = .903$; therefore the null hypothesis is accepted as tenable.

Hypothesis 48. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *My study habits were good.*

For this statement, those who took additional courses indicated a level of 2.86, and those who did not take courses 3.56 with an F of 4.066 and $p = .047$; therefore the null hypothesis is rejected as untenable.

Hypothesis 49. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *Teachers were caring and supportive.*

For this statement, those who took additional courses indicated a level of agreement of 3.93, and those who did not take courses 4.06, with an F of .182 and $p = .671$; therefore the null hypothesis is accepted as tenable.

Hypothesis 50. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *Teachers were well qualified to teach their courses.*

For this statement, those who took additional courses indicated a level of agreement of 3.36 and those who did not take courses 3.88 with an F of 3.192 and $p = .078$; therefore the null hypothesis is accepted as tenable.

Hypothesis 51. There is no difference in perception of the effectiveness of the

academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *My parents provided good academic help.*

For this statement, those who took additional courses indicated a level of agreement of 2.93, and those who did not take courses 3.40 with an F of 1.348 and $p = .249$; therefore the null hypothesis is accepted as tenable.

Hypothesis 52. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *The school's communication with parents was adequate.*

For this statement, those who took additional courses indicated a level of agreement of 3.21 and those who did not take courses 3.28 with an F of .035 and $p = .853$; therefore the null hypothesis is accepted as tenable.

Hypothesis 53. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *Academic preparation for postsecondary studies was adequate.*

For this statement, those who took additional courses indicated a level of agreement of 2.71, and those who did not take courses 3.59 with an F of 6.151 and $p = .015$; therefore the null hypothesis is rejected as untenable.

Hypothesis 54. There is no difference in perception of the effectiveness of the academic program between those who take additional high-school courses prior to

attending postsecondary institutions and those who do not take additional courses as it relates to this statement: *I felt better prepared than the students I met from public schools.*

For this statement, those who took courses indicated a level of agreement of 2.57, and those who did not take courses 3.03 with an F of 1.483 and $p = .227$; therefore the null hypothesis is accepted as tenable.

For 3 of the 18 statements, *Library facilities were adequate. My study habits were good. and Academic preparation for postsecondary studies was adequate*, there were significant differences between those who took additional high-school courses prior to attending postsecondary institutions and those who did not. On all three aspects, those who did not take additional courses prior to attending postsecondary institutions scored significantly higher than those who took additional courses, thus hypotheses 43, 48, and 53 are rejected as untenable. All other hypotheses are accepted as tenable. These data are summarized in Table 4.

Research Question 4

Are there differences in perception of the effectiveness of the academic program between graduates who attend postsecondary institutions immediately after high school and those who do not attend immediately? Using data generated from the respondents' perception rating of the effectiveness of 18 aspects of the academic program, this question was answered by testing null hypotheses 55-72. The standard set for rejecting the null hypotheses is when the observed level of significance is less than .05.

TABLE 4
EFFECTIVENESS BASED ON ADDITIONAL OR NO ADDITIONAL COURSES

Aspects	Add. Courses (N=14)		No Add. (N=68)		F	Sig.
	Mean	SD	Mean	SD		
1. Curriculum offerings were sufficient.	3.29	1.38	3.59	.93	1.020	.316
2. Courses were too difficult.	1.86	.77	1.93	.90	.072	.790
3. School didn't offer the courses I wanted.	2.79	1.25	2.74	1.24	.019	.890
4. More assistance was needed for students who were experiencing difficulty with courses.	3.36	1.39	2.72	1.13	3.393	.068
5. School needed more emphasis on academics.	2.00	.88	2.56	1.11	3.127	.081
6. School needed more emphasis on voc/tech. courses.	3.71	1.07	3.51	1.10	.386	.536
7. Library facilities were adequate.	2.14	1.17	3.10	1.12	8.394	.005*
8. Classroom environment was conducive to learning.	3.43	1.16	3.75	.78	1.649	.203
9. Student guidance for course selection was adequate.	2.43	1.28	3.09	1.25	3.185	.078
10. Teachers were readily available to assist students with their course work.	4.07	.83	3.99	1.01	.088	.767
11. The quality of instruction was adequate.	3.43	1.02	3.85	.82	2.886	.093
12. My study habits were good.	2.86	1.41	3.56	1.14	4.066	.047*
13. Teachers were caring and supportive.	3.93	1.07	4.06	1.03	.182	.671
14. Teachers were well qualified to teach their courses.	3.36	1.08	3.88	.99	3.192	.078
15. My parents provided good academic help.	2.93	1.38	3.40	1.37	1.348	.249
16. The school's communication with parents was adequate.	3.21	1.48	3.28	1.13	.035	.853
17. Academic preparation for post-secondary studies was adequate.	2.71	1.38	3.59	1.16	6.151	.015*
18. I felt better prepared than the students I met from public school.	2.57	1.28	3.03	1.28	1.483	.227

*Level of significance for the study ($p < .05$).

Hypothesis 55. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it relates to this statement: *Curriculum offerings were sufficient.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 3.55, and those who did not attend immediately, 3.50 with an F of .034 and $p = .855$; therefore the null hypothesis is accepted as tenable.

Hypothesis 56. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it relates to this statement: *Courses were too difficult.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 1.94, and those who did not attend immediately, 1.85 with an F of .142 and $p = .707$; therefore the null hypothesis is acceptable as tenable.

Hypothesis 57. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it relates to this statement: *School didn't offer the courses I wanted.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 2.68, and those who did not attend

immediately, 2.95 with an F of .734 and $p = .394$; therefore the null hypothesis is accepted as tenable.

Hypothesis 58. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it relates to this statement: *More assistance was needed for students who were experiencing difficulty with courses.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 2.71, and those who did not attend immediately, 3.20 with an F of 2.597 and $p = .111$; therefore the null hypothesis is accepted as tenable.

Hypothesis 59. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it relates to this statement: *School needed more emphasis on academics.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 2.52, and those who did not attend immediately, 2.30 with an F of .591 and $p = .444$; therefore the null hypothesis is accepted as tenable.

Hypothesis 60. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it

relates to this statement: *School needed more emphasis on vocational and technical courses.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 3.44, and those who did not attend immediately, 3.90 with an F of 2.806 and $p = .098$; therefore the null hypothesis is acceptable as tenable.

Hypothesis 61. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it relates to this statement: *Library facilities were adequate.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 3.02, and those who did not attend immediately, 2.70 with an F of 1.087 and $p = .300$; therefore the null hypothesis is acceptable as tenable.

Hypothesis 62. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school as it relates to this statement: *Classroom environment was conducive to learning.*

For this statement, those who attended immediately after high school indicated a level of agreement of 3.73, and those who did not attend immediately, 3.60 with an F of .324 and $p = .571$; therefore the null hypothesis is accepted as tenable.

Hypothesis 63. There is no difference in perception of the effectiveness of the

academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary secondary institutions immediately after high school as it relates to this statement: *Student guidance for course selection was adequate.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 3.05, and those who did not attend immediately, 2.75 with an F of .825 and $p = .367$; therefore the null hypothesis is accepted as tenable.

Hypothesis 64. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: *Teachers were readily available to assist students with their course work.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 3.94, and those who did not attend immediately, 4.20 with an F of 1.100 and $p = .297$; therefore the null hypothesis is accepted as tenable.

Hypothesis 65. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: *The quality of instruction was adequate.*

For this statement, those who did not attend postsecondary institutions

immediately indicated a level of agreement of 3.81, and those who did not attend immediately, 3.70 with an F of .229 and $p = .634$; therefore the null hypothesis is accepted as tenable.

Hypothesis 66. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: *My study habits were good.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 3.52, and those who did not attend immediately, 3.20 with an F of 1.036 and $p = .312$; therefore the null hypothesis is accepted as tenable.

Hypothesis 67. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: *Teachers were caring and supportive.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 4.05, and those who did not attend immediately, 4.00 with an F of .033 and $p = .857$; therefore the hypothesis is accepted as tenable.

Hypothesis 68. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately

after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: *Teachers were well qualified to teach their courses.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 3.84, and those who did not attend immediately, 3.65 with an F of .519 and $p = .473$; therefore the null hypothesis is acceptable as tenable.

Hypothesis 69. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: *My parents provided good academic help.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 3.37 and those who did not attend immediately, 3.15 with an F of .386 and $p = .473$; therefore the null hypothesis is acceptable as tenable.

Hypothesis 70. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who do not attend postsecondary institutions immediately after high school as it relates to this statement: *The school's communication with parents was adequate.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 3.34, and those who did not attend

immediately, 3.05 with an F of .894 and $p = .347$; therefore the null hypothesis is accepted as tenable.

Hypothesis 71. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: *Academic preparation for postsecondary studies was adequate.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 3.60, and those who did not attend immediately, 2.95 with an F of .293 and $p = .041$; therefore the null hypothesis is rejected as untenable.

Hypothesis 72. There is no difference in perception of the effectiveness of the academic program between those who attend postsecondary institutions immediately after high school and those who did not attend postsecondary institutions immediately after high school as it relates to this statement: *I felt better prepared than the students I met from public school.*

For this statement, those who attended postsecondary institutions immediately after high school indicated a level of agreement of 3.06, and those who did not attend immediately, 2.60 with an F of 2.000 and $p = .161$; therefore the null hypothesis is accepted as tenable.

For only 1 of the 18 statements, *academic preparation for postsecondary studies was adequate*, was there a difference in perception of the effectiveness of the academic

program. Those who attended postsecondary institutions immediately after high school indicated significantly higher effectiveness. Therefore, hypothesis 72 is rejected as untenable; all other hypotheses were accepted as tenable. These data are summarized in Table 5.

Research Question 5

Are there differences in perception of the effectiveness of the academic program between graduates who attend private postsecondary institutions and those attend public postsecondary institutions? Using data generated from the respondents' perception rating of the effectiveness of 18 aspects of the academic program, this question was answered by testing null hypotheses 73-90. The standard set for rejecting the null hypotheses is when the observed level of significance is less than .05.

Hypothesis 73. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *Curriculum offerings were sufficient.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 3.63, and those who attended public postsecondary institutions, 3.39 with an F of 1.080 and $p = .302$; therefore the null hypothesis is accepted as tenable.

Hypothesis 74. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those

TABLE 5
EFFECTIVENESS BASED ON IMMEDIACY OF POSTSECONDARY ATTENDANCE

Aspects	Attend Immed. (N=62)		Attend Later (N=20)		F	Sig.
	Mean	SD	Mean	SD		
1. Curriculum offerings were sufficient.	3.55	.97	3.50	1.19	.034	.855
2. Courses were too difficult.	1.94	.88	1.85	.88	.142	.707
3. School didn't offer the Courses I wanted.	2.68	1.21	2.95	1.32	.734	.394
4. More assistance was needed for students who were experiencing difficulty with courses.	2.71	1.14	3.20	1.32	2.575	.111
5. School needed more emphasis on academics.	2.52	1.13	2.30	.98	.591	.444
6. School needed more emphasis on voc/tech. courses.	3.44	1.08	3.90	1.07	2.806	.098
7. Library facilities were adequate.	3.02	1.12	2.70	1.34	1.087	.300
8. Classroom environment was conducive to learning.	3.73	.83	3.60	.94	.324	.571
9. Student guidance for course selection was adequate.	3.05	1.27	2.75	1.29	.825	.367
10. Teachers were readily available to assist students with their course work.	3.94	1.04	4.20	.77	1.100	.297
11. The quality of instruction was adequate.	3.81	.87	3.70	.86	.229	.634
12. My study habits were good.	3.52	1.14	3.20	1.40	1.036	.312
13. Teachers were caring and supportive.	4.05	1.09	4.00	.86	.033	.857
14. Teachers were well qualified to teach their courses.	3.84	1.03	3.65	.99	.519	.473
15. My parents provided good academic help.	3.37	1.35	3.15	1.50	.386	.536
16. The school's communication with parents was adequate.	3.34	1.12	3.05	1.39	.894	.347
17. Academic preparation for post-secondary studies was adequate.	3.60	1.21	2.95	1.23	4.293	.041*
18. I felt better prepared than the students I met from public schools.	3.06	1.25	2.60	1.35	2.000	.161

*Level of significance for this study ($p < .05$).

who attend public postsecondary institutions as it relates to this statement: *Courses were too difficult.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 1.71, and those who attended public postsecondary institutions, 2.21 with an F of 6.798 and $p = .011$; therefore the null hypothesis is rejected as untenable.

Hypothesis 75. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *School didn't offer the courses I wanted.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 2.57, and those who attended public postsecondary institutions, 3.00 with an F of 2.415 and $p = .124$; therefore the null hypothesis is accepted as tenable.

Hypothesis 76. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *More assistance was needed for students who were experiencing difficulty with courses.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 2.94, and those who attended public postsecondary institutions, 2.67 with an F of 1.023 and $p = .315$; therefore the null hypothesis is accepted as tenable.

Hypothesis 77. There is no difference in perception of the effectiveness of the program between those who attend private postsecondary institutions and those who

attend public postsecondary institutions as it relates to this statement: *School needed more emphasis on academics.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 2.29, and those who attended public postsecondary institutions, 2.73 with an F of 3.324 and $p = .072$; therefore the null hypothesis is accepted as tenable.

Hypothesis 78. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *School needed more emphasis on vocational and technical courses.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 3.49, and those who attended public postsecondary institutions, 3.64 with an F of .353 and $p = .554$; therefore the null hypothesis is accepted as tenable.

Hypothesis 79. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *Library facilities were adequate.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 3.10 and those who attended public postsecondary institutions, 2.70 with an F of 2.365 and $p = .128$; therefore the null hypothesis is accepted as tenable.

Hypothesis 80. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those

who attend public postsecondary institutions as it relates to this statement: *Classroom environment was conducive to learning.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 3.80 and those who attended public postsecondary institutions, 3.55 with an F of 1.702 and $p = .196$; therefore the null hypothesis is accepted as tenable.

Hypothesis 81. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *Student guidance for course selection was adequate.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 3.14, and those who attended public postsecondary institutions, 2.73 with an F of 2.120 and $p = .149$; therefore the null hypothesis is accepted as tenable.

Hypothesis 82. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *Teachers were readily available to assist students with their course work.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 4.04, and those who attended public postsecondary institutions, 3.94 with an F of .209 and $p = .649$; therefore the null hypothesis is accepted as tenable.

Hypothesis 83. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *The quality of instruction was adequate.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 3.84, and those who attended public postsecondary institutions, 3.70 with an F of .517 and $p = .474$; therefore the null hypothesis is accepted as tenable.

Hypothesis 84. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *My study habits were good.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 3.55, and those who attended public postsecondary institutions, 3.27 with an F of 1.047 and $p = .309$; therefore the null hypothesis is accepted as tenable.

Hypothesis 85. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *Teachers were caring and supportive.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 4.08, and those who attended public postsecondary institutions, 3.97 with an F of .228 and $p = .634$; therefore the null hypothesis is accepted as tenable.

Hypothesis 86. There is no difference in perception of the effectiveness of the

academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *Teachers were well qualified to teach their courses.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 3.90, and those who attended public postsecondary institutions, 3.64 with an F of 1.315 and $p = .255$; therefore the null hypothesis is accepted as tenable.

Hypothesis 87. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *My parents provided good academic help.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 3.43, and those who attended public postsecondary institutions, 3.15 with an F of .795 and $p = .375$; therefore the null is accepted as tenable.

Hypothesis 88. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *The school's communication with parents was adequate.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 3.39, and those who attended public postsecondary institutions, 3.09 with an F of 1.237 and $p = .269$; therefore the null hypothesis is accepted as tenable.

Hypothesis 89. There is no difference in perception of the effectiveness of the

academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *Academic preparation for postsecondary studies was adequate.*

For this statement, those who attended private postsecondary institutions indicated a level of agreement of 3.80, and those who attended public postsecondary institutions, 2.91 with an F of 11.415 and $p = .001$; therefore the null hypothesis is rejected as untenable.

Hypothesis 90. There is no difference in perception of the effectiveness of the academic program between those who attend private postsecondary institutions and those who attend public postsecondary institutions as it relates to this statement: *I felt better prepared than the students I met from public schools.*

For this statement, those who attended private institutions indicated a level of agreement of 3.10, and those who attended public postsecondary institutions, 2.73 with an F of 1.691 and $p = .197$; therefore the null hypothesis is accepted as tenable.

For only 2 of the 18 statements: *Courses were too difficult*; and *Academic preparation for postsecondary studies was adequate*, were there significant differences in perception based on attendance at private or public postsecondary institutions. For statement 2, those who attended public postsecondary institutions indicated a level of agreement significantly higher than those who attended private postsecondary institutions; therefore hypothesis 74 was rejected as untenable. For statement 17, those who attended private postsecondary institutions indicated a level of agreement

significantly higher than those who attended public postsecondary institutions; therefore hypothesis 89 was rejected as untenable. All other hypotheses were accepted as tenable. These data are summarized in Table 6.

