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A FOLLOW-UP STUDY OF SELECTED GRADUATES OF A SCHOOL  
IN KENYA FOR CHILDREN OF MISSIONARIES: 1965-1970

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A Dissertation  
Presented to  
the Graduate Faculty of  
the Curry Memorial School of Education of  
the University of Virginia

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In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Education

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by

David Hamilton Reynolds, B.A.; M.Ed.

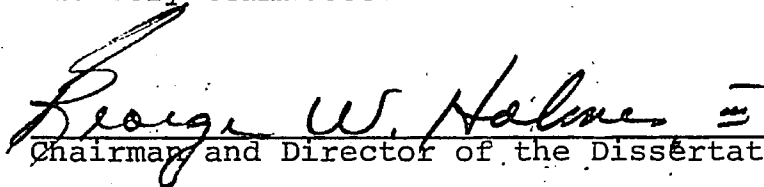
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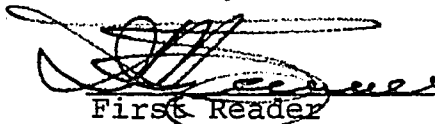
The University of Virginia  
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ACCEPTANCE OF THE DISSERTATION

The dissertation is accepted by the Graduate Faculty of the Curry Memorial School of Education, the University of Virginia, in partial fulfillment of the requirements for the Doctor of Education Degree.

Advisory Committee:

  
Chairman and Director of the Dissertation

  
First Reader

  
Second Reader

Date: June 19, 1972

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## TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS . . . . .	iii
LIST OF TABLES . . . . .	viii
 Chapter	
1. THE PROBLEM AND DEFINITION OF TERMS . . . . .	1
INTRODUCTION . . . . .	1
THE COLONIZATION OF AFRICA . . . . .	4
The Coming of Independence . . . . .	6
EDUCATION IN EAST AFRICA . . . . .	7
STATEMENT OF THE PROBLEM . . . . .	9
PURPOSES OF THE STUDY . . . . .	13
SIGNIFICANCE OF THE STUDY . . . . .	13
STATEMENT OF HYPOTHESES . . . . .	15
DELIMITATIONS OF THE STUDY . . . . .	17
LIMITATIONS OF THE STUDY . . . . .	17
DEFINITIONS OF TERMS . . . . .	18
ORGANIZATION OF THE REMAINDER OF THE STUDY . . . . .	19
2. REVIEW OF SELECTED LITERATURE . . . . .	20
The Seventh-Day Adventist Follow-Up Study . . . . .	20
Selected Follow-Up Studies Reported in the Literature . . . . .	23
3. PROCEDURES USED IN THE STUDY . . . . .	31
THE POPULATION OF THE STUDY . . . . .	31

Chapter	Page
DEVELOPMENT OF THE INSTRUMENT . . . . .	32
The Literature Related to Instrument Design. . . . .	33
Content and Structure of the Questionnaire . . . . .	33
Procedures Used in the Selection of Items . . . . .	35
Pilot-Testing of the Instrument. . . . .	37
Reliability and Validity of the Instrument. . . . .	39
Selection of the Statistic . . . . .	39
PROCEDURES USED FOR ANALYSIS OF DATA. . . . .	41
4. PRESENTATION AND ANALYSIS OF DATA. . . . .	43
RETURNS FROM THE MAILED QUESTIONNAIRE . . . . .	43
PART 1: PROFILE OF THE RESPONDENTS. . . . .	44
Citizenship of Respondents. . . . .	45
Country of Birth of Respondents . . . . .	45
Marital Status of Respondents . . . . .	46
Country in which Respondents' Parents Worked . . . . .	47
Respondents' Fathers: Highest Level of Academic Preparation for a Missionary Career. . . . .	48
Respondents' Mothers: Highest Level of Academic Preparation for a Missionary Career. . . . .	49
Respondents' Obligations with respect to Military Service. . . . .	50
Type of Institution of Higher Learning Attended by Respondents. . . . .	51