TABLE 6

EFFECTIVENESS BASED ON ATTENDANCE AT PRIVATE OR PUBLIC POST-SECONDARY INSTITUTIONS

Aspects	Attend Private (N=49)		Attend Public (N=33)		F	Sig.
	Mean	SD	Mean	SD		
1. Curriculum offerings were sufficient.	3.63	.93	3.39	1.14	1.080	.302
2. Courses were too difficult.	1.71	.76	3.00	1.35	7.798	.011*
3. School didn't offer the courses I wanted.	2.57	1.14	3.00	1.35	2.415	.124
4. More assistance was needed for students who were experiencing difficulty with courses.	2.94	1.13	2.67	1.29	1.023	.315
5. School needed more emphasis on academics.	2.29	.91	2.73	1.28	3.845	.072
6. School needed more emphasis on voc/tech. courses.	3.49	1.12	3.64	1.06	.353	.554
7. Library facilities were adequate.	3.10	1.10	2.70	1.26	2.365	.128
8. Classroom environment was conducive to learning.	3.80	.84	3.55	.87	1.702	.196
9. Student guidance for course selections was adequate.	3.14	1.26	2.73	1.28	2.120	.149
10. Teachers were readily available to assist students with their course work.	4.04	.98	3.94	1.00	.209	.649
11. The quality of instruction was adequate.	3.84	.83	3.70	.92	.517	.474
12. My study habits were good.	3.55	1.23	3.27	1.18	1.047	.309
13. Teachers were caring and supportive.	4.08	1.10	3.97	.95	.228	.634
14. Teachers were well qualified to teach their courses.	3.90	1.01	3.64	1.03	1.315	.255
15. My parents provided good academic help.	3.43	1.49	3.15	1.35	.795	.375
16. The school's communication with parents was adequate.	3.39	1.15	3.09	1.23	1.237	.269
17. Academic preparation for post-secondary studies was adequate.	3.80	.96	2.91	1.42	11.415	.001*
18. I felt better prepared than the students I met from public schools.	3.10	1.21	2.73	1.38	1.691	.197

*Level of significance for the study ($p < .05$).

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This chapter presents the summary of the study, findings, conclusions, implications, and recommendations based upon the findings. This study investigated the effectiveness of the high-school academic program in preparing graduates for postsecondary education, as perceived by alumni from four Seventh-day Adventist senior high schools in Canada.

Purpose of the Study

Seventh-day Adventists operate a worldwide system of education at all levels—from the elementary to the tertiary level. The Seventh-day Adventist secondary school system in Canada is part of the North American Division system of education. However, Canada has its own share of challenges as it attempts to offer the requirements for the completion of the high-school diploma as outlined by the province, as well as satisfy the North American Division of Seventh-day Adventists that it is preserving the uniqueness of the Seventh-day Adventist school system.

In order for any school system to improve, progress, and maintain its viability, it must periodically evaluate its program to determine how effective it is and whether or not it is meeting its objectives. One of the best ways to test the effectiveness of any program

is to ask the recipients of the program how well that program has worked for them.

Howe (1962) expressed the belief that the best possible indication of the success of any school system is its products. He stated:

A scientific and objective study of the graduates of the Seventh-day Adventist Church-operated system of secondary schools should provide evidence of success or failure for the purpose of measuring the impact of the system of parochial education in the lives of the graduates. (p. 47)

A literature review revealed no empirical study that statistically tested the effectiveness of the high-school academic program as perceived by alumni from the four Canadian Seventh-day Adventist senior high schools utilized in this study. Since one's perception is one's reality, this study measured the perception of the high-school academic program effectiveness by gathering data from alumni who graduated from two dormitory high schools and two day high schools in the Seventh-day Adventist school system in Canada during the period 1986-1992. The four senior high schools are located in the provinces of Ontario, Alberta, and British Columbia. In the study the schools were assigned numbers (1-4) to protect their identity.

The results of this study should be of value to education administrators in the Canadian Seventh-day Adventist secondary school system, and perhaps in other parts of the world, as they evaluate their direction and focus, and the kinds of modification or restructuring that may need to be implemented for the academic program to be perceived as a viable alternative to the public school system in preparing students for higher education, if they choose this route. The Ontario Ministry of Education (*OSSIS*, 1986) stated that secondary school administrators should seek ways of making the curriculum responsive to the needs of the Canadian student. It has been a pattern in Canada for many of the students who complete the high-school diploma in Seventh-day Adventist high

schools, including the four in this study, to choose to pursue higher education in private as well as public colleges and universities in Canada and in the United States of America.

The Problem

Postsecondary institutions are concerned about the academic quality of the program that high schools offer, and the apparent lack of adequate preparation for postsecondary studies as demonstrated by some high-school graduates. The secondary school program provides a bridge between elementary school and the tertiary level of education. The problem of inadequate academic preparation for postsecondary studies is one with which the Seventh-day Adventist school system must concern itself because a large percentage of its high-school graduates choose to pursue degrees at private as well as public institutions in Canada and also in the United States. No parochial school system can afford to fall behind in its effectiveness in the face of strong competition and free education offered by the public school system. This is one of the reasons, therefore, that it must evaluate the effectiveness of its academic program.

Theoretic Framework

The term "system" refers to an organism that is whole with many interconnected parts. All parts of the body system function to achieve a common purpose, that of the wellness of an individual. The Systems Design theory when adapted to education views the school as a system also with several interconnected parts. These parts all contribute to the quality of the program offered by effective schools. The Systems theory along with an adaptation by Arcaro (1995b) of Malcom Baldrige's National Quality Award and the findings as discovered in the literature review provided the theoretical framework

for this study. This study used all of the “five pillars” of The Total Quality School model—customer focus (graduates), measurement (survey measured the perception of the effectiveness of the high-school academic program), total involvement and commitment by parents and teachers were assumed by the survey instrument and reflected by certain statements, and the results of the study will provide feedback to the administrators of the schools for continuous improvement (see adapted model on page 13).

Literature Review

The literature review presented a short historical account of the foundations of the provinces of Ontario, British Columbia, and the Prairie Provinces in Canada. The development of the public school system and secondary education in Canada was reviewed. Following this was a presentation of the development of Seventh-day Adventist education in Canada. Issues and short studies as well as longitudinal studies regarding the academic preparation of high-school graduates for postsecondary studies were reviewed. Other studies and how the systems approach can be used in education completed the review.

Although many of the studies conducted among alumni that were discovered during the literature search have focused on school to work transitions (e.g., Krahn & Lowe, 1996), several of those studies included a section on academic achievement or performance (Hall, 1992; McDowell Group, 1994). At the college level some studies were conducted using freshmen as their population or college alumni (Jacobs, 1985) (Illinois State Board of Education & the Illinois Board of Higher Education, 1988). The thrust of these studies was to evaluate the college’s academic program via the performance of its students.

A number of longitudinal studies tracked alumni to find out how they were performing in the world of work and how useful their academic program proved to be several years after leaving high school (Hall, 1992; U.S. Dept. of Health, Education & Welfare, 1976). Some studies revealed that respondents were satisfied with their high-school academic program, while others rated the program moderately effective. Some reported that they felt prepared for postsecondary studies, while others did not.

A concern that surfaced in some of the literature is that postsecondary institutions are not always satisfied with the performance of some high-school graduates, and are questioning the effectiveness of the high-school academic program in preparing students to perform well at the tertiary level. The literature revealed that some high schools are under attack for producing sub-standard performing graduates was (Cox, 1982; Morgan & Matthews, 1987).

The literature suggests that the problem of inadequately prepared high-school students is of concern in the U.S. and in Canada (Fagan & Spurrell, 1995; Moore, 1997/1998; Morris, 2000). Several commissions on education have been set up over time in various provinces in Canada to address the very many challenges that secondary schools face in preparing students who can perform creditably at the tertiary level. It is quite clear in the literature that administrators and teachers are major players in the secondary school system (Glasser, 1969). How they prepare, plan, and implement the academic program largely determines its effectiveness in preparing students for the challenges of further study and, in some cases, jobs after high school.

Seventh-day Adventists are proponents of a triad in the education of young people—home, school, and church. Stephen Glenn is of the firm belief that if children

have the support of their parents they are guaranteed to be successful in all areas of their life, including their academic performance (Glenn & Nelsen, 1989). The church has its role to play particularly in the spiritual development of the child, and certainly the school must do its share in contributing to the academic success of the child. The concept is that of holistic development of children to which the Seventh-day Adventist Church has subscribed for decades (White, 1903/1952). If students want to be able to enter the college or university of their choice, they must be adequately prepared at the high-school level, the bridge between the elementary and the tertiary levels.

In the United States of America, there are academic preparatory programs in which students can enroll to prepare them for entrance to "top" colleges, or at least the college of their choice. The mandate of the secondary school is to assist students in mastering the basic skills to the fullest, and to create varied learning experiences from which they can learn and be adequately prepared for the challenges of postsecondary studies.

Methodology

This study developed a survey instrument by modifying information from similar survey instruments used in four studies (Hall, 1992; McDowell Group, 1994; Picciano, 1980; U.S. Department of Health, Education and Welfare, 1976). The survey form contained 18 statements relative to aspects of the high-school academic program, and was composed of three sections: the first section required each respondent to rate the effectiveness of 18 aspects of the academic program. The second section extracted demographic information, the category of postsecondary institution attended (private or public), whether or not the respondent had taken additional high-school courses before

enrolling in college/university, and whether or not the respondent attended a postsecondary institution immediately after completing high school. The third section provided the opportunity for the respondent to make comments or give suggestions concerning the high-school academic program. Respondents were assigned numbers, which identified their comments and suggestions on survey items (see Appendix 2 for the entire data set).

The instrument was field-tested for face and content validity by a non-probability, convenience sample of six alumni (three males and three females) from high schools in the study. The following criteria guided the selection of the sample:

1. All graduated from schools in the study.
2. They represented one of the ethnic groups (Canadian/West Indian Black, Canadian White, Filipino) that attended the four schools during the period of time used for the study.
3. All graduated during the years 1986-1992.
4. All pursued postsecondary studies in either private or public postsecondary institutions.
5. Four of the six participants had attended postsecondary institutions immediately after high school, and two had taken additional high-school courses prior to attending postsecondary institutions.
6. Four of them had attended private postsecondary institutions and two of them had attended public postsecondary institutions.
7. All participants were in close proximity to the researcher.

Each participant completed a survey form. Following this, the group came together to

discuss their impression and understanding of the statements, and to point out any flaws or ambiguity. Suggestions were made for correction, clarification, and modification to the instrument.

The survey used for rating the respondents' perceptions of the effectiveness of the high-school academic program was a Likert-type scale in which the respondents had a range of 1-5. 1 = strongly disagree, to 5 = strongly agree. The scale for interpreting the calculated means was: 1-2.5, minimally effective; 2.51-3.5, moderately effective; and 3.51-5, highly effective. The first research question was answered by compiling data generated from respondents, and using the Statistical Package for Social Sciences (SPSS) to calculate mean scores and standard deviation (*SD*) scores. To discover differences in perception, Analyses of Variance (ANOVA) were calculated and 90 hypotheses were statistically tested to answer the second to the fifth research questions.

Graduates from four Seventh-day Adventist senior high schools in Canada participated in the study. The four schools supplied listings of a total population of 1,020 graduates. A selection of 204 potential respondents comprised a random sample, using a pattern of selecting every fifth person from the graduates of each of the years 1986-1992. Eighty-two (82) usable surveys were returned for a response rate of 40.19%.

Findings of the Study

Five research questions were posed in this study to scientifically test the perception of graduates regarding the effectiveness of the high-school academic program.

Research Question 1

What is the graduates' perception of the various aspects of the high-school

academic program?

This question was answered by using respondents' rating of effectiveness on the 18 statements on the survey form, and by calculating the mean score and standard deviation score for each response, and by the written comments on the survey instrument (see complete data set in Appendix 2).

Highly Effective Program Aspects

The findings revealed that respondents rated the following aspects of the academic program as highly effective: *courses were too difficult* (4.09); *teachers were caring and supportive* (4.04); *teachers were readily available to assist students with their course work* (4.00); *teachers were well qualified to teach courses* (3.79); *the quality of instruction was adequate* (3.78); *classroom environment was conducive to learning* (3.70); *curriculum offerings were sufficient* (3.54); *school needed more emphasis on academics* (3.54).

Courses were too difficult. The rating for this aspect is 4.09. Because of reverse polarity effect, to strongly disagree that courses were too difficult implies that the courses really were at a manageable level of difficulty (there were no comments from respondents on this aspect). A mark of a good teacher is to be able to simplify even difficult concepts so that students understand them. The rating here implies that either teachers did a good job of simplifying concepts, or the content and the students were on the same level so that the material did not seem difficult to them. A third possibility is that those who may have found courses difficult did not comment on this aspect.

Teachers were caring and supportive. This aspect received a rating of 4.04 for effectiveness. There is no doubt that nurture plays an extremely important role in student learning. The literature wholeheartedly supports the fact that at every stage of one's educational pursuit nurture is important and should not be divorced from the classroom. In speaking definitively about nurture and its important role in a quality school, Glasser (1993) stated:

There must be a warm, supportive classroom. Quality schoolwork and the quality of life that results from it can only be achieved in a warm, supportive classroom environment. It cannot exist if there is an adversarial relationship between those who teach and those who are asked to learn. (p. 22)

Many educators have, no doubt, witnessed the negative effects of little or no nurture in classrooms. At the elementary level children cry because they would rather not be with "teacher" at school. At the secondary level students manufacture excuses in order to skip school, and at the tertiary level, students choose courses other than those that the less nurturing teachers might be teaching.

Some respondents commended teachers for the caring and support that they experienced. This fits well with the image that educators in the Seventh-day Adventist school system are expected to portray. White, 1913/1941/1943, a prominent leader of the Seventh-day Adventist Church, gave this counsel:

Wherever a school is established, there should be warm hearts to take a lively interest in the youth. . . . Ardent, active piety in the teacher is essential. The youth need sympathy, affection, and love, or they will become discouraged. The teacher's obligations are weighty and sacred, but no part his work is more important than that of looking after the youth with tender, loving solicitude. (pp. 502, 503)

Other respondents disagreed with those who shared positive experiences. The apparent disagreement on this item may suggest that not all of the teachers in the schools

demonstrated nurture among all students, or at all times. Therefore, it may be concluded that nurture, having been rated this highly, was expected by students who attended the schools in this study, and administrators may need to be aware of its importance to students as they engage in the selection process.

Teachers were readily available to assist students with their course work.

The rating for this aspect is 4.00. The availability of teachers to help students has always been an important concern in the Seventh-day Adventist school system, regardless of the educational level. This assistance often determines the difference between success and failure particularly for the “average” (and there are many of those at the secondary level) as well as the struggling student. Teachers need to make themselves available to assist students who are experiencing difficulty or who need clarification on assignments and projects. At the high-school level, there are times when this help has to be given outside of class, and scheduling out-of-class assistance is part of what is expected of dutiful teachers. This is one of the demands of the teaching profession, particularly in private schools because the Ministry of Education and critics of the Seventh-day Adventist school system continually scrutinize the performance of students.

This aspect regarding teachers’ availability to help generated some disagreement between respondents who rated it as highly effective and those who supplied comments and suggestions. However, the comments that registered disagreement were in the minority (25%; 75% of the comments were positive ones). This aspect may also be perceived as part of nurture, and it seems apparent that although the majority of respondents were satisfied with the teachers’ availability to assist those students who

needed help, not all teachers made themselves available when students needed their assistance.

Teachers were well qualified to teach their courses. Although the rating for this aspect is high (3.79), it should be noted that some respondents indicated that their perception was that not all staff were qualified to teach in their assigned area. One respondent, however, had an opportunity to compare his high-school teachers with those in a public education system and applauded his teachers for being well qualified to teach versus the ones he had met more recently in the public system.

The different experiences of respondents do raise questions as to whether all teachers were qualified to teach in assigned areas. One possible explanation for the apparent discrepancy may be that some respondents experienced teachers who taught well (but may not have been qualified to teach that subject and it did not matter to those respondents); or perhaps some respondents experienced teachers who were teaching in their area of expertise. Another plausible explanation may be that some respondents did attend classes with some teachers who were certified but teaching outside of their area of expertise.

In small, private, and independent schools, sometimes the demands of the curriculum and the supply of teachers are not equal and there may be times, when out of necessity, teachers are asked to “learn and teach” simultaneously.

The quality of instruction was adequate. The rating for this aspect is 3.78. It is an aspect of a school’s academic program that has generated all types of debate among educators and evoked comments, positive and negative, from non-educators. Regardless

of the course content, the delivery of that content is a key factor in students' learning.

Armstrong and Savage (1998) purported the view that teachers need to be reflective.

This means that teachers must think about what they do so they can identify what worked well and what did not. This kind of reflection leads to improved instruction. . . .

When reflecting on lessons, effective teachers focus on different things than ineffective teachers. They tend to concentrate on issues associated with student understanding; less competent teachers are apt to think back more on superficial events that occurred during the lesson. (p. 70)

One mark of an effective teacher is being able to maintain a level of instruction that makes the concepts taught understandable to the students. Borich (2000) totally agrees with this notion when he states: "Effective teachers make their points understandable, explain concepts clearly so students are able to follow in a logical step-by-step order. They have an oral delivery that is clear, audible, and free of distracting mannerisms" (p. 8).

Arcaro (1995a) put a spin of her own on this issue of quality of instruction when she declared:

A quality classroom integrates essential knowledge with the essential skills that will help students to master and apply that knowledge. . . . The teacher becomes the facilitator of knowledge and skills, and the students take responsibility for their own and their classmates' learning. Students accept the concept of quality, do quality work, and evaluate themselves for continuous improvement. (p. 67)

This study found that although overall the respondents rated the quality of instruction as highly effective, a minority of them reflected a negative experience and indicated that teachers needed to work on improving their delivery skills.

Henson (1993) convincingly writes about teachers and some ingredients that affect the quality of their teaching:

You can talk at length about the importance of learning a particular subject or about certain information being essential to future learning, but unless you yourself appear to be interested in a lesson, your words will probably go unheard. On the other hand, if each day you are excited about the lesson, students will wonder what you find so interesting.

To behave enthusiastically does not mean becoming overly emotional, yet you cannot afford to be nonchalant or just mildly interested. (p. 288)

A possible explanation for the apparent disagreement among respondents is that the respondents who commented were the ones who had negative experiences with teachers' quality of instruction. It may be concluded, therefore, that perhaps a larger percentage of teachers demonstrated an adequate quality of instruction than those who did not, to justify the rating this aspect received.

Classroom environment was conducive to learning. The rating for this aspect is 3.70. Every educator should recognize the value of creating an environment in the classroom that maximizes student learning. Arcaro (1995a) expressed the belief that the atmosphere or climate of the classroom is as equally important as what the teacher teaches (p. 24). Stover et al. (1993) believed that the type of classroom that is most effective is an interactive learning environment. They expressed the notion of the interactive classroom environment in these words:

Interactive instruction facilitates the acquisition of this content information because active cognitive engagement is inherent in such instruction. . . .

Interactive instruction facilitates the acquisition of content knowledge, sharpens students' thinking skills, develops students' language processing skills and enhances students' social skills and self-esteem. (pp. 20-22)

Georgiades (1978) in establishing a premise for evaluating how good a school is and the humanizing of the school's program conceptualized an effective classroom environment and seemed to agree with Stover, Neubert, and Lawlor (1993) when he stated: "A school's environment should encourage interaction between students and their

peers, between students and teachers, and among professional staff and the larger community” (p. 22).

The classroom environment aspect did not elicit any comments or suggestions from respondents. This probably suggests that either there was no particular concern about the learning environment, or respondents did not choose to comment on this aspect because there were other aspects that they perceived to be more important.

Curriculum offerings were sufficient. This aspect received a rating of 3.54.

Curriculum offerings (courses) could be seen as the “king pin” of a school’s academic program—its very heart and core. Katz (1956) in defining curriculum stated:

The curriculum is much more than a collection of courses of study. A generally more accepted definition of curriculum today is ‘that body of experiences which condition and make up the total activities of the child for which the school takes responsibility’. (p. 78)

Very often, parents as well as students select schools on the basis of the availability of courses that are offered. Concerns about whether or not students will be able to plan a course schedule that will allow them to complete all of the required courses, as well as electives to receive a high-school diploma, are very often foremost in the minds of the community. These concerns have been voiced no less among students who attend Seventh-day Adventist high schools.

In Canada the requirements for completion of a high-school diploma stipulate a certain number of compulsory courses as well as a certain number of elective/optional courses (see Appendix 5). In the Seventh-day Adventist school system, there is often not a large selection of courses from which students may choose, or enough teachers to allow much flexibility in scheduling. Scheduling usually demands a great deal of creativity to

be able to guarantee students at least the compulsory courses and enough electives for the diploma requirements.

The question of curriculum offerings in schools, particularly in small, private schools, has generated on-going debate in Canada. Clark, Gidney, and Milburn (1983) described it this way: "Throughout Canada's education history, there has been from time to time concerns about curriculum. These concerns have been expressed by parents, teachers and by students" (p. 21). Describing the challenge that faces small-to-medium schools they had this to say:

We have found that small schools have most often offered courses at only two levels. They now seem to be caught between the need to comply with Ministry recommendations to offer required subjects at a variety of difficulty levels and the fact that they lack both the teacher resources to do so and sufficient students to warrant the creation of separate programs by level. (p. 21)

By rating curriculum offerings being sufficient as highly effective, respondents seemed to be indicating that there were enough courses for completion of their high-school diploma. Be that as it may, there were some respondents who felt that they could have benefited from perhaps a wider selection of courses. Others expressed a desire to see certain types of courses retained in the curriculum because those courses were of value to them and perhaps might be of value to other students.

The fact that approximately only half of the respondents wrote comments and suggestions on this aspect may explain why, even though this item was rated as highly effective, there seemed to be some apparent disagreement among the respondents. One plausible explanation for this may be that those who rated the item so highly were not the same ones who wrote the comments and suggestions. Another explanation may be that sufficiency of the curriculum offerings that led to completion of the high-school diploma

did not preclude students from wishing that there were some other choices available to them.

School needed more emphasis on academics. The rating for this aspect is 3.54. Since there was reverse polarity on this one, when respondents strongly disagree with the statement it implies the opposite meaning. In this case the disagreement with the statement means that enough emphasis was indeed placed on academics. It does not mean that perhaps more emphasis would not or could not have maximized effectiveness, but rather, it appears as though the emphasis was sufficient to accomplish the goals of the program. This seems to suggest that perhaps there was a fairly balanced academic program, which did not overemphasize academics. One respondent commented that there needed to be more emphasis placed on academics, while another mentioned that academic levels were not up to par for university attendance. One possible explanation for the apparent disagreement could be that the respondents who chose to comment were the ones who experienced poor academics. The fact that others did not comment may suggest that they may have either overlooked commenting, or they were satisfied with the emphasis that the school placed on academics. It is also probable that others may have been dissatisfied but refrained from commenting.

Moderately Effective Program Aspects

Respondents rated another group of program aspects moderately effective as reflected by the following statements: *Academic preparation for postsecondary studies was adequate* (3.44); *My study habits were good* (3.44); *My parents provided good academic help* (3.32); *The school's communication with parents was adequate* (3.27);

School didn't offer courses I wanted (3.26); More assistance was needed for students experiencing difficulty with courses (3.17); Student guidance for course selection was adequate (2.98); I felt better prepared than the students I met from public schools (2.95); Library facilities were adequate (2.94).

Academic preparation for postsecondary studies was adequate. The rating for this aspect is 3.44. The very existence of a high school depends on how effectively it is preparing students for the choices they will make when they leave it behind. Some students choose to pursue higher-level studies at postsecondary institutions. One of the challenges of secondary education administrators is to plan and execute an effective academic program--one that adequately prepares its students for postsecondary studies.

While, overall, respondents perceived their academic preparation as moderately effective, on this, as with several other aspects, there was disagreement as revealed by respondents' comments. Most of those who commented indicated that they were not adequately prepared. If the respondents who chose to comment were the ones who were not prepared, then maybe the rating is justifiable, for it is probable that some of those who experienced adequate preparedness did not comment.

My study habits were good. This aspect received the rating of 3.44, the same as academic preparation for postsecondary studies. Students' study habits contribute to their academic success. The effectiveness of a school's academic program can be enhanced or deterred depending on whether or not it successfully teaches its students how to maximize their potential by utilizing their study skills. When students perform well academically the school receives a good rating and parents want their children to attend

the school. Ultimately, then, students' study habits affect the overall perception of the effectiveness of the school's academic program. Many high schools do not have a formal course in good study habits. However, probably every high-school teacher at some time or other has encouraged students to develop and cultivate good study habits so they can perform well on tests and improve their grades.

Devine (1987) perceived the need for students to be taught how to study and defined study skills as "competencies associated with acquiring, recording, organizing, synthesizing, remembering, and using information and ideas found in school" (p. 5).

Further emphasizing the need, he described the rationale for such skills:

Some students move easily through school, achieving academic success, good grades, honors, prizes, and eventual admission to college. Others stumble year after year, requiring special help, remediation, individual tutoring, and developing along the way negative images of themselves as students and people. The majority in the great middle bump of the bell-shaped curve of the school population, hover between success and failure, experiencing their share of each. (Devine, 1987, p. 2)

It is no secret to teachers and education administrators that diligence and application (good study habits) are integrally linked with good performance. Only one respondent expressed the need for students to be taught study skills. It should be noted that the two aspects (academic preparation and study habits) had exactly the same means. It has been observed that there is some connection between students' study habits and academic preparation. The rating, however, may suggest that at the high-school level study skills are not necessarily high on the students' list of priorities, hence the reason for the lack of comments. Another plausible reason may be that in high school, students do not readily acknowledge the correlation between their study skills and academic preparation or success.

My parents provided good academic help. The aspect received a rating of 3.32. Parental assistance, along with their active involvement in school programs and activities, tends to result in higher achievement and greater success by students. This is true of the elementary as well as the secondary level. The end result is a boost for the school's academic program for good student performance and higher achievement. The more students who gain acceptance to postsecondary institutions of their choice, the more highly spectators tend to rate the academic program. However, I have observed that assistance and parental involvement tends to lessen as students enter high school--partly because adolescents want it that way, and partly because parents tend to feel that their "little children" are becoming adults and need less supervision and a chance to become more independent in their thinking and behavior. Parents generally tend to feel that adolescents need to assume more responsibility for their actions, and this includes their attitude to their school assignments. While this is desirable, unfortunately it is not always the case as adolescents are usually at various stages of development and do not all master the developmental tasks appropriate for their mental age level.

This aspect did not receive comments or suggestions from respondents. Given the fact that two of the schools in the study were dormitory schools, most parents would probably have had limited, on-going interaction with their children to provide the academic help from which they might have benefited. It is probable that if all the schools in this study were day schools, the rating could have been higher. It is possible to suggest also that perhaps not all parents of alumni who attended the two day schools provided good academic help or were able to provide that kind of help, and that, too,

could have affected the rating. However, it is difficult to conclude whether or not the rating would have been higher or lower since no comments appeared on this aspect.

School's communication with parents was adequate. This aspect received a rating of 3.27. This is an important aspect of program effectiveness for teachers, administrators, and parents. It has been observed that when schools and parents keep in touch with each other, students tend to perform better, i.e., there is a positive correlation between communication with parents and student performance. The fact that parents are informed about their children in regard to issues surrounding school is sometimes often enough knowledge to motivate a student to adopt a more serious and diligent attitude to school assignments. However, keeping in touch with parents when young people enter high school often can be tricky.

As a former guidance-counselor and vice-principal, I have observed that letters and other forms of communication have been given to high-school students to carry home for their parents and that communication ends up in their locker at school. Keeping the communication constant and flowing is definitely a challenge at the high-school level. However, the school cannot afford to become complacent, but rather must continue to mobilize all of the available avenues to effectively communicate with parents about both the positive as well as the negative concerns of their adolescents.

There were only three comments and suggestions about this aspect. Each comment highlighted the need for improved communication with parents on a consistent basis. Probably respondents were either nonchalant about this aspect or did not want to make it appear as though this was important to them, so they refrained from commenting. Another plausible explanation for the rating may be that since there were two dormitory

academies in the study, regular and constant communication with parents who lived long distances away (in some cases in other provinces) could not have followed the same communication pattern as the day schools could have attempted. If one accepts the above probabilities, that would then explain the moderate rating.

School didn't offer courses I wanted. The rating for this aspect is 3.26 and has a reverse polarity effect. This study recognizes the issue of the challenge that small schools face in trying to ensure that enough variety of courses is offered to guarantee those students who wish to complete the high-school diploma that assurance. In an effort to fulfill that commitment, the school very often finds itself in a bind where it offers the required courses but ends up being pigeon-holed into offering just so many electives based on the teachers' expertise. The challenge for administrators in the four Seventh-day Adventist schools is to utilize their creative abilities to try to offer some additional courses so that students would not feel cheated because their peers are taking some courses in the public school system that are not available to them.

One way to try to deal with this challenge is to simply ask the students for input into the curriculum offerings and examine the teachers' qualifications to determine who might be able to teach those courses. This solution sounds simple enough but the truth of the matter goes back to what Clark et al. (1983) said about the challenge to find teachers with the expertise needed to offer certain courses. The second part of the challenge is to have enough students to justify offering the class.

Offering sufficient courses and not offering courses that students may want are two different sides of perhaps the same coin. There was not, however, an overwhelming number of comments among respondents on this item, which might suggest that the

rating it received was either reasonable, or that those who might have wanted other courses did not write comments or suggestions.

More assistance was needed for students who were experiencing difficulty with courses. The rating for this aspect is 3.17. There is a reverse polarity effect, but the rating seems to suggest that perhaps some respondents knew of students who were experiencing difficulty and received help and others may have had the same experience or witnessed the opposite happen. Teachers are expected to make themselves available to assist the academically challenged students or those students who, for one reason or another, need assistance in understanding concepts that have been taught. At the high-school level, parents as well as students expect this to be part of an effective school's academic program. Often parents expect teachers to work along with their adolescents, particularly those who may be termed "students at risk" to support them by pulling and pushing them along so that they may successfully complete their courses. This is one interpretation of the term "individualized instruction."

Providing assistance during class time may not always be possible at the high-school level depending on the structure of the class activities, method of instruction, course content, number of students, etc. However, the caring teacher will be intentional in seeking out students who are experiencing difficulty and will plan time to provide the type of assistance needed. This assistance may take the form of peer tutoring, monitored by the teacher.

Comments on this aspect were limited, although what appeared were both positive and negative. It is probable that those respondents who experienced difficulty but did not receive enough assistance did not comment. There is also the probability that some

respondents who perhaps received assistance did not comment. This seems like an area that administrators may need to give some more attention.

Student guidance for course selection was adequate. The rating for this aspect is 2.98. In Canada there are hundreds of careers from which to choose. How to prepare, what courses are needed, which postsecondary school to attend are questions, the answers to which are often confusing for the high-school student. Answers to choosing a career are not as simple as they were several decades ago, for there is a preponderance of information available which, if one does not know how to sort through, results in quite a complex decision-making process. Lack of adequate guidance and counseling could have repercussions that none of the stakeholders--teachers, parents or students--would care to face.

A well-run guidance department guides students through the process of planning for high school as well as what happens after high school. Katz (1974) affirmed this by his statement : "The counseling and guidance department of secondary schools provide both students and teachers with information valuable to the personal, social, academic and vocational development of the student" (p. 67).

The guidance department should also be involved in administering skills and aptitude testing to assist students in narrowing their career choices based on the cluster of occupations for which they test the highest. There also should be continual evaluation of the academic program to determine how effective it is in meeting the school's goals and those of its student body, when, if, and what courses may be added or dropped from the curriculum offerings. Borich (2000) commented on these particular skills of the

guidance-counselor in this statement: "School counselors should engage in evaluation procedures to assess the effectiveness of the program planning and implementation. These procedures should include gathering data from students, school personnel, and parents about the stated goals and objectives of the program" (p. 14).

There are other functions of the guidance-counselor that Courtland (1995) highlights: "Counseling involves interaction between counselor and students. Counselors should be able to help students develop healthy self-concepts and learn to respect cultural diversity, while setting educational, career, and personal/social goals" (p. 13). The question is whether or not students took advantage of the guidance services, limited as they might have been. Rubinfeld (1959) examines the other side of the coin:

High school students would do well to recognize the maxim that "the squeaky wheel gets the grease." . . .

In the main, most counselors discover that too few of the youngsters take advantage of all the aids which are available. Despite pleas on the part of the counseling staff, despite notices about special meetings, despite well-advertised invitations to hear college representatives, there is always a percentage of the youngsters who go blithely on their way. (p. 30)

All but one of the respondents who commented on this aspect indicated the need for improved guidance services in the school. The apparent disagreement may be as a result of the relatively small number of respondents who chose to write comments and suggestions. It is probable that if more respondents had written comments, more may have indicated some satisfaction with the services they received. Another plausible explanation is that perhaps those who wrote comments were the ones who did not benefit from what may have been satisfactory guidance services.

I felt better prepared than the students I met from public schools. The rating for this aspect is 2.95. There were no comments on this one. It is probable that

respondents did not consciously compare their performance with that of their peers who attended public secondary schools. Another possible explanation could be that those who commented on preparation for postsecondary studies felt that those comments would have taken care of both related aspects. In addition, those who felt better prepared than their peers may have declined to comment.

Library facilities were adequate. This aspect received a rating of 2.94. One can hardly conceive of an effective academic program without adequate library facilities. Francis Bacon states, “Reading maketh a full man; conference (dialogue) a ready man.” If this is true, then it behooves schools to have a well-stocked library with literature that is necessary and relevant to assist in developing not only “full” men/women, but also “ready” men and women; for reading prepares a person for conference (dialogue). Libraries are media centers and resource areas where students could spend fair amounts of time finding material for projects, research papers, and doing additional reading. A school functioning without an adequate library is like a person living with a mal-functioning heart. Katz (1988) explained the importance of a library in these words:

A school library must be viewed as an extension of the classroom, and managing the library has only one purpose: to make education in that school more effective. The library then is both a place of learning and a place that houses the tools of learning. (p. 14)

Comments on library facilities were sparse—only three respondents chose to comment. None of the comments were encouraging and they were not enough to explain the rating. It is possible that respondents simply neglected to comment on this aspect. Another plausible explanation may be that respondents see themselves as diminishing their use of school libraries as they build up their own electronic library.

Minimally Effective Program Aspect

Only one statement was rated minimally effective: *School needed more emphasis on technical and vocational courses* (2.45). This aspect had reverse polarity. To strongly agree means that the program was deficient in this area in that more vocational and technical courses were needed.