## Chapter

## Page

College Grade-Point Average Reported by Respondents. . . . .	52
Careers Planned by Respondents. . . . .	53
Acceptance at Schools of Respondents' Choice. . . . .	54
Factors Influencing School Choice by Respondents. . . . .	55
Persons Influencing School Choice by Respondents. . . . .	57
Methods of Financing Higher Education. . . . .	58
Successes and Satisfactions Reported by Respondents After Leaving High School. . . . .	59
Failures and Disappointments Reported by Respondents After Leaving High School. . . . .	61
Perceptions with Respect to the Christian Faith Expressed by Respondents. . . . .	63
Profile of the Respondents: Summary.	65
PART 2: EVALUATION OF THE EDUCATIONAL PROGRAM OF THE RIFT VALLEY ACADEMY. .	67
EVALUATION OF THE ENGLISH STUDIES PROGRAM. . . . .	67
EVALUATION OF THE SCIENCE STUDIES PROGRAM. . . . .	74
EVALUATION OF THE MATHEMATICS STUDIES PROGRAM. . . . .	81
EVALUATION OF THE LANGUAGE STUDIES PROGRAM. . . . .	85
EVALUATION OF THE SOCIAL STUDIES PROGRAM. . . . .	88

## Chapter

Page

EVALUATION OF THE RELIGION STUDY PROGRAM. . . . .	94
EVALUATION OF THE MUSIC STUDIES PROGRAM. . . . .	101
EVALUATION OF THE PHYSICAL EDUCATION PROGRAM. . . . .	104
EVALUATION OF DORMITORY LIVING AT THE RIFT VALLEY ACADEMY. . . . .	110
EVALUATION OF THE GUIDANCE AND COUNSELING PROGRAM . . . . .	112
EVALUATION OF SCHOOL RULES AND REGULATIONS. . . . .	115
SUMMARY OF GRADUATES' LIKES AND DISLIKES WITH RESPECT TO SCHOOL LIFE AT THE ACADEMY. . . . .	117
PART 3: SUGGESTIONS AND RECOMMENDATIONS MADE BY THE RESPONDENTS. . . . .	121
5. SUMMARY, FINDINGS, AND CONCLUSIONS . . . . .	130
BACKGROUND AND PURPOSE OF THE STUDY . . . . .	130
REVIEW OF THE RELATED LITERATURE. . . . .	132
PROCEDURES USED IN THE STUDY. . . . .	132
PRESENTATION AND ANALYSIS OF DATA . . . . .	134
SUMMARY OF THE FINDINGS . . . . .	135
CONCLUDING STATEMENT. . . . .	142
BIBLIOGRAPHY . . . . .	144
APPENDIX . . . . .	150



LIST OF TABLES

Table	Page
1. Response to the Mail Questionnaire by Year of Graduation . . . . .	44
2. Citizenship of Respondents by Year of Graduation . . . . .	45
3. Country of Birth of Respondents by Year of Graduation . . . . .	46
4. Marital Status of Respondents by Year of Graduation . . . . .	47
5. Country in which Parents of Respondents Worked by Year of Graduation . . . . .	48
6. Highest Level of Academic Preparation of Fathers of Respondents by Year of Graduation . . . . .	49
7. Highest Level of Academic Preparation of Mothers of Respondents by Year of Graduation . . . . .	50
8. Military Obligations of Respondents by Year of Graduation . . . . .	51
9. Types of Institutions of Higher Learning Attended by Respondents by Year of Graduation . . . . .	52
10. Grade-Point Averages Reported by Respondents by Year of Graduation . . . . .	53
11. Careers Planned by Respondents by Year of Graduation . . . . .	54
12. Acceptance of Respondents by Institutions of Higher Learning by Year of Graduation . . . . .	55
13. Factors Influencing Choice of School by Year of Graduation . . . . .	56
14. Persons Influencing Choice of School by Year of Graduation . . . . .	58

## LIST OF TABLES (continued)

Table	Page
15. Methods of Financing Higher Education by Year of Graduation . . . . .	59
16. Greatest Successes and Satisfactions of Respondents by Year of Graduation . . . . .	60
17. Greatest Failures and Disappointments of Respondents by Year of Graduation . . . . .	62
18. Perceptions with Respect to Relevance of the Christian Faith to Respondents by Year of Graduation . . . . .	64
19. Evaluation of the Quality of Instruction in Grammar by Year of Graduation . . . . .	68
20. Evaluation of the Quality of Instruction in Grammar by Period of Graduation . . . . .	69
21. Evaluation of the Quality of Instruction in Literature by Year of Graduation . . . . .	70
22. Evaluation of the Quality of Instruction in Literature by Period of Graduation. . . . .	71
23. Evaluation of the Quality of Instruction in Composition by Year of Graduation . . . . .	72
24. Evaluation of the Quality of Instruction in Composition by Period of Graduation . . . . .	73
25. Evaluation of the Quality of Instruction in Chemistry by Year of Graduation . . . . .	76
26. Evaluation of the Quality of Instruction in Physics by Year of Graduation . . . . .	77
27. Evaluation of the Quality of Instruction in Physics by Period of Graduation . . . . .	78
28. Evaluation of the Quality of Instruction in Biology by Year of Graduation . . . . .	79
29. Evaluation of the Quality of Instruction in Biology by Period of Graduation . . . . .	80