School needed more emphasis on technical and vocational courses. This aspect received a rating of (2.45). There was a time in Canada's educational history when vocational education was believed to be for the "not so smart" student, and the socially disadvantaged, or the student whose first language was not English. Lyons, Randhawa, and Paulson (1991) lucidly explained the Canadian philosophy on vocational education by stating:

Canadians have historically considered vocational education to be preparation for second-class citizenships. Until recently, we did not treat domestic programs for training highly skilled workers as vital to the nation's interest. Whereas European countries had programs to prepare craftspeople for skilled trades, Canada relied on immigration to fill these jobs. Vocational preparation in North America came to be seen as a social policy measure directed at society's marginal or outcast elements such as orphans, young people with criminal records and slow learners. (16:2, p. 137)

They concluded their discourse on Canada's state of affairs regarding vocational education by expressing what they perceived to be a felt need: "Canada needs a system which will ensure that young people, both men and women, will see vocational education as challenging and worthwhile, not just as a ticket to second-class status" (16:2, p. 149)

The philosophy of Seventh-day Adventist education speaks to this matter of vocational/technical training. Here the concept is very definitively expounded:

Manual training is deserving of far more attention than it has received. Schools should be established that, in addition to the highest mental and moral culture,

shall provide the best possible facilities for physical development and industrial training. Instruction should be given in agriculture, manufactures--covering as many as possible of the most useful trades. . . . Gardens, workshops, and treatment rooms should be provided, and the work in every line should be under the direction of skilled instructors. (White, 1952/1980, p. 218)

This philosophy is as sound as it could be because there is always need for men and women with technical and/or vocational training. However, the reality of the situation is, that although there is a recognizable need, three factors seem to militate against applying this philosophy as it should be in Adventist high schools in Canada:

1. Funding is usually so limited that there never seems to be enough money available to appropriate some for technical/vocational education. Machinery and tools are quite costly for a school to outfit an industrial department with enough equipment to properly teach courses.

2. Many skilled tradesmen/women do not have teaching certificates and that is a Ministry of Education requirement, especially for tech/voc course.

3. There has been a stigma attached to tech/voc courses as the quotation so astutely described, therefore it has not been cost-effective to offer more than one or two tech/voc courses at the high-school level since the enrollment in those courses has not been encouraging.

All the comments and suggestions on this aspect of technical/vocational education consciously or unconsciously agreed with the philosophy of the usefulness of such education and training, but highlighted the need for intentionalizing the planning and inclusion of more technical/vocational courses for students. If high-school students are graduating without technical/vocational skills or not enough of them, undoubtedly, this is an aspect of the academic program that needs some attention.

In summary, respondents perceived eight aspects of the academic program as highly effective based on the mean scores and the rating scale. Nine aspects of the program were perceived as moderately effective based on the mean scores and the rating scale. Only one aspect of the program received a minimally effective rating. Respondents perceived approximately 44% of the aspects of the academic program on the survey form as highly effective. They perceived 50% of the aspects as moderately effective, and approximately 6% of the aspects were perceived as minimally effective. This may be interpreted to mean that while respondents do not perceive the entire academic program as highly effective, they may have perceived the preparation they received for postsecondary studies as adequate.

Research Question 2

Are there differences in the graduates' perception of the effectiveness of the high-school academic program based on demographic factors? This question was answered by testing 36 hypotheses relative to the 18 statements on the survey instrument. The standard set for rejecting all null hypotheses was when the observed level of significance was less than .05.

Hypotheses 1–18 were tested to discover if males and females perceived the effectiveness of the academic program differently. Respondents indicated that there was no difference between males and females in their perception of the effectiveness of the high-school academic program on all 18 of the variables; therefore the null hypotheses were accepted as tenable (see Table 2).

These findings suggest that gender does not affect one's perception of the effectiveness of the academic program. Therefore it can be concluded from this study

that, in the four schools, the quality of the academic program crosses gender lines, and it appears that the schools administered the program equally to males as to females.

Hypotheses 19-36 were tested to determine if there was any difference in perception of the effectiveness of the high-school academic program based on ethnic origin. Respondents differed significantly in their perception on only 1 of the 18 aspects: library facilities were adequate (.008); therefore the null hypothesis 25 was rejected as untenable. All the other null hypotheses were accepted as tenable (see Table 2).

On the aspect of library facilities, Canadian Whites perceived the effectiveness of the academic program significantly higher (3.13) than Canadian/West Indian Blacks (2.33) (see Table 3). This may suggest that perhaps Canadian Whites are economically able to afford a well-stocked library at home and may not need to use the school library as much as the Blacks do. If this conclusion is correct, then the Whites may not have as much knowledge of the adequacy of the library facilities as perhaps the Blacks do.

Many of the Canadian/West Indian Blacks or their parents are immigrants. When one is transplanted to a new country, there are inherent challenges and problems, one of them being that of survival. Often immigrants discover that they cannot continue on in the career that they may have worked so hard to build because to continue either means returning to school, or endeavoring to gain experience in the new country before someone would be willing to "risk" hiring the immigrant. In other cases, the immigrant parents are themselves at the genesis of a new career or seeking to find a new career. Building and maintaining a personal or family library may be a somewhat remote idea for some households. These families and their children may therefore depend on the school library and the public libraries more than the Canadian Whites.

There are also some Canadian Whites who are children of immigrant parents, but they seem to be able to progress faster up the economic level than the Blacks because of their ethnic origin. The exception to this may be older immigrant White Canadians with a language barrier who often seem to be content to work at low-paying jobs while financing their children's education.

In summary, since on 17 out of 18 aspects of the academic program there was no difference in perception based on ethnic origin, this seems to suggest that for the four schools in this study, the Seventh-day Adventist Church who believes in the equality of all mankind has demonstrated this concept well. It could also be concluded that in the four schools the Canadian theme of unity in diversity has been embraced and practiced.

Research Question 3

Are there differences in perception of the effectiveness of the high-school academic program between those who take additional high-school courses prior to attending postsecondary and those who do not take additional courses? This question was answered by testing hypotheses 37-54 relative to the 18 statements on the questionnaire. The standard set for rejecting the null hypotheses was when the observed level of significance was less than .05.

The findings revealed that respondents showed significant differences in perception of effectiveness on three aspects of the academic program, therefore hypothesis 43 (.005), hypothesis 48 (.047), and hypothesis 53 (.015) were rejected as untenable. All other hypotheses were accepted as tenable (see Table 4).

For library facilities, the statistics revealed that those who did not take additional courses rated the library facilities significantly higher (3.10) than those who take

additional courses (2.14). This may suggest that the library facilities were not well utilized by some respondents, or they have not have understood how to utilize the available resources, which may have been partially responsible for their need to take additional courses before enrolling in postsecondary studies. On the other hand, those who perceived the library facilities as adequate may either have utilized it well, or may have had the benefit of their own home library or public libraries, which meant they may not have needed to use the school library very much, and when they did, what they needed was available so they perceived the facilities as moderately effective. It may be noted that differences in perception of program effectiveness in regard to library facilities have recurred in hypotheses testing with a different basis from the previous one.

On the statement relating to good study habits, respondents who did not take additional courses prior to attending postsecondary institutions rated the effectiveness of the academic program significantly higher (3.56) than those who took additional high-school courses (2.86). It appears that there might be a relationship between good study habits and the absence of the need to take additional courses before entering college or university. However, students may need to take additional courses if their study habits are poor. The vicious cycle continues. If one has poor study habits it is likely that the person will rate library facilities poorly. Results of this study indicate that the respondents who took additional courses prior to enrollment at university/college are the same ones who rated the library facilities as moderately effective.

Consistent with the findings for the first two hypotheses, there was a difference in perception towards academic preparation. Those respondents who did not take additional high-school courses prior to attending postsecondary institutions rated academic

preparation for postsecondary studies significantly higher (3.59) than those who took additional courses (2.71).

These findings seem to suggest that some relationship may exist between students' academic preparation and their perception of program effectiveness. If students do not need to take additional courses, then they tend to perceive the academic preparation they received as adequate and the program as highly effective, while those who need to take additional courses tend to perceive their academic preparation perhaps not as adequate and therefore moderately effective.

In summary, only in regard to three aspects was there a significant difference in perception, while on 15 aspects those who took additional high-school courses prior to attending postsecondary institutions and those who did not take additional courses showed no significant difference in perception. These findings seem to reinforce the "we are different but similar" concept that seems to operate in the four schools in this study.

Research Question 4

Are there differences in perception of the effectiveness of the high-school academic program between those who attend postsecondary institutions immediately after high school and those who do not attend immediately after high school?

This question was answered by testing hypotheses 55-72 relative to the 18 statements on the survey instrument. The standard set for rejecting the null hypotheses was when the observed level of significance was less than .05.

The findings revealed that only in one aspect of the program was there significant difference in perception—adequacy of academic preparation for postsecondary studies.

Therefore hypothesis 71 (.041) was rejected as untenable. All other hypotheses were accepted as tenable (see Table 5).

Adequacy of academic preparation seems to be discriminating between groups of respondents. Those who attended postsecondary institutions immediately after high school rated the effectiveness in relationship to adequacy of academic preparation significantly higher (3.60, highly effective) than those who did not attend college or university immediately after high school (2.95, moderately effective).

These findings seem to explain why those who rated the program as highly effective would have immediately enrolled in postsecondary institutions. It seems to suggest that the academic preparation was adequate so that they did not have to delay college/university enrollment. However, it was outside of the scope of this study to discover why some respondents did not immediately attend college or university. One plausible explanation is that those respondents who did not attend postsecondary immediately after completion of the high-school program were not adequately prepared, hence the moderately effective rating.

In summary, on 17 of the 18 aspects there was no difference in perception among respondents of the four schools. This suggests that alumni who attended those schools tend to perceive almost all aspects of the academic program in a similar manner.

Research Question 5

Are there differences in perception of the effectiveness of the high-school academic program between those who attended private postsecondary institutions and those who attended public postsecondary institutions? This question was answered by testing hypotheses 73-90 relative to the 18 statements on the survey instrument. The

standard set for rejecting the null hypotheses was any observed significance level less than .05.

The findings revealed significant differences in perception of two aspects of the academic program, therefore hypotheses 74 (.011) and 89 (.001) were rejected as untenable. All other hypotheses were accepted as tenable (see Table 6).

For the statement Academic preparation was adequate, respondents who attended private postsecondary institutions rated program effectiveness in relationship to this aspect significantly higher (3.80, highly effective) than respondents who attended public postsecondary institutions (2.91, moderately effective). One explanation for this difference may be that the academic preparation was adequate for private postsecondary schools but not for public institutions, if the public institutions were more demanding than the private institutions. Another plausible explanation for the difference in perception may be that the respondents who attended public secondary schools may not have excelled at the secondary level therefore there were more academic challenges to surmount at the tertiary level.

The other statement about which there was significant difference in perception was courses were too difficult. This is one of those items with reverse polarity. Those who attended private postsecondary institutions rated the effectiveness of the academic program in relationship to this aspect (1.71, highly effective), which really meant that they did not perceive the courses to be difficult. However, those who attended public postsecondary institutions rated the effectiveness of the academic program in relationship to this aspect (3.00, moderately effective), which may be interpreted to mean that they felt that perhaps some of the courses were difficult and others were not. Perhaps this

difference may explain why respondents who did not perceive the courses as being difficult chose to attend private postsecondary schools. Possibly they felt they would be able to handle the challenges that the private school would offer. Perhaps the second group thought they would not want to risk the challenges of difficult courses at the next level of their education, therefore they would attend public institutions and hope that not all of the courses would be “too difficult.”

In summary, in regard to 16 of the 18 aspects of the academic program there was no significant difference in perception between those who attended private postsecondary institutions and those who attended public postsecondary institutions. This is yet another example of what seems to be some portrayal of “togetherness” in perception towards the aspects of the academic program in the four schools in this study.

Conclusions

The following conclusions may be drawn from the study:

1. Among alumni from the four Canadian Seventh-day Adventist senior high schools, there is a great deal of homogeneity regarding their perception of the effectiveness of the high-school academic program.
2. Alumni from four Canadian Seventh-day Adventist senior high schools perceive the academic program as mostly moderately effective.
3. Alumni from four Canadian Seventh-day Adventist senior high schools perceive their preparation for postsecondary studies as moderately effective.
4. Alumni from four Canadian Seventh-day Adventist senior high schools perceive their teachers as well qualified to teach, nurturing, and readily available to assist students with their course work.

5. Alumni from four Canadian Seventh-day Adventist senior high schools perceive curriculum offerings as sufficient, but there is some indication that they perceive a need for more emphasis to be placed on technical and vocational courses as well as academics.

6. Alumni from four Canadian Seventh-day Adventist senior high schools perceive the quality of instruction offered in their schools as highly effective.

7. Alumni from four Canadian Seventh-day Adventist senior high schools perceive a need for improved library facilities.

8. Alumni from four Canadian Seventh-day Adventist senior high schools perceive their classroom environment as highly effective for their learning experiences.

9. Alumni from four Canadian Seventh-day Adventist senior high schools perceive the need for improved communication between the school and the home.

10. Alumni from four Canadian Seventh-day Adventist senior high schools perceive the guidance services as moderately adequate.

11. Alumni from four Canadian Seventh-day Adventist senior high schools perceive the need for teachers to provide more assistance for students who are experiencing difficulty with courses.

Implications

The findings and conclusions of this study suggest several implications for Seventh-day Adventist education administrators at the four Canadian schools in this study. One of the goals of the schools should be to have all aspects of the academic program perceived as highly effective.

Using the five pillars of Arcaro's Total Quality Schools model (1995), and

applying the systems approach to education, the administrators of the schools in this study could convene meetings with students, parents, community, and Conference education officers to study, present findings, and collect ideas and strategies for designing a strategic plan for improving the moderately effective and the minimally effective aspects of the academic program to highly effective. The assumption here is that every administrator is interested in and concerned about continuous improvement of the total school program which, of course, includes the academic program of which there are several interconnected parts.

In addition, students, parents, community, and Conference education officers should be involved in creating and designing a vision and mission for each school—a mapping for the school's journey. Any existing vision and mission should be carefully reviewed and intentional efforts made to implement them. This total involvement will require commitment on the part of all connecting parts of the system. With the focus on the areas of concern, there should be unrelenting persistence until all aspects of the academic program are perceived as highly effective.

There may be need for a paradigm shift in thinking about the delivery of services in education. It may serve the schools in good stead, for example, if teachers pair with Guidance services to be deliberate and intentional in providing information necessary to prepare students for postsecondary studies.

There needs also to be a focus on improving library facilities. The services could be improved by collaboration among teachers, guidance personnel, and librarians—it should be a team effort. The library should be recognized as a media center which is the core of any school system and should provide a variety of services for students as well as

teachers. A school librarian is better prepared to service the needs of its recipients if the person is a qualified teacher-librarian. The teacher-librarian possesses some additional skills that a non-teacher-librarian possesses. The bias in training is specifically towards education settings.

Education administrators may need to take a serious look at ways and means of providing more technical and vocational courses for those students who would prefer to pursue careers in tech/voc fields. This may necessitate some form of re-packaging the academic program to make it more attractive, relevant, and marketable.

Administrators in the four schools in this study may need to aim at becoming system designers rather than system users. The difference between system users and system designers is that system users begin from the inside then move towards the outside. They evaluate the problems, then try to find solutions for them. System designers begin from the outside then move inwards. They create a vision of what kind of school program they would like to design. They envision what the end product would look like, and they endeavor to pass that vision on to others. The next step they take is to develop a mission which drives their goals and objectives. Every decision from there onwards is geared towards shaping the vision and fulfilling the mission.

By adopting the five pillars of Arcaro's model (1995b) as a framework, the visionary administrator utilizes the pillar of total involvement to project a vision and develop a mission of what an effective academic program looks like and how well it would work to construct the kind of quality school that perceives all or most aspects of the program as highly effective. Because the pillar of continuous improvement is important to the administrator, evaluation and measurement take place at regular intervals

and these are measured against the vision, mission, and the goals and objectives. The customers (students) are also part of the planning and design since the administrator believes in yet another pillar: total involvement. Parents and the community (in the Adventist school system this pillar also refers to the constituents who assist in funding the school) are very involved in sharing and helping to develop the vision and mission of the effective academic program, the effective (quality) school.

Recommendations

These recommendations are being made for further research:

1. Replicate this study in the other Seventh-day Adventist senior high schools in Canada and compare the results and findings with this study.
2. Replicate this study using the same four schools but with alumni from 1992-1998.
3. Conduct a study on the academic performance of alumni in their freshmen year as compared with alumni from other private high schools to determine effectiveness of the Seventh-day Adventist high-school academic program in Canada, in preparing graduates for postsecondary education.
4. Conduct a study on the social adjustment of alumni in their freshmen year in postsecondary institutions to determine the effectiveness of Seventh-day Adventist high schools in Canada in preparing graduates socially for postsecondary education.
5. Conduct a study to compare the effectiveness of the guidance program in Seventh-day Adventist high schools with other private and/or independent high schools in Canada.

6. **Conduct a study comparing the library facilities of the senior Seventh-day Adventist high schools in Canada with other private and/or independent high schools.**
7. **Conduct similar studies among the Seventh-day Adventist schools in other countries.**

APPENDIXES

APPENDIX 1
LETTERS TO PRINCIPALS AND ALUMNI

Date

XXXXXXX
XXXXXXX
XXXXXXX

Dear Principal

I am a doctoral student of Andrews University in the proposal-writing stage of my dissertation. The purpose of my study is to examine the effectiveness of the high-school academic program in preparing students for postsecondary studies (whether they attended private or public institutions) as perceived by alumni from nine senior Seventh-day Adventists academies in Canada. The period to be research is 1986-1992.

Would you please assist me in this study by faxing to me the names and addresses of all alumni from your school who completed their high-school diploma and graduated during the years 1986-1992. If you have a Development Officer could you kindly give that person permission to fax me the information.

My fax number at X Academy is (000) 000-0000. In case you are experiencing difficulty sending the fax, please mail the same to me at:

X Academy
XXXXXXXXX
XXXXXXXXX

Thank you for your prompt assistance in this matter. If you are interested in receiving results of the study please do not hesitate to request a copy.

Sincerely yours

Janice Maitland

Enc

Date

Dear Alumni

As a doctoral student of Andrews University, I am conducting a survey to gather information on the effectiveness of the high-school academic program in our Seventh-day Adventist academies in Canada in preparing students for post-secondary education.

Could you please take a few moments of your time to answer the simple questions on the enclosed form and you might find it a pleasant experience.

Your answers will be kept confidential and used only in combination with others to get a composite picture. They are essential to the accuracy of my research. Enclosed is a stamped self-addressed envelope for your convenience in returning the questionnaire.

Thank you for your valuable assistance.

Sincerely yours

Janice Maitland

Enc

APPENDIX 2
QUESTIONNAIRE AND COMMENTS

HIGH SCHOOL GRADUATE SURVEY

Year Graduated _____

This survey is about your **perception of the effectiveness of the academic program** of the high school you attended. Indicate your agreement or disagreement with each statement that follows by circling one number for each. 1 means "strong disagree" and 5 means "strongly agree."

Strongly disagree 1 2 3 4 5 Strongly agree

- | | | |
|-----|---|-----------|
| 1. | Curriculum offerings were sufficient | 1 2 3 4 5 |
| 2. | Courses were too difficult | 1 2 3 4 5 |
| 3. | School didn't offer the courses I wanted | 1 2 3 4 5 |
| 4. | More assistance was needed for students who were experiencing difficulty with courses | 1 2 3 4 5 |
| 5. | School needed more emphasis on academics | 1 2 3 4 5 |
| 6. | School needed more emphasis on vocational and technical courses | 1 2 3 4 5 |
| 7. | Library facilities were adequate | 1 2 3 4 5 |
| 8. | Classroom environment was conducive to learning | 1 2 3 4 5 |
| 9. | Student guidance for course selection was adequate | 1 2 3 4 5 |
| 10. | Teachers were readily available to assist students with their course work | 1 2 3 4 5 |
| 11. | The quality of instruction was adequate | 1 2 3 4 5 |
| 12. | My study habits were good | 1 2 3 4 5 |
| 13. | Teachers were caring and supportive | 1 2 3 4 5 |
| 14. | Teachers were well qualified to teach their courses | 1 2 3 4 5 |
| 15. | My parents provided good academic help | 1 2 3 4 5 |
| 16. | The school's communication with parents was adequate | 1 2 3 4 5 |
| 17. | Academic preparation for post-secondary studies was adequate | 1 2 3 4 5 |
| 18. | I felt better prepared than the students I met from public schools | 1 2 3 4 5 |

Circle the answer which applies to you

- | | | | |
|----|---|--|---|
| 1. | College/university attended | private | public |
| 2. | Gender/Sex | male | female |
| 3. | Ethnic origin | Canadian black
West Indian
Filipino
Hispanic black
Other | Canadian white
Asian
Hispanic white
Oriental |
| 4. | I attended college/university immediately after high school | Yes | No |
| 5. | I took additional high school courses after graduation | Yes | No |

Your comments or suggestions on improving and/or enhancing academic quality of the high school program you attended

Comments & Suggestions

Forty-three alumni supplied these comments and/or suggestions about their experiences as it relates to the effectiveness of the high-school academic program. The comments were categorized and each respondent was assigned a number.

Courses/Course Selection

#24: “Not everyone wants to be a teacher or a preacher, more technical courses are needed. I noticed when I left public high school in Grade 10, that the courses for Grade 11 in the private schools were almost a repeat.”

#25: School #3 needed more technical and vocational courses.”

#26: “More tech. Courses are needed and better general level courses instead of putting general level students in with the advanced level.”

#22: “Needed more P.E. courses after Grade 10. Emphasis on healthy physical activity is poor.”

#23: “Mandatory Physical Education courses every year!!”

#33: “Skills from sporting activities helped me merge swiftly into a U.S. college environment, making life-long friends, experiences from playing on university hockey team. I do not want to see P.E. cut because of financial difficulties. P.E. needs to involve fundamentals in all sports and life-long fitness. Exposure to the arts could help us understand our culture and history—ballet, symphony, opera, fine arts.”

#14: “Stronger emphasis on academics—especially Maths.”

#13: “More selection of courses.”

#12: "More courses/instruction, etc. that was tied to real life. Life application stuff, e.g., family life, leadership, finances etc. could have been stressed more."

#1: "A class on critical thinking or have more critical thinking woven into the curriculum."

#27: "The art (painting) and music (band, choir) programs are essential."

#11: "Have the option of more challenging classes for more advanced students, courses on good study habits. The content of the courses was pretty much on a par with public schools I attended the year before. I think there should be a short course on how to study with tests soon enough after to demonstrate the value of good study habits. I also think there should be classes for those who are ahead intellectually/academically. I started out way ahead of my Grade 1 class having learned to read. I was four years old and there was another girl also in the same situation. I was skipped a Grade 4 but because right from the beginning things were easy I never developed good study habits."

#39: "I wished for more emphasis on fine arts, i.e., painting. As I think back, I realize that many students could have benefited from a vocational/technical track."

#29: "A variety of vocational subjects would be good."

#34: "Continue extracurricular activities such as band and choir. Great experience especially with the traveling."

#5: "Courses were not too difficult but just right."

Quality of Teaching & Teachers' Qualifications

#38: "The academic quality of my high school program could best be enhanced by increasing enthusiasm in each subject taught, to learn for the sake of learning, and to

structure the courses in such a way that best prepares one for the toughest university courses in North America. When one receives high marks in a high-school program that is not challenging enough to prepare one for a top-notch school, top notch marks for one unknowingly unprepared creates a situation of a false sense of security. They are accepted to good schools as a result of the high marks, but as a result of being under-prepared, confidence and self-esteem could be affected in a shocked, young individual. By preparing the teen properly for what's truly ahead, such situations could be avoided. This can best be done by researching these top-level schools. I believe that efforts in this area of the system could best improve the SDA Academy system in assisting in one's future endeavors."

#21: "Employ teachers with appropriate degree specialization to teach the appropriate courses e.g., Biology major specialty teaching Biology, not Biology major teaching Physics."

#11: "Have teachers who teach kids to think and discover for themselves instead of repeat back all the answers that are given for themselves instead of repeat back all the answers that are given to them. This will prepare them more for the way things are in college/university."

#39: "I have worked in the public school system in NY State, and by comparison I realize that the educators in our system are well qualified, well-rounded individuals."

#15: "Academic levels were sub-standard for attending university. Teachers should only teach classes in their field."

#1: "Discussion in every class on how these class topics impact our SDA world view and how our SDA world view impacts these topics/issues."

#16: "Government testing showed dramatic difference in English score. I feel gyped in getting quality instruction in grammar and writing. Teachers may have judged content and thought rather than correct structure and proper writing skills."

#36: Need teachers who are qualified and up-to-date on present advances/academics in terms of students progressing to high education. Not only qualified teachers but those who have a passion for their field not just give homework and tests but actually teach."

Teacher Nurture

#20: "Since this survey comes 13 years since I graduated, all I remember is Teacher X and all the extra math tutorials he gave, and Mr Y's English classes where we studied Shakespeare (I liked that anyway)."

#11: "Many teachers were good and available to help, others usually for the courses I actually had trouble with did not make themselves available for outside help."

#37: "I believe School #2's teachers are one of a kind. The teachers are very concerned with the achievements of their students. All in all I had my best days at School #2. I loved that school!"

#28: "Teachers were relics; information was outdated."

#17: "Teachers need to be more readily available for students they know are having difficulties/students will not necessarily come for help. It wasn't until my last

year of school a teacher suggested I take a dyslexia test-there I found out why I struggled through tests, quizzes etc.”

#18: “Need more caring prayerful teachers who see all students as important, potentially filled with gifts from God, worthy of the best of their time and efforts.”

#19: “Vice-principal was not caring or supportive and not qualified to teach courses. Also had made known his dislike for myself and later, kicked me out of school without the Principal’s knowledge. For this and other reasons my child will not be attending a private school operated by the Seventh-day Adventist Church.”

Guidance Counseling

Comments and suggestions about guidance and career counseling seemed to highlight a need for better services in that aspect of the academic program.

#31: “Need better career counseling and aptitude testing to identify students’ natural abilities.”

#32: “I think a guidance counselor would improve the program at School A.”

#34: “More education on career opportunities. Also guidance as to how class choices in high school prepare/or do not prepare students for the future (further education or practical—some students were one-sided one way or the other e.g., a heavy science load did not allow students room to take more practical courses that would prepare them for everyday living or develop talents.”

#35: “I felt very fortunate to have attended School #4 because of the help and extra guidance a small school could give. I felt better prepared for university. As for learning potential—School #4 was top notch.”

#33: "Need individual career assessment and counseling."

#36: "Better testing and counseling of students, so they succeed not struggle in their postsecondary studies."

#39: "My impression it that I could have benefited from a more active guidance counseling system."

School's Communication with Parents

#29: "More consistent school communication with out of province parents."

#30: "The school's communication with the parents could improve especially when the student is doing poorly in their academics. A system should be developed in which the parent, guidance counselor and student should meet and openly discuss possible reasons why the student is doing poorly and steps should be taken to assist the student in improving his/her grades."

#28: "School only communicated with parents during tuition payments, and problem situations. No praise or positive reinforcement was relayed to parents."

Co-op Programs/Work-Study

#39: "One of the most beneficial aspects that absolutely impacted my studies was the work-study program."

#42: "Internships provide first-class experience for desired fields of study. I wish I had that opportunity."

#41: "Probably offering study/co-op programs for students in Grade 12."

Library and Other Facilities

#36: “Better library facilities, more up-to-date equipment.”

#37: “Library, science labs, computer labs need improvement.”

#2: “Dorm students weren’t allowed easy access to the library. The red tape to get permission to go there was enormous and took hours of talking and explaining—even if you were a kid who was never in trouble.”

Preparation for University/College

#37: “Better testing and counseling of students, so they succeed, not struggle in their postsecondary studies.”

#28: “Due to the school’s specialized nature, I was not prepared for university; making my own decisions, and life in general.”

#35: “Because of the help and extra guidance a small school could give—I felt better prepared for university.”

#11: “If teachers teach kids to think for themselves this will prepare them more for what is in university/college.”

#15: “Academic levels were sub-standard for attending university.”

Miscellaneous Comments and Suggestions

#9: “Overall, my high-school experience was positive.”

#43: “I am happy with my experience.”

#5: “I had a positive experience, and I was a hard-working student who received good grades all the way through high school.”

#2: "I had problems with dorm life and the way things were handled in that area. The dean and rules were not reasonable or practical."

#3: "Develop some tolerance for those individuals who think/act 'outside the Box.' Need curricular activities. I will not send my children."

#4: "Stimulate the private sector to create jobs so students can afford to attend private schools."

#7: "Negative accusations against public education were wrongfully made to graduating students in their classes as a means of promoting CUC."

#8: "The process of domestication that we learn at home/school/church is what will improve and/or enhance the academic quality of the high-school program I attended."

#10: "I attended School #4 and felt that a more public approach to sports and interaction with the community is needed. The school tended to shelter and bubble students from appropriate pro-social interaction."

#40: "A school needs rules but not judgment. Yes we need Christ in our lives but we need an education too. We need to stress more on our education not on playing God."

APPENDIX 3

TABLE 7

TABLE 7
RESPONDENTS BY GRADUATION YEAR

Year	N	%
1986	8	9.8
1987	16	19.5
1988	13	15.9
1989	9	11.0
1990	14	17.1
1991	11	13.4
1992	11	13.4
Total	82	100.0

APPENDIX 4

RAW DATA

ONEWAY
 q1 to q18 BY gender
 /STATISTICS DESCRIPTIVES
 /MISSING ANALYSIS .

Oneway

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Q1	1	29	3.48	1.18	.21	3.04	3.82	1	5
	2	53	3.67	.86	.13	3.30	3.89	1	5
	Total	82	3.64	1.02	.11	3.51	3.79	1	5
Q2	1	29	2.10	.80	.17	1.78	2.46	1	5
	2	53	1.81	.88	.12	1.69	2.05	1	5
	Total	82	1.91	.89	0.09E-02	1.72	2.11	1	5
Q3	1	29	2.83	1.23	.23	2.38	3.29	1	5
	2	53	2.70	1.25	.17	2.36	3.04	1	5
	Total	82	2.74	1.24	.14	2.47	3.02	1	5
Q4	1	29	2.72	1.00	.19	2.36	3.10	1	5
	2	53	2.89	1.30	.18	2.63	3.24	1	5
	Total	82	2.83	1.19	.13	2.57	3.09	1	5
Q5	1	29	2.89	1.38	.23	2.21	3.17	1	5
	2	53	2.34	.88	.13	2.07	2.61	1	5
	Total	82	2.46	1.09	.12	2.22	2.70	1	5
Q6	1	29	3.46	1.18	.21	3.01	3.89	1	5
	2	53	3.80	1.08	.16	3.31	3.90	1	5
	Total	82	3.65	1.09	.12	3.31	3.79	1	5
Q7	1	29	2.79	1.28	.23	2.31	3.27	1	5
	2	53	3.02	1.13	.16	2.71	3.39	1	5
	Total	82	2.94	1.18	.19	2.88	3.20	1	5
Q8	1	29	3.72	.84	.16	3.40	4.04	2	5
	2	53	3.88	.87	.12	3.44	3.92	1	5
	Total	82	3.70	.89	0.40E-02	3.61	3.89	1	5
Q9	1	29	2.79	1.28	.23	2.31	3.27	1	5
	2	53	3.08	1.28	.18	2.72	3.43	1	5
	Total	82	2.99	1.29	.14	2.70	3.28	1	5
Q10	1	29	3.88	1.09	.20	3.46	4.30	1	5
	2	53	4.08	.82	.13	3.82	4.39	2	5
	Total	82	4.00	.88	.11	3.78	4.22	1	5
Q11	1	29	3.89	1.00	.19	3.31	4.07	2	5
	2	53	3.89	.79	.11	3.62	4.04	2	5
	Total	82	3.78	.88	0.51E-02	3.69	3.97	2	5
Q12	1	29	3.14	1.26	.23	2.69	3.61	1	5
	2	53	3.80	1.17	.16	3.28	3.89	1	5
	Total	82	3.44	1.21	.13	3.17	3.70	1	5
Q13	1	29	4.09	.89	.16	3.69	4.41	2	5
	2	53	4.04	1.07	.16	3.74	4.39	1	5
	Total	82	4.04	1.04	.11	3.81	4.28	1	5
Q14	1	29	3.89	1.07	.20	3.28	4.10	2	5
	2	53	3.88	.89	.14	3.69	4.12	1	5
	Total	82	3.79	1.02	.11	3.67	4.02	1	5
Q15	1	29	3.34	1.17	.22	2.90	3.79	1	5
	2	53	3.30	1.49	.20	2.89	3.71	1	5
	Total	82	3.32	1.39	.16	3.01	3.62	1	5
Q16	1	29	3.41	1.05	.20	3.01	3.81	1	5
	2	53	3.18	1.28	.17	2.84	3.64	1	5
	Total	82	3.27	1.19	.13	3.01	3.53	1	5
Q17	1	29	3.31	1.28	.23	2.83	3.79	1	5
	2	53	3.51	1.23	.17	3.17	3.86	1	5
	Total	82	3.44	1.24	.14	3.17	3.71	1	5
Q18	1	29	2.97	1.32	.25	2.48	3.47	1	5
	2	53	2.84	1.28	.18	2.89	3.20	1	5
	Total	82	2.96	1.29	.14	2.67	3.23	1	5

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Q1	Between Groups	.130	1	.130	.123	.728
	Within Groups	84.280	80	1.063		
	Total	84.390	81			
Q2	Between Groups	1.800	1	1.800	2.108	.161
	Within Groups	60.803	80	.780		
	Total	62.402	81			
Q3	Between Groups	.314	1	.314	.204	.653
	Within Groups	123.308	80	1.541		
	Total	123.622	81			
Q4	Between Groups	.488	1	.488	.345	.558
	Within Groups	115.114	80	1.439		
	Total	115.610	81			
Q5	Between Groups	2.297	1	2.297	1.953	.168
	Within Groups	94.064	80	1.178		
	Total	96.390	81			
Q6	Between Groups	.453	1	.453	.378	.540
	Within Groups	95.852	80	1.198		
	Total	96.305	81			
Q7	Between Groups	.955	1	.955	.884	.411
	Within Groups	111.740	80	1.397		
	Total	112.695	81			
Q8	Between Groups	3.778E-02	1	3.778E-02	.051	.822
	Within Groups	59.340	80	.742		
	Total	59.378	81			
Q9	Between Groups	1.484	1	1.484	.918	.341
	Within Groups	130.457	80	1.631		
	Total	131.951	81			
Q10	Between Groups	.854	1	.854	.885	.350
	Within Groups	77.148	80	.964		
	Total	78.000	81			
Q11	Between Groups	.370	1	.370	.498	.483
	Within Groups	59.679	80	.748		
	Total	60.049	81			
Q12	Between Groups	4.088	1	4.088	2.851	.095
	Within Groups	114.128	80	1.427		
	Total	118.185	81			
Q13	Between Groups	1.884E-04	1	1.884E-04	.000	.988
	Within Groups	88.880	80	1.098		
	Total	88.880	81			
Q14	Between Groups	.478	1	.478	.459	.500
	Within Groups	82.999	80	1.037		
	Total	83.478	81			
Q15	Between Groups	3.456E-02	1	3.456E-02	.018	.884
	Within Groups	183.722	80	1.922		
	Total	183.758	81			
Q16	Between Groups	.980	1	.980	.672	.415
	Within Groups	113.148	80	1.414		
	Total	114.098	81			
Q17	Between Groups	.743	1	.743	.481	.480
	Within Groups	123.482	80	1.543		
	Total	124.185	81			
Q18	Between Groups	9.172E-03	1	9.172E-03	.005	.941
	Within Groups	133.786	80	1.672		
	Total	133.805	81			

recode ethnic (1,3=1)(2=2)(4 thru hi=system).
 ONWAY
 q1 to q18 BY ethnic
 /STATISTICS DESCRIPTIVES
 /MISSING ANALYSIS .