## LIST OF TABLES (continued)

Table	Page
30. Evaluation of the Quality of Instruction in Algebra by Year of Graduation . . . . .	82
31. Evaluation of the Quality of Instruction in Geometry by Year of Graduation . . . . .	83
32. Evaluation of the Quality of Instruction in Trigonometry by Year of Graduation . . . . .	84
33. Evaluation of the Quality of Instruction in Latin by Year of Graduation . . . . .	86
34. Evaluation of the Quality of Instruction in French by Year of Graduation . . . . .	87
35. Evaluation of the Quality of Instruction in World History by Year of Graduation . . . . .	89
36. Evaluation of the Quality of Instruction in American History by Year of Graduation . . . . .	90
37. Evaluation of the Quality of Instruction in Government by Year of Graduation . . . . .	91
38. Evaluation of the Quality of Instruction in Government by Period of Graduation . . . . .	92
39. Evaluation of the Quality of Instruction in Psychology by Year of Graduation . . . . .	93
40. Evaluation of the Quality of Instruction in Bible by Year of Graduation . . . . .	96
41. Evaluation of the Quality of Instruction in Bible by Period of Graduation . . . . .	97
42. Assessment of the Value of Chapel Periods, Young People's Fellowship Meetings, and Church Assemblies by Year of Graduation . . . . .	98
43. Assessment of the Value of Chapel Periods, Young People's Fellowship Meetings, and Church Assemblies by Period of Graduation . . . . .	99
44. Evaluation of the Quality of Instruction in Instrumental Music by Year of Graduation . . . . .	102

## LIST OF TABLES (continued)

Table		Page
45.	Evaluation of the Quality of Instruction in Choral Music by Year of Graduation . . . . .	103
46.	Evaluation of the Quality of Instruction in Physical Education by Year of Graduation . . . . .	105
47.	Evaluation of the Quality of Instruction in Physical Education by Period of Graduation . . . . .	106
48.	Assessment of the Value of the Inter-House Competition by Year of Graduation . . . . .	107
49.	Assessment of the Value of the Inter-School Competition by Year of Graduation . . . . .	108
50.	Assessment of the Quality of Instruction in Dormitory Life by Year of Graduation . . . . .	111
51.	Assessment of the Quality of the Guidance and Counseling Program by Year of Graduation . . . . .	113
52.	Assessment of the Quality of the Guidance and Counseling Program by Period of Graduation . . . . .	114
53.	Assessment of the Rules and Regulations by Year of Graduation . . . . .	116
54.	Summary of Student Likes by Year of Graduation . . . . .	118
55.	Summary of Student Dislikes by Year of Graduation . . . . .	120

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August 1972

## ABSTRACT

### A FOLLOW-UP STUDY OF SELECTED GRADUATES OF A SCHOOL IN KENYA FOR CHILDREN OF MISSIONARIES: 1965-1970

David Hamilton Reynolds, Ed.D.  
The University of Virginia, August 1972

Major Advisor: Dr. George W. Holmes, III

## INTRODUCTION

The Rift Valley Academy was founded in 1905 for the education of the children of missionaries serving in east and central Africa. Gradually the school was expanded until, in 1970, 367 students were enrolled from thirty-five missionary societies. In 1968 the school received provisional accreditation by the Middle States Association of Colleges and Secondary Schools.

## PURPOSES OF THE STUDY

The purposes of this study were (1) to determine the opinions that selected graduates of the Rift Valley Academy held concerning the education they had received; (2) to determine whether or not there was a statistically significant difference between the opinions of those graduating prior to the provisional accreditation (Period 1) and those graduating after accreditation (Period 2); and (3) to solicit from

graduates suggestions for the improvement of the educational program at the academy.

## PROCEDURES

An original fifty-item questionnaire, which had been pilot-tested by a ten percent stratified random sample of the surviving graduates of the school from 1965 through 1970, was mailed to a fifty percent random sample of the same population stratified by year of graduation. One-hundred and three persons were selected to receive the questionnaire. Ninety-four responded, representing a 91.26 percent response. Data from the responses were presented in three sections (1) The Profile of the Respondents; (2) The Evaluation of the Educational Program; and (3) The Suggestions and Recommendations Made by the Respondents.