Oneway

Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Q1	21	3.36	.80	.18	3.01	3.78	2	6
2	82	3.82	1.12	.18	3.50	3.88	1	6
Total	73	3.65	1.04	.12	3.30	3.79	1	6
Q2	21	1.86	.74	.16	1.62	2.29	1	4
2	82	1.89	.84	.13	1.62	2.16	1	6
Total	73	1.80	.89	.10	1.70	2.11	1	6
Q3	21	2.88	1.11	.34	2.35	3.38	1	6
2	82	2.82	1.39	.18	2.34	2.89	1	6
Total	73	2.89	1.27	.16	2.59	2.89	1	6
Q4	21	3.19	1.21	.28	2.64	3.74	1	6
2	82	2.89	1.18	.16	2.58	3.02	1	6
Total	73	2.84	1.20	.14	2.56	3.12	1	6
Q5	21	2.38	1.02	.22	1.87	2.80	1	4
2	82	2.80	1.08	.16	2.30	2.80	1	6
Total	73	2.45	1.07	.12	2.20	2.70	1	6
Q6	21	3.43	1.08	.23	2.94	3.82	1	6
2	82	3.69	1.14	.16	3.32	3.86	1	6
Total	73	3.68	1.12	.13	3.31	3.84	1	6
Q7	21	2.33	1.02	.22	1.87	2.80	1	6
2	82	3.13	1.19	.18	2.80	3.47	1	6
Total	73	2.80	1.19	.14	2.63	3.18	1	6
Q8	21	3.62	.81	.18	3.15	3.89	2	6
2	82	3.79	.89	.12	3.54	4.04	1	6
Total	73	3.71	.87	.10	3.51	3.82	1	6
Q9	21	3.24	1.28	.38	2.89	3.61	1	6
2	82	2.87	1.38	.18	2.80	3.24	1	6
Total	73	2.97	1.31	.16	2.67	3.28	1	6
Q10	21	3.86	.88	.19	3.68	4.36	3	6
2	82	3.88	1.04	.14	3.69	4.27	1	6
Total	73	3.87	.89	.12	3.74	4.20	1	6
Q11	21	3.71	.80	.20	3.30	4.13	2	6
2	82	3.78	.86	.12	3.55	4.02	2	6
Total	73	3.77	.88	.10	3.57	3.97	2	6
Q12	21	3.19	1.21	.28	2.64	3.74	1	6
2	82	3.88	1.14	.16	3.26	3.80	1	6
Total	73	3.47	1.17	.14	3.19	3.74	1	6
Q13	21	3.81	.87	.19	3.41	4.21	2	6
2	82	4.08	1.13	.16	3.76	4.39	1	6
Total	73	4.00	1.07	.12	3.75	4.25	1	6
Q14	21	3.78	.89	.19	3.38	4.17	2	6
2	82	3.88	1.10	.18	3.88	4.19	1	6
Total	73	3.85	1.04	.12	3.61	4.09	1	6
Q15	21	3.05	1.80	.39	2.37	3.73	1	6
2	82	3.40	1.32	.18	3.04	3.77	1	6
Total	73	3.30	1.37	.16	2.99	3.62	1	6
Q16	21	3.43	1.38	.30	2.81	4.05	1	6
2	82	3.19	1.14	.16	2.88	3.51	1	6
Total	73	3.25	1.20	.14	2.89	3.64	1	6
Q17	21	3.82	1.12	.24	3.11	4.13	1	6
2	82	3.44	1.27	.18	3.08	3.80	1	6
Total	73	3.49	1.23	.14	3.21	3.78	1	6
Q18	21	3.05	1.16	.28	2.82	3.88	1	6
2	82	2.88	1.38	.18	2.88	3.26	1	6
Total	73	2.89	1.32	.16	2.89	3.29	1	6

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Q1	Between Groups	.822	1	.822	.768	.388
	Within Groups	77.280	71	1.088		
	Total	78.082	72			
Q2	Between Groups	8.888E-02	1	8.888E-02	.087	.769
	Within Groups	58.280	71	.782		
	Total	58.329	72			
Q3	Between Groups	.874	1	.874	.540	.465
	Within Groups	114.879	71	1.618		
	Total	115.753	72			
Q4	Between Groups	3.712	1	3.712	2.628	.108
	Within Groups	100.315	71	1.413		
	Total	104.027	72			
Q5	Between Groups	.418	1	.418	.381	.550
	Within Groups	81.887	71	1.150		
	Total	82.082	72			
Q6	Between Groups	.836	1	.836	.505	.479
	Within Groups	88.201	71	1.258		
	Total	88.838	72			
Q7	Between Groups	9.804	1	9.804	7.354	.008
	Within Groups	82.724	71	1.308		
	Total	102.529	72			
Q8	Between Groups	1.048	1	1.048	1.380	.244
	Within Groups	53.811	71	.759		
	Total	54.959	72			
Q9	Between Groups	2.078	1	2.078	1.211	.275
	Within Groups	121.887	71	1.718		
	Total	123.945	72			
Q10	Between Groups	1.208E-02	1	1.208E-02	.012	.912
	Within Groups	88.983	71	.985		
	Total	88.945	72			
Q11	Between Groups	8.230E-02	1	8.230E-02	.110	.741
	Within Groups	82.989	71	.748		
	Total	83.041	72			
Q12	Between Groups	2.234	1	2.234	1.883	.203
	Within Groups	85.880	71	1.361		
	Total	88.184	72			
Q13	Between Groups	1.070	1	1.070	.898	.338
	Within Groups	80.830	71	1.140		
	Total	82.000	72			
Q14	Between Groups	.228	1	.228	.207	.650
	Within Groups	77.117	71	1.088		
	Total	77.342	72			
Q15	Between Groups	1.888	1	1.888	1.010	.318
	Within Groups	133.472	71	1.880		
	Total	136.370	72			
Q16	Between Groups	.836	1	.836	.574	.451
	Within Groups	103.220	71	1.454		
	Total	104.055	72			
Q17	Between Groups	.467	1	.467	.308	.581
	Within Groups	107.779	71	1.518		
	Total	108.247	72			
Q18	Between Groups	.111	1	.111	.083	.803
	Within Groups	124.875	71	1.758		
	Total	124.998	72			

OSWAY
 q1 to q18 BY address
 /STATISTICS DESCRIPTIVES
 /MISSING ANALYSIS .

Oneway

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Q1	1	14	3.29	1.38	.37	2.49	4.08	1	6
	2	88	3.89	.93	.11	3.38	3.81	1	6
	Total	82	3.64	1.02	.11	3.31	3.78	1	6
Q2	1	14	1.88	.77	.21	1.41	2.30	1	3
	2	88	1.88	.80	.11	1.71	2.15	1	6
	Total	82	1.81	.88	0.00E+00	1.72	2.11	1	6
Q3	1	14	2.78	1.26	.38	2.08	3.51	1	6
	2	88	2.74	1.24	.15	2.43	3.04	1	6
	Total	82	2.74	1.24	.14	2.47	3.02	1	6
Q4	1	14	3.38	1.39	.37	2.56	4.18	1	6
	2	88	2.72	1.13	.14	2.45	2.99	1	6
	Total	82	2.85	1.18	.13	2.57	3.09	1	6
Q5	1	14	2.00	.88	.28	1.49	2.51	1	3
	2	88	2.88	1.11	.13	2.59	2.98	1	6
	Total	82	2.48	1.08	.12	2.22	2.70	1	6
Q6	1	14	3.71	1.07	.28	3.10	4.33	2	6
	2	88	3.51	1.10	.13	3.26	3.78	1	6
	Total	82	3.55	1.09	.12	3.31	3.78	1	6
Q7	1	14	2.14	1.17	.31	1.47	2.82	1	4
	2	88	3.10	1.12	.14	2.88	3.37	1	6
	Total	82	2.94	1.18	.13	2.88	3.28	1	6
Q8	1	14	3.43	1.16	.31	2.78	4.10	2	6
	2	88	3.75	.78	0.00E+00	3.88	3.94	1	6
	Total	82	3.70	.88	0.00E+00	3.61	3.88	1	6
Q9	1	14	2.43	1.28	.34	1.88	3.17	1	6
	2	88	3.08	1.25	.18	2.78	3.38	1	6
	Total	82	2.88	1.28	.14	2.70	3.28	1	6
Q10	1	14	4.07	.88	.28	3.88	4.55	3	6
	2	88	3.88	1.01	.12	3.74	4.28	1	6
	Total	82	4.00	.88	.11	3.78	4.22	1	6
Q11	1	14	3.43	1.02	.27	2.84	4.02	2	6
	2	88	3.85	.82	0.00E+00	3.88	4.05	2	6
	Total	82	3.78	.88	0.01E+00	3.88	3.97	2	6
Q12	1	14	2.88	1.41	.38	2.05	3.67	1	6
	2	88	3.88	1.14	.14	3.28	3.88	1	6
	Total	82	3.44	1.21	.13	3.17	3.70	1	6
Q13	1	14	3.88	1.07	.28	3.31	4.55	2	6
	2	88	4.08	1.08	.13	3.81	4.31	1	6
	Total	82	4.04	1.04	.11	3.81	4.28	1	6
Q14	1	14	3.38	1.08	.28	2.73	3.88	2	6
	2	88	3.88	.88	.12	3.64	4.12	1	6
	Total	82	3.78	1.02	.11	3.67	4.02	1	6
Q15	1	14	2.88	1.38	.37	2.13	3.73	1	6
	2	88	3.40	1.37	.17	3.05	3.73	1	6
	Total	82	3.22	1.38	.18	3.01	3.88	1	6
Q16	1	14	3.21	1.48	.38	2.38	4.07	1	6
	2	88	3.28	1.13	.14	3.01	3.65	1	6
	Total	82	3.27	1.18	.13	3.01	3.53	1	6
Q17	1	14	2.71	1.38	.37	1.82	3.61	1	6
	2	88	3.88	1.18	.14	3.31	3.87	1	6
	Total	82	3.44	1.24	.14	3.17	3.71	1	6
Q18	1	14	2.87	1.38	.34	1.88	3.31	1	6
	2	88	3.08	1.28	.18	2.72	3.24	1	6
	Total	82	2.95	1.28	.14	2.87	3.28	1	6

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Q1	Between Groups	1.083	1	1.083	1.020	.318
	Within Groups	83.328	80	1.042		
	Total	84.410	81			
Q2	Between Groups	5.880E-02	1	5.880E-02	.072	.780
	Within Groups	62.347	80	.778		
	Total	62.402	81			
Q3	Between Groups	2.951E-02	1	2.951E-02	.019	.880
	Within Groups	123.882	80	1.546		
	Total	123.922	81			
Q4	Between Groups	4.704	1	4.704	3.383	.069
	Within Groups	110.905	80	1.386		
	Total	115.610	81			
Q5	Between Groups	3.888	1	3.888	3.127	.081
	Within Groups	92.785	80	1.160		
	Total	96.673	81			
Q6	Between Groups	.482	1	.482	.388	.538
	Within Groups	95.842	80	1.198		
	Total	96.324	81			
Q7	Between Groups	10.701	1	10.701	8.384	.005
	Within Groups	101.884	80	1.275		
	Total	112.585	81			
Q8	Between Groups	1.188	1	1.188	1.848	.303
	Within Groups	88.178	80	.727		
	Total	89.378	81			
Q9	Between Groups	5.082	1	5.082	3.185	.078
	Within Groups	128.898	80	1.608		
	Total	133.980	81			
Q10	Between Groups	8.813E-02	1	8.813E-02	.088	.787
	Within Groups	77.814	80	.974		
	Total	78.000	81			
Q11	Between Groups	2.081	1	2.081	2.888	.098
	Within Groups	67.888	80	.724		
	Total	69.969	81			
Q12	Between Groups	8.718	1	8.718	4.088	.047
	Within Groups	112.478	80	1.408		
	Total	118.195	81			
Q13	Between Groups	.187	1	.187	.182	.671
	Within Groups	88.883	80	1.084		
	Total	89.070	81			
Q14	Between Groups	3.203	1	3.203	3.182	.078
	Within Groups	80.273	80	1.003		
	Total	83.476	81			
Q15	Between Groups	2.548	1	2.548	1.348	.248
	Within Groups	151.208	80	1.880		
	Total	153.756	81			
Q16	Between Groups	4.884E-02	1	4.884E-02	.035	.863
	Within Groups	114.048	80	1.428		
	Total	114.088	81			
Q17	Between Groups	8.887	1	8.887	6.181	.018
	Within Groups	115.388	80	1.442		
	Total	124.185	81			
Q18	Between Groups	2.438	1	2.438	1.483	.227
	Within Groups	131.378	80	1.642		
	Total	133.816	81			

ONEWAY
 q1 to q18 BY yescoll
 /STATISTICS DESCRIPTIVES
 /MISSING ANALYSIS .

Oneway

Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Q1	20	3.55	.87	.12	3.30	3.70	1	5
2	20	3.50	1.19	.27	2.94	4.06	1	5
Total	40	3.54	1.02	.11	3.31	3.70	1	5
Q2	20	1.94	.89	.11	1.71	2.18	1	5
2	20	1.85	.89	.20	1.44	2.26	1	3
Total	40	1.91	.89	0.09E-02	1.72	2.11	1	5
Q3	20	2.69	1.21	.16	2.57	2.80	1	5
2	20	2.85	1.32	.29	2.33	3.37	1	5
Total	40	2.74	1.24	.14	2.47	3.02	1	5
Q4	20	2.71	1.14	.14	2.42	3.00	1	5
2	20	3.20	1.32	.30	2.60	3.82	1	5
Total	40	2.93	1.19	.13	2.67	3.09	1	5
Q5	20	2.82	1.13	.14	2.23	2.80	1	5
2	20	2.90	.89	.22	1.84	2.78	1	4
Total	40	2.86	1.09	.12	2.22	2.70	1	5
Q6	20	3.44	1.09	.14	3.18	3.71	1	5
2	20	3.80	1.07	.24	3.40	4.40	2	5
Total	40	3.55	1.09	.12	3.31	3.79	1	5
Q7	20	3.02	1.12	.14	2.78	3.30	1	5
2	20	2.70	1.34	.30	2.07	3.33	1	5
Total	40	2.94	1.18	.13	2.88	3.20	1	5
Q8	20	3.79	.89	.11	3.51	3.84	1	5
2	20	3.80	.94	.21	3.18	4.04	2	5
Total	40	3.70	.89	0.49E-02	3.51	3.89	1	5
Q9	20	3.05	1.27	.16	2.79	3.37	1	5
2	20	2.75	1.29	.29	2.15	3.35	1	5
Total	40	2.89	1.28	.14	2.70	3.28	1	5
Q10	20	3.84	1.04	.13	3.67	4.20	1	5
2	20	4.20	.77	.17	3.84	4.56	3	5
Total	40	4.00	.89	.11	3.78	4.22	1	5
Q11	20	3.81	.87	.11	3.69	4.03	2	5
2	20	3.70	.89	.19	3.30	4.10	2	5
Total	40	3.78	.89	0.51E-02	3.69	3.97	2	5
Q12	20	3.82	1.14	.14	3.23	3.81	1	5
2	20	3.20	1.40	.31	2.55	3.85	1	5
Total	40	3.44	1.21	.13	3.17	3.70	1	5
Q13	20	4.05	1.09	.14	3.77	4.33	1	5
2	20	4.00	.89	.18	3.80	4.40	2	5
Total	40	4.04	1.04	.11	3.81	4.28	1	5
Q14	20	3.84	1.09	.13	3.68	4.10	1	5
2	20	3.85	.89	.22	3.19	4.11	2	5
Total	40	3.79	1.02	.11	3.67	4.02	1	5
Q15	20	3.57	1.35	.17	3.09	3.71	1	5
2	20	3.15	1.50	.33	2.45	3.85	1	5
Total	40	3.32	1.39	.15	3.01	3.62	1	5
Q16	20	3.34	1.12	.14	3.08	3.62	1	5
2	20	3.05	1.39	.31	2.40	3.70	1	5
Total	40	3.27	1.19	.13	3.01	3.53	1	5
Q17	20	3.80	1.21	.15	3.59	3.90	1	5
2	20	2.85	1.29	.28	2.57	3.13	1	5
Total	40	3.44	1.24	.14	3.17	3.71	1	5
Q18	20	3.08	1.25	.16	2.75	3.39	1	5
2	20	2.80	1.35	.30	1.97	3.23	1	5
Total	40	2.95	1.29	.14	2.67	3.23	1	5