The major null hypothesis tested in the study was stated as follows: The period of graduation from the Rift Valley Academy and the graduate's evaluation of his high school experiences there were essentially unrelated. Ten subsidiary null hypotheses were tested in the areas in which there were responses sufficient for testing by means of the chi-square test of independence. These areas were: English grammar, literature, composition, physics, biology, government, Bible, religious meetings, physical education, and guidance and counseling.

## FINDINGS

From the evidence obtained in the study, the following findings appeared to be important:

### The Profile of the Respondents

The graduates of the Rift Valley Academy who responded to the questionnaire appeared to consider themselves to be successful in their higher education and careers. The majority of the graduates were in college or the armed services. None reported having dropped out of school for academic reasons, and none reported being absent without leave from the armed services.

### The Evaluation of the Educational Program

Responses of "very good" outnumbered responses of "poor" in the following subjects or activities: English grammar, literature, algebra, geometry, trigonometry, Latin, French, world history, American history, government, psychology, Bible, religious meetings, and instrumental and choral music. "Very good" responses equalled "poor" responses in physics. "Poor" responses outnumbered "very good" responses in composition, chemistry, biology, and physical education. Appreciative comments outnumbered critical comments with respect to inter-house and inter-school sports programs, and dormitory life. Critical comments outnumbered appreciative comments in programs related to guidance and counseling, and



rules and regulations.

### The Testing of Hypotheses

The periods of graduation and the evaluations of respondents were not significantly related in the following subjects or activities: English grammar, literature, composition, physics, Bible, religious meetings, physical education, and guidance and counseling. Periods of graduation and the evaluations of respondents were significantly related (at the alpha level .05) in biology and government. On the basis of these findings, the major null hypothesis was accepted conditionally. Periods of graduation and the evaluations of respondents were essentially unrelated. The accreditation appraisal and suggestions of 1968 had not affected significantly the respondents' evaluations of their high school experiences.

### The Suggestions and Recommendations

The graduates recommended, in particular, increased student participation in the formulation of all rules and regulations affecting them at the school; and the supplanting of a staff- and faculty-dominated school program by a program jointly planned by faculty, staff, and students. Respondents also recommended revision of the courses in chemistry, physics, biology, physical education, and composition.

## Chapter 1

### THE PROBLEM AND DEFINITION OF TERMS

#### INTRODUCTION

At the time this study was made East Africa was composed of three independent nations, Kenya, Uganda, and Tanzania. Together they extended approximately 800 miles from east to west and 1200 miles from north to south.

The earliest recorded history of East Africa dates back to the 11th century, B.C. The hills of northwestern Tanganyika provided some of the earliest evidences of man's existence. Kenya's coast was familiar to mariners from Phoenicia, Egypt, Greece, and Assyria. Arabs settled the coast near the equator, and by A.D. 800 had established colonies on the coastal strip and islands. By the 10th century Arab dhows traded regularly along the shoreline of East Africa.

The sudden arrival of the Portuguese ended what Kirby described as the "centuries-long grip of the Arabs on the East African coast."<sup>1</sup> Bartholomew Diaz rounded the Cape of Good Hope in 1486 as part of a Portuguese plan to open shipping routes to the Indies. Twelve years later Vasco da Gama voyaged up the coast, calling at Mombasa and

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<sup>1</sup>C. P. Kirby, East Africa: Kenya, Uganda and Tanzania (London: Ernest Benn Ltd., 1968), p. 13.

Malindi, where he built large pillars to commemorate his visit. Francisco d'Almeida, leading an expedition of twenty ships and one thousand men, captured the ports of Sofala and Kilwa before destroying Mombasa and continuing on his journey to the East.

Portuguese domination of the east coast was complete by A.D. 1508. Huge forts were built at Mozambique and Mombasa; however, Portuguese interest in the coast appeared to center around provisions for staging posts for shipping convoys to the East. Jan van Riebeeck, the Dutch explorer, was to show a similar interest in the Cape of Good Hope one-hundred and fifty years later. The Portuguese invaders soon discovered that it was unnecessary for them to sail as far north as Mombasa before turning east and their interest in Mombasa as a staging post declined and centered on Mozambique to the south. The Portuguese did not, in any event, find their occupation of Mombasa and the coastal strip enjoyable or profitable. Marsh and Kingsnorth noted that from the start "the Portuguese found the East African part of their empire disappointing because it never brought them the wealth they had expected."<sup>2</sup> During 1585 a Turkish pirate named Mirale Bey succeeded in firing Arab rebellion against the Portuguese, but it was more than one-hundred years later, in 1698, that the Portuguese fortifications in Mombasa (Fort Jesus) fell to Arab invaders. The old pattern of

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<sup>2</sup>Z. A. Marsh and G. W. Kingsnorth, An Introduction to the History of East Africa (Cambridge: The University Press, 1966), p. 9.