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Q1	Between Groups	3.541E-02	1	3.541E-02	.034	.855
	Within Groups	84.355	80	1.054		
	Total	84.380	81			
Q2	Between Groups	.111	1	.111	.142	.707
	Within Groups	62.282	80	.779		
	Total	62.402	81			
Q3	Between Groups	1.124	1	1.124	.734	.394
	Within Groups	122.488	80	1.531		
	Total	123.622	81			
Q4	Between Groups	3.638	1	3.638	2.597	.111
	Within Groups	111.874	80	1.400		
	Total	115.610	81			
Q5	Between Groups	.708	1	.708	.581	.444
	Within Groups	95.884	80	1.198		
	Total	96.590	81			
Q6	Between Groups	3.283	1	3.283	2.808	.098
	Within Groups	83.042	80	1.163		
	Total	86.305	81			
Q7	Between Groups	1.511	1	1.511	1.087	.300
	Within Groups	111.184	80	1.380		
	Total	112.695	81			
Q8	Between Groups	.238	1	.238	.324	.571
	Within Groups	58.138	80	.730		
	Total	58.378	81			
Q9	Between Groups	1.348	1	1.348	.825	.367
	Within Groups	130.805	80	1.633		
	Total	131.951	81			
Q10	Between Groups	1.058	1	1.058	1.100	.297
	Within Groups	78.842	80	.982		
	Total	78.000	81			
Q11	Between Groups	.171	1	.171	.229	.634
	Within Groups	59.877	80	.748		
	Total	60.048	81			
Q12	Between Groups	1.511	1	1.511	1.038	.312
	Within Groups	116.884	80	1.458		
	Total	118.195	81			
Q13	Between Groups	3.541E-02	1	3.541E-02	.033	.857
	Within Groups	88.855	80	1.098		
	Total	88.880	81			
Q14	Between Groups	.538	1	.538	.518	.473
	Within Groups	82.837	80	1.037		
	Total	83.478	81			
Q15	Between Groups	.738	1	.738	.388	.536
	Within Groups	153.018	80	1.913		
	Total	153.758	81			
Q16	Between Groups	1.280	1	1.280	.884	.347
	Within Groups	112.837	80	1.410		
	Total	114.088	81			
Q17	Between Groups	6.328	1	6.328	4.283	.041
	Within Groups	117.888	80	1.473		
	Total	124.195	81			
Q18	Between Groups	3.283	1	3.283	2.000	.161
	Within Groups	130.542	80	1.632		
	Total	133.805	81			

ONEWAY
 q1 to q18 BY colltype
 /STATISTICS DESCRIPTIVES
 /MISSING ANALYSIS .

Oneway

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Q1	1	40	3.63	.83	.13	3.37	3.90	1	5
	2	33	3.39	1.14	.20	2.99	3.80	1	5
	Total	82	3.54	1.02	.11	3.31	3.78	1	5
Q2	1	40	1.71	.78	.11	1.49	1.93	1	5
	2	33	2.21	.98	.17	1.87	2.55	1	5
	Total	82	1.91	.88	0.09E-02	1.72	2.11	1	5
Q3	1	40	2.57	1.14	.18	2.24	2.90	1	5
	2	33	3.00	1.35	.23	2.62	3.48	1	5
	Total	82	2.74	1.24	.14	2.47	3.02	1	5
Q4	1	40	2.84	1.13	.18	2.63	3.29	1	5
	2	33	2.67	1.29	.22	2.21	3.12	1	5
	Total	82	2.63	1.19	.13	2.57	3.09	1	5
Q5	1	40	2.29	.91	.13	2.02	2.55	1	5
	2	33	2.73	1.28	.22	2.27	3.19	1	5
	Total	82	2.48	1.09	.12	2.22	2.70	1	5
Q6	1	40	3.49	1.12	.18	3.17	3.81	1	5
	2	33	3.64	1.08	.18	3.28	4.01	1	5
	Total	82	3.55	1.09	.12	3.31	3.79	1	5
Q7	1	40	3.10	1.10	.18	2.78	3.42	1	5
	2	33	2.70	1.26	.22	2.25	3.14	1	5
	Total	82	2.84	1.18	.13	2.68	3.20	1	5
Q8	1	40	3.80	.84	.12	3.55	4.04	1	5
	2	33	3.55	.87	.15	3.24	3.85	2	5
	Total	82	3.70	.88	0.49E-02	3.51	3.89	1	5
Q9	1	40	3.14	1.28	.18	2.79	3.50	1	5
	2	33	2.73	1.28	.22	2.27	3.19	1	5
	Total	82	2.88	1.28	.14	2.70	3.28	1	5
Q10	1	40	4.04	.98	.14	3.78	4.32	2	5
	2	33	3.94	1.00	.17	3.69	4.29	1	5
	Total	82	4.00	.98	.11	3.78	4.22	1	5
Q11	1	40	3.84	.83	.12	3.60	4.07	2	5
	2	33	3.70	.82	.16	3.37	4.02	2	5
	Total	82	3.78	.86	0.51E-02	3.59	3.97	2	5
Q12	1	40	3.55	1.23	.18	3.20	3.90	1	5
	2	39	3.27	1.18	.21	2.85	3.69	1	5
	Total	82	3.44	1.21	.13	3.17	3.70	1	5
Q13	1	40	4.58	1.10	.18	3.77	4.40	1	5
	2	33	3.87	.85	.17	3.69	4.31	2	5
	Total	82	4.04	1.04	.11	3.81	4.28	1	5
Q14	1	40	3.80	1.01	.14	3.61	4.19	1	5
	2	39	3.64	1.03	.18	3.27	4.00	2	5
	Total	82	3.79	1.02	.11	3.57	4.02	1	5
Q15	1	40	3.43	1.40	.20	3.08	3.63	1	5
	2	33	3.15	1.35	.23	2.67	3.63	1	5
	Total	82	3.32	1.38	.15	3.01	3.62	1	5
Q16	1	40	3.39	1.15	.18	3.08	3.72	1	5
	2	39	3.09	1.23	.21	2.65	3.53	1	5
	Total	82	3.27	1.19	.13	3.01	3.53	1	5
Q17	1	40	3.80	.88	.14	3.62	4.07	1	5
	2	39	2.91	1.42	.25	2.40	3.41	1	5
	Total	82	3.44	1.24	.14	3.17	3.71	1	5
Q18	1	40	3.10	1.21	.17	2.75	3.45	1	5
	2	33	2.73	1.39	.24	2.24	3.22	1	5
	Total	82	2.88	1.29	.14	2.67	3.23	1	5

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Q1	Between Groups	1.124	1	1.124	1.080	.302
	Within Groups	83.267	80	1.041		
	Total	84.390	81			
Q2	Between Groups	4.887	1	4.887	6.788	.011
	Within Groups	57.515	80	.719		
	Total	62.402	81			
Q3	Between Groups	3.622	1	3.622	2.415	.124
	Within Groups	120.000	80	1.500		
	Total	123.622	81			
Q4	Between Groups	1.460	1	1.460	1.023	.315
	Within Groups	114.180	80	1.427		
	Total	115.610	81			
Q5	Between Groups	3.845	1	3.845	3.324	.072
	Within Groups	82.545	80	1.157		
	Total	86.390	81			
Q6	Between Groups	.424	1	.424	.353	.554
	Within Groups	85.881	80	1.100		
	Total	86.305	81			
Q7	Between Groups	3.236	1	3.236	2.365	.128
	Within Groups	108.459	80	1.368		
	Total	112.695	81			
Q8	Between Groups	1.237	1	1.237	1.702	.198
	Within Groups	68.141	80	.727		
	Total	59.378	81			
Q9	Between Groups	3.408	1	3.408	2.120	.148
	Within Groups	128.545	80	1.607		
	Total	131.951	81			
Q10	Between Groups	.203	1	.203	.208	.648
	Within Groups	77.787	80	.972		
	Total	78.000	81			
Q11	Between Groups	.385	1	.385	.517	.474
	Within Groups	59.884	80	.746		
	Total	60.048	81			
Q12	Between Groups	1.527	1	1.527	1.047	.308
	Within Groups	116.888	80	1.458		
	Total	118.195	81			
Q13	Between Groups	.247	1	.247	.228	.634
	Within Groups	88.843	80	1.088		
	Total	89.890	81			
Q14	Between Groups	1.348	1	1.348	1.315	.255
	Within Groups	82.138	80	1.027		
	Total	83.478	81			
Q15	Between Groups	1.514	1	1.514	.785	.375
	Within Groups	182.242	80	1.903		
	Total	183.756	81			
Q16	Between Groups	1.738	1	1.738	1.237	.288
	Within Groups	112.360	80	1.404		
	Total	114.088	81			
Q17	Between Groups	15.508	1	15.508	11.415	.001
	Within Groups	108.888	80	1.368		
	Total	124.195	81			
Q18	Between Groups	2.770	1	2.770	1.881	.187
	Within Groups	131.085	80	1.638		
	Total	133.805	81			

Frequency Table

SCHOOL

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	11	13.4	13.4	13.4
2	20	24.4	24.4	37.8
3	33	40.2	40.2	78.0
4	18	22.0	22.0	100.0
Total	82	100.0	100.0	

YEAR

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	8	9.8	9.8	9.8
2	16	19.5	19.5	29.3
3	13	15.9	15.9	45.1
4	9	11.0	11.0	56.1
5	14	17.1	17.1	73.2
6	11	13.4	13.4	86.6
7	11	13.4	13.4	100.0
Total	82	100.0	100.0	

Q1

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	4	4.9	4.9	4.9
2	5	6.1	6.1	11.0
3	31	37.8	37.8	48.8
4	27	32.9	32.9	81.7
5	15	18.3	18.3	100.0
Total	82	100.0	100.0	

Q2

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	28	34.1	34.1	34.1
2	38	46.3	46.3	80.5
3	13	15.9	15.9	96.3
4	1	1.2	1.2	97.6
5	2	2.4	2.4	100.0
Total	82	100.0	100.0	

Q3

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	12	14.6	14.6	14.6
2	30	36.6	36.6	51.2
3	16	19.5	19.5	70.7
4	15	18.3	18.3	89.0
5	9	11.0	11.0	100.0
Total	82	100.0	100.0	

Q4

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	12	14.6	14.6	14.6
2	22	26.8	26.8	41.5
3	24	29.3	29.3	70.7
4	16	19.5	19.5	90.2
5	8	9.8	9.8	100.0
Total	82	100.0	100.0	

Q6

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	14	17.1	17.1	17.1
2	36	43.9	43.9	61.0
3	16	19.5	19.5	80.5
4	12	14.6	14.6	95.1
5	4	4.9	4.9	100.0
Total	82	100.0	100.0	

Q8

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	3	3.7	3.7	3.7
2	11	13.4	13.4	17.1
3	24	29.3	29.3	46.3
4	26	31.7	31.7	78.0
5	18	22.0	22.0	100.0
Total	82	100.0	100.0	

Q7

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	11	13.4	13.4	13.4
2	18	22.0	22.0	35.4
3	26	31.7	31.7	67.1
4	19	23.2	23.2	90.2
5	8	9.8	9.8	100.0
Total	82	100.0	100.0	

Q8

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	1	1.2	1.2	1.2
2	7	8.5	8.5	9.8
3	19	23.2	23.2	32.9
4	44	53.7	53.7	86.6
5	11	13.4	13.4	100.0
Total	82	100.0	100.0	

Q9

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	13	15.9	15.9	15.9
2	17	20.7	20.7	36.6
3	22	26.8	26.8	63.4
4	18	22.2	22.2	85.6
5	11	13.4	13.4	100.0
Total	82	100.0	100.0	

Q10

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	1	1.2	1.2	1.2
2	7	8.5	8.5	9.8
3	12	14.6	14.6	24.4
4	33	40.2	40.2	64.6
5	29	35.4	35.4	100.0
Total	82	100.0	100.0	

Q11

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2	8	9.8	9.8	9.8
3	17	20.7	20.7	30.5
4	42	51.2	51.2	81.7
5	15	18.3	18.3	100.0
Total	82	100.0	100.0	

Q12

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	8	9.8	9.8	9.8
2	6	7.3	7.3	17.1
3	29	35.4	35.4	52.4
4	20	24.4	24.4	76.8
5	19	23.2	23.2	100.0
Total	82	100.0	100.0	

Q13

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	2	2.4	2.4	2.4
2	7	8.5	8.5	11.0
3	9	11.0	11.0	22.0
4	32	39.0	39.0	61.0
5	32	39.0	39.0	100.0
Total	82	100.0	100.0	

Q14

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	2	2.4	2.4	2.4
2	8	9.8	9.8	12.2
3	16	19.5	19.5	31.7
4	35	42.7	42.7	74.4
5	21	25.6	25.6	100.0
Total	82	100.0	100.0	

Q15

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	11	13.4	13.4	13.4
2	13	15.9	15.9	29.3
3	19	23.2	23.2	52.4
4	17	20.7	20.7	73.2
5	22	26.8	26.8	100.0
Total	82	100.0	100.0	

Q16

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	10	12.2	12.2	12.2
2	7	8.5	8.5	20.7
3	28	34.1	34.1	54.9
4	25	30.5	30.5	85.4
5	12	14.6	14.6	100.0
Total	82	100.0	100.0	

Q17

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	9	11.0	11.0	11.0
2	9	11.0	11.0	22.0
3	17	20.7	20.7	42.7
4	31	37.8	37.8	80.5
5	16	19.5	19.5	100.0
Total	82	100.0	100.0	

Q18

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	14	17.1	17.1	17.1
2	14	17.1	17.1	34.1
3	29	35.4	35.4	69.5
4	12	14.6	14.6	84.1
5	13	15.9	15.9	100.0
Total	82	100.0	100.0	

COLLTYPE

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	49	59.8	59.8	59.8
2	33	40.2	40.2	100.0
Total	82	100.0	100.0	

GENDER

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	29	35.4	35.4	35.4
2	53	64.6	64.6	100.0
Total	82	100.0	100.0	

ETHNIC

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	6	7.3	8.2	8.2
2	52	63.4	71.2	79.5
3	15	18.3	20.5	100.0
Total	73	89.0	100.0	
Missing System	9	11.0		
Total	82	100.0		

YESCOLL

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	62	75.6	75.6	75.6
2	20	24.4	24.4	100.0
Total	82	100.0	100.0	

ADDS

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	14	17.1	17.1	17.1
2	88	82.9	82.9	100.0
Total	82	100.0	100.0	

APPENDIX 5
PROVINCIAL HIGH-SCHOOL DIPLOMA
REQUIREMENTS

ONTARIO REQUIREMENTS

(Prior to 1987)

(Began 1987)

Twenty-Seven (27) Credits:

Thirty (30) Credits:

Required Electives

Electives

Communications	3 credits
Social Studies	3 credits
Sciences	3 credits
Arts	3 credits

14 credits

Compulsory

Compulsory

English	2 credits
Mathematics	2 credits
Science	1 credits
Canadian History	1 credits
Canadian Geography	1 credits
English (Sr Division)	2 credits

English	5 credits
Mathematics	2 credits
Science	2 credits
Canadian History	1 credit
Canadian Geography	1 credit
French	1 credit
Physical Education	1 credit
Technical/Business	1 credit
Social Science (Sr Division)	1 credit
Arts	1 credit

Additional Electives

4 credits

A credit is equal to 110 hours of instruction.

Six Grade 13 credits are required for entrance to Ontario University.

Beginning in 1987 six Ontario Academic Credits (OACs) for entrance to Ontario
Beginning in 1991 Ontario implemented the Common Curriculum which eliminated levels of difficulty in course content for Grade 9 students. Emphasis was placed on student learning outcomes.

There are three levels of difficulty: advanced level intended for university bound students. General level intended for students who want to enter community college. Basic level for those students who are planning to go directly to the workplace.

BRITISH COLUMBIA REQUIREMENTS

Fifty-two (52) Credits Required:

Foundation Studies

Language Arts 11	4 credits	
Language Arts 12	4 credits	
Social Studies 11	4 credits	
Mathematics 11	4 credits	
Science 11	4 credits	
Fine Arts 11	2 credits	
Applied Skills 11	2 credits	
Career and Personal Planning 11	2 credits	
Career and Personal Planning 12	2 credits	
		28 credits

Selected Studies

Provincial grade 12 courses	10 credits	
Locally-developed courses	1-8 credits	
		24 credits

A credit is equal to 100-120 hours of instructional time.

Provincial examinations are required in 17 of the grade 12 academic subjects. Scores in these exams form 40 % of the final grade.

Students in Grades 11 or 12 must complete 30 hours of work experience as part of Career and Personal Planning (CAPP) 11 or 12.

Apprenticeship and co-op education programs are for workplace-based training.

Career preparation programs consist of six courses at the grade 11 and 12 level. These courses may be Ministry-authorized or career preparation courses.

ALBERTA REQUIREMENTS

One hundred Credits (100) Required:

Social Studies 30 or 33
Mathematics 20 or 23 or 24
Science 20 or 24 or Biology 20 or Chemistry 20 or Physics 20
Physical Education 10 3 credits
Career and Life Management (CALM) 20 3 credits

Any combination from:

Career and Technology Studies (CTS)
OR
Fine Arts or Second Languages
OR
Locally-developed /acquired and authorized courses in CTS,
Fine Arts or Second Languages
OR
Physical Education 20 or 30 10 credits

Any 30-level Courses including:

Locally developed/acquired and authorized courses
Series Courses (advanced level) in career and technology studies
35-level Work Experience 10 credits

A credit is equal to 25 hours of instruction (most courses are 5 credits each).

Three-credit courses are equal of 62.5 hours of instruction.

Work experience or special projects worth 3 credits must have 75 hours of instruction.

Courses numbered 10-19 are grade 10 courses, 20-29 are grade 11 courses, and grade 12 courses are 30-39.

Courses numbered 10-20-30 offer the greatest academic challenge and are primarily for students wanting to enter University.

Courses numbered 13-23-33 are less academic and intended primarily for entry into certain colleges and technical schools, trades or entry into the workplace.

The 14-24 courses are primarily for students planning direct entry into the workplace.

Courses numbered 15-25-35 are locally developed.

APPENDIX
MAP OF CANADA



SELECTED BIBLIOGRAPHY

BIBLIOGRAPHY

- Arcaro, J. (1995a). *Creating quality in the classroom*. Delray Beach, FL: St. Lucie Press.
- Arcaro, J. S. (1995b). *Quality in education*. Delray Beach, FL: St. Lucie Press.
- Armstrong, D. G., & Savage, T. V. (1998). *Teaching in the secondary school, an introduction*. Upper Saddle River, NJ: Prentice-Hall.
- Banathy, B. H. (1991). *Systems design of education: A journey to create the future*. Englewood Cliffs, NJ: Educational Technologies Publications.
- Betts, F. (1992). How systems thinking applies to education. *Educational Leadership*, 50(3), 38-41.
- Borich, G. D. (2000). *Effective teaching methods*. Upper Saddle River, NJ: Prentice-Hall.
- Butlin, G. (1999). Determinants of postsecondary participation. *Education Quarterly Review*, 5(3), 9-35.
- Cadwallader, E. M. (1975). *A history of SDA education*. Payson, AZ: Leaves of Autumn Books.
- Careless, J. M. S. (1953/1963). *Canada: A story of challenge*. Toronto, ON: Macmillan.
- Carnegie Commission on Higher Education. (1972). *Continuity and discontinuity: High education and the schools*. New York: McGraw-Hill.
- Carter-Wells, J. (1989). Academic preparation for college: What we know and where we need to go. *Review of Research in Developmental Education*, 7(2), 3-6. (ERIC Document Reproduction Service No. ED 341 431)
- Chadwick, R. P. (1982). *Teaching and learning an integrated approach to Christian education*. Old Tappan, NJ: H. Revell Company.

- Clark, R. J., Gidney, R. D., & Milburn, G. (1983). *Issues in secondary school*. Waterloo, ON: Johanns Graphics.
- College Entrance Examination Board. (1983). *Academic preparation for college: What students need to know and be able to do*. New York: U.S. Department of Education. (ERIC Document Reproduction Service No. ED 232 517)
- Council of Ministers of Education, Canada (CMEC). (1993). *Joint declaration: Future directions for the Council of Ministers of Education*. Toronto, ON: Westprint.
- Courtland, C. L. (Ed). (1995). *Counseling for diversity: A guide for school counselors and related professionals*. Boston, MA: Allyn and Bacon.
- Cox, A. (1982). *Collaborative actions to aid students' transition from high school to college*. Testimony to the National Commission on Excellence in Education. (Public hearing). Chicago, IL: National Commission on Excellence in Education. (ERIC Document Reproduction Service No. ED 237 011)
- Creemers, B., Peters, T., & Reynolds, D. (1989). *School effectiveness and school improvement*. Amsterdam: Swets & Zeitlinger.
- Denby, M. (1995). A system approach to secondary school change. *Orbit*, 26(3),14-16.
- Devine, T. G. (1987). *Teaching study skills* (2nd ed.). Boston, MA: Allyn & Bacon.
- Dilamarter, J. W. (1995). Schools of the 21st century. *Orbit*, 26(4),13-14.
- Evans, J. R. (1995). Continuous improvement in schools. *Orbit*, 26(2), 64-66.
- Fagan, L. P., & Spurrell, D. (1995). *Evaluating achievement of senior high school students in Canada* (A study of policies and practices of Ministries and school boards in Canada). Toronto, ON: Canadian Education Association.
- Gaskell, J. (1995). *Secondary schools in Canada: The national report of the exemplary schools project*. Toronto, ON: Canadian Education Association. (ERIC Document Reproduction Service No. MN 97-07359)
- General Conference of Seventh-day Adventists, Education Department. (1994). *Report of the Board of Regents*. Washington, DC: Review and Herald.
- General Conference Working Policy*. (1995-1996). Washington, DC: Review and Herald Publishing Association.

- Georgiades, W. (1978). *How good is your school?* Reston, VA: The National Association of Secondary School Principals (NASSP).
- Glasser, W. (1969). *Schools without failure*. New York: Harper & Row.
- Glasser, W. (1993). *The quality school teacher*. New York: Harper Collins.
- Glenn, H. S., & Nelsen, J. (1989). *Raising self-reliant children in a self-indulgent world*. Rocklin, CA: Prima Publishing & Communications.
- Goldberg, M., & Harvey, J. (1983): A nation at risk: The report of the National Commission on Excellence in Education. *Phi Delta Kappan*, 65, 14-18.
- Graham, M. (1981). Toronto Junior Academy becomes Crawford Adventist Academy. *Canadian Adventist Messenger*, 50(6), 8-9.
- Graham, M. (1981). Toronto Junior Academy holds open house. *Canadian Adventist Messenger*, 50(6), 8-9.
- Gross, S., & Fretchling, J. A. (1983). *Follow-up study of the high school class of 1981 one year after graduation*. U.S. Department of Education. Rockville, MD: Department of Educational Accountability. (ERIC Document Reproduction Service No. ED 248 273)
- Hall, B. (1992). *High school follow-up survey. Looking back: Analysis of student views, outcomes, and recommendations*. Salt Lake City School District. Salt Lake City, UT: Survey Services. (ERIC Document Reproduction Service No. ED 366 787)
- Hamilton, A. (2001). FVAA is people. Retrieved from the Fraser Valley Adventist Academy. Web site: <http://www.fvaa.net/facts.htm#FVAA>.
- Henry, G. T. (1990). *Practical sampling*. Newbury Park, CA: SAGE Publications.
- Henson, K. T. (1993). *Methods and strategies for teaching in the secondary and middle schools*. White Plains, NY: Longman Publishing.
- Hilde, R. L., Sr. (1970). *Effectiveness of curriculum of Seventh-day Adventist secondary schools*. Doctoral dissertation, University of Southern California, Los Angeles.
- Howe, W. A. (1962). *A survey of the 1947-1951 graduates of selected Seventh-day Adventist secondary schools*. Doctoral dissertation, University of Nebraska, Lincoln.

- Illinois State Board of Education and the Illinois Board of Higher Education. (1988). *Academic preparation for college in Illinois. Admission requirements for public colleges and universities and suggested learning outcomes for college-bound students.* Joint report. Springfield, IL: Author.
- Jacobs, L. C. (1985). *College freshmen view their high school preparation.* U.S. Department of Education. Chicago, IL: American Educational Research Association. (ERIC Document Reproduction Service No. ED 261 623)
- Karlen, J. M. (1979). *1978 graduate follow-up.* Newark, NJ: Essex County College. (ERIC Document Reproduction Service No. ED 179 268)
- Katz, J. (1956). *Canadian education today.* Toronto, ON: McGraw-Hill.
- Katz, J. (1974). *Education in Canada.* New Abbot, Devon, Great Britain: David and Charles (Holdings).
- Katz, J. (1988). *The how to do it manual for small libraries.* New York: Neal-Schuman Publishers.
- Kaufman, R. A. (1972). *Educational system planning.* Englewood Cliffs, NJ: Prentice-Hall.
- Kaufman, R. A. (1988). *Planning educational systems.* Lancaster, PA: Technomic Publishing Co.
- Krahn, H., & Lowe, G. S. (1996). *Alberta high school grad survey report.* Edmonton, AB: Social Sciences & Humanities Research Council of Canada.
- Lyons, J. E., Randhawa, B. S., & Paulson, N.A. (1991). The development of vocational education. *Canadian Journal of Vocational Education, 16*(2), 137, 149.
- MacGilchrist, B., Myers, K., & Reed, J. (1997). *The intelligent school.* London, England: Paul Chapman Publishing.
- MacInnis, G. (1995). *A report on education in Canada.* Toronto, ON: Westprint.
- MacKinnon, D. (1996). Method, methodology, and dangling conversations. *The Alberta Journal of Educational Research, 42*(3), 208-217.
- Martin, W. B., & Macdonell, A. J. (1978). *Canadian education: A sociological analysis.* Scarborough, ON: Prentice-Hall.

- McDowell Group. (1994). *Rural Alaska secondary education study*. Juneau, AK: Alaska State Department of Education. (ERIC Document Reproduction Service No. ED 378 004)
- Merriam, S. B. (1988). *Case study research in education*. San Francisco, CA: Jossey-Bass.
- Monteith, J. E. (1983). *The Lord is my shepherd: A history of the Seventh-day Adventist church in Canada*. College Heights, AB: Parkland Color Press.
- Moore, B. (1997, December/1998, January). Dismantling the symbols. *Beaver*, 77(6), 53-54.
- Morgan, A. D., & Matthews, D. (1987). *Academic preparation for college: A joint project*. Final report. Santa Fe, Mexico: New Mexico Department of Education and Commission on Higher Education. (ERIC Document Reproduction Service No. ED 285 457)
- Morris, C. (2000, February 17). *Profs say know-nothing high school grads dumbing down courses*. Retrieved July 24, 2001, from Canadian Business and Current Affairs (CBCA) database.
- National Commission on Excellence in Education. (1983). *A nation at risk: The imperative for educational reform*. Washington, DC: Government Printing Office.
- North American Division. (1995). *The Constitution, bylaws and working policy of the General Conference of Seventh-day Adventists*. Washington, DC: General Conference of Seventh-day Adventists.
- North American Division Education Code, K-12. (1995-1996). Washington, DC: General Conference of Seventh-day Adventists.
- Nyberg, V.R., & Lee, B. (1978). *Evaluating academic achievement in the last three years of secondary school in Canada*. Toronto, Canada: Canadian Education Association.
- Olsen, M. E. (1925). *A history of the origin and progress of Seventh-day Adventists*. Takoma Park, MD: Review & Herald Publishing Association.
- Ontario Royal Commission On Learning. (1994). *For the love of learning*. Toronto, ON: Government of Ontario.
- Ontario secondary schools (OSS). (1999). Toronto, ON: Ministry of Education.

- Ontario secondary schools, intermediate and senior (OSSIS)*. (1986). Toronto, ON: Ministry of Education.
- Page, J. A., & Page, F. M. (1984). *Principals' perceptions of their role and the perceived effectiveness of their academic preparation for that role*. Statesboro, GA: Georgia Southern College's Faculty Research Committee. (ERIC Documentation Reproduction Service No. ED 242 710)
- Phillips, C. E. (1957). *The development of education in Canada*. Toronto: W. J. Gage.
- Picciano, A. G. (1980). *Study of alumni (1979) at the College of Staten Island*. Staten Island, NY: College of Staten Island, Office of Institutional Planning. (ERIC Document Reproduction Service No. ED 212 229)
- Provincial Committee on Aims and Objectives of Education in the Schools of Ontario. (1968). *Living and learning*. Toronto, ON: Newton Publishing.
- Reynolds, D., Bollen, R., Creemers, B., Hopkins, D., Stoll, L., & Lagerweij, N. (1996). *Making good schools*. London, England: Routledge.
- Rubinfeld, W. A. (1959). *College guidance for students and parents*. New York: Vocational Guidance Manuals.
- Schneider, G., Seitchik, A., & Holdaway, J. (1987). *Chapter 74 vocational educational programs in Massachusetts: Results from a survey of 1983/84 graduates and their employers*. Massachusetts State Department of Education. Final report. Cambridge, MA: Bureau of Research, Planning, and Evaluation. (ERIC Document Reproduction Service No. ED 281 003)
- Scheerens, J., & Bosker, R. (1997). *Foundations of educational effectiveness*. Kidlington, Oxford: Redwood Brooks.
- Seventh-day Adventist Church. (2001). *Facts and figures*. Retrieved August 14, 2001, from http://www.Adventist.org/world_church_facts_and_figures.html.
- Seventh-day Adventist Church (SDA) in Canada education code*. (1996). Oshawa, ON: SDA Church in Canada.
- Seventh-day Adventist Church (SDA) in Canada schools directory*. (1999-2000). Oshawa, ON: SDA Church in Canada.
- Slark, J., & Bateman, H. (1982). *Follow-up survey of former SAC students who transferred to a four-year college*. Santa Anna, CA: Institutional Research Office. (ERIC Document Reproduction Service No. ED 223 293)

- Stover, L. T., Neubert, G. A., & Lawlor, J. C. (1993). *Creating interactive environments in the secondary school*. Washington, DC: National Education Association of the United States.
- Stavros, D. (1991). *Follow-up study of 1989 graduates: Detroit public schools*. Detroit, MI: Michigan Department of Research and Evaluation. (ERIC Document Reproduction Service No. ED 347 233)
- Thomas, C., & Putman, J. H. (1969). *Egerton Ryerson and education in Upper Canada*. Toronto, ON: William Briggs.
- Titley, E. B., & Miller, P. J. (1982). *Education in Canada: An interpretation*. Calgary, AB: Detselig Enterprises.
- U.S. Department of Health, Education and Welfare. (1966). *Coleman report*. Washington, DC: Office of Educational Research.
- U.S. Department of Health, Education, and Welfare. (1976). *The base-year study and capsule description of the class of 1972*. Washington, DC: Research Triangle Institute.
- Warner, B. (1975). Okanagan Academy auditorium project. *Canadian Adventist Messenger*, 44(2), 35.
- White, E. G. (1952/1980). *Adventist home*. Washington, DC: Review & Herald Publishing Association.
- White, E. G. (1913/1941/1943). *Counsels to parents, teachers and students*. Mountain View, CA: Pacific Press Publishing Association.
- White, E. G. (1903/1952). *Education*. Mountain View, CA: Pacific Press Publishing Association.
- Wien, C. A., & Dudley-Marling, C. (1998). Limited vision: The Ontario curriculum and outcomes-based learning. *Journal of Education*, 23(4), 405-420.
- Wilson, J. D. (1981). *Canadian education in the 1980s*. Calgary, AB: Detselig Enterprises.
- Wilson, J. D., Stamp, R. M., & Audet, L-P. (1970). *Canadian education: A history*. Scarborough, ON: Prentice-Hall.
- Woodcock, G. (1979). *The Canadians*. Cambridge, MA: Harvard University Press.

Wohlstetter, P., Kirk, A. N. V., Robertson, P. J., & Mohrmann, S. A. (1998). *Organizing for successful school-based management*. Alexandria, VA: ABCD.

VITA

NAME: JANICE PATRICIA MAITLAND

DATE OF BIRTH: May 30, 1946

PLACE OF BIRTH: St. George's, Grenada, West Indies

EDUCATION:

1958-1963, 1964-1965	Anglican Girls' High School, Grenada
1965-1967	Caribbean Union College, Trinidad
1979-1981	Andrews University, B.Sc., Secretarial
1981-1984	Andrews University, M.A. Education
1991-1993	Andrews University, Ed.S. Education
1996-2001	Andrews University, Ph.D. Education

PROFESSIONAL EXPERIENCE:

1963-1964	Teacher, St. George's Methodist Elementary School, Grenada
1967-1968	Secretary, Caribbean Union College Trinidad
1971-1975	Teacher, Caribbean Union College, Trinidad
1976-1978	Chairperson, Commercial Department, Barbados Adventist Secondary School, Barbados

1981-1986	Chairperson, Business Education Department, Crawford Adventist Academy, Ontario, Canada
1986-2000	Guidance Counselor, Crawford Adventist Academy, Ontario, Canada
1998-2000	Vice-principal, Crawford Adventist Academy, Ontario, Canada
2000-	Human Resources Coordinator, Caribbean Union College, Trinidad