Swahili city states was reestablished with the traditional links to Islamic culture and trade. Arab influence on the coast enabled the slave trade to flourish. British and Dutch merchants replaced the Portuguese traders, and the British, having abolished slavery within their own domain in 1807, became instrumental in the eventual demise of the East African slave trade.

Explorers and missionaries probed inland from the coast. Ludwig Krapf established a mission church in the town of Mombasa in the mid 1840s and was joined some time later by Johan Rebman, who may have been the first white man to see Mount Kilimanjaro. Richard Burton and John Hanning Speke, their interest focused on East Africa by a map drawn by Krapf and Rebman, arrived in East Africa to explore inland. They were followed by David Livingstone, who, commissioned by the Royal Geographical Society, explored the land area between Lake Nyasa and Lake Victoria in an attempt to settle a controversy which had developed between Burton and Speke. Livingstone's life and exploits in Africa attracted considerable publicity in England and the United States. Henry Stanley, in particular, gave wide publicity to Livingstone's call for an opening-up of East Africa to Western influences.

## THE COLONIZATION OF AFRICA

German interest in East Africa was symbolized by the arrival of Carl Peters in Zanzibar in 1884. After a short journey inland, during which he compelled local chiefs and headmen to sign treaties they did not understand, Peters established the German East Africa Company, and succeeded in persuading Bismarck to declare East Africa a German protectorate. Britain gained a foothold in Kenya and Uganda and in 1895 established a protectorate over the area then known as British East Africa. In 1920 Britain accepted a mandate over Tanganyika territory under the League of Nations, and gained control over Kenya, Uganda, and Tanganyika.

Thousands of British and South African settlers responded to tempting offers to settle the "White Highlands" of Kenya. Missionaries, responding to a call to go into all the world and preach the gospel, established outposts in many remote corners of the three countries. Mission stations preceded by three or four decades colonial administration outposts. Hughes noted: "From the start, their religious aim of 'converting the heathen' was frequently accompanied by humanitarian motives such as abolition of the slave-trade and slavery."<sup>3</sup> Hughes summarized missionary influence in East Africa at the turn of the century as follows:

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<sup>3</sup>A. J. Hughes, East Africa: Kenya, Uganda, Tanzania (Baltimore: Penguin Books, 1969), p. 17.

Without missionary influences and pioneering the interest of Western governments would not have been so easily aroused. And it might have been, but for the missionaries, that eastern Africa might have fallen under the sway of Asia rather than Europe.

From the start, most missionaries saw their task as involving more than saving people from slavery or converting them to Christianity. The greatest of them, David Livingstone, often declared that their aim should not be mere evangelism, but the bringing of the full Christian culture to fight social evils of poverty, ignorance, tribal war, disease and slavery.<sup>4</sup>

Lord Lugard, Sir Harry Johnson, Lord Delamere, and many other adventurers went to East Africa to establish business enterprises, and many of them described their adventures in detail for readers at home. Ronald Hardy, a well-known historian of the building of the Uganda Railway, observed as follows that few of the pioneers had the writing ability their subject deserved:

In those days nearly every hunter, missionary, Government servant or explorer whose work, greed or lust for killing took him to British East Africa wrote a book about it. Never was so marvelous and pristine a setting served with such conspicuous lack of talent. Most of these men walked through an Eden with their eyes shut.<sup>5</sup>

The building of the Uganda Railway was to transform the development of the three countries. Started late in the nineteenth century, the railway was constructed to "still the moral outrage of Victorian England at the use of human animals

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<sup>4</sup> Ibid.

<sup>5</sup> Ronald Hardy, The Iron Snake (New York: G. P. Putnam's Sons, 1965), p. 109.

for transportation."<sup>6</sup> Colonial expansion was at its zenith, and without the Uganda Railway, Britain would have been at a serious disadvantage in competing with other colonial land-grabbers.

### The Coming of Independence

With the influx of British and South African settlers, Kenya continued to be dominated by the white minority until after World War II. Uganda, which became a British protectorate in the 1890s, gained independence in 1962 under a federal constitution. Tanganyika, which became a German territory in 1885, a British mandated territory in 1920, and a British trust territory in 1946, gained independence in 1962 and became a republic within the Commonwealth. In 1964 the republics of Tanganyika and Zanzibar were united to form the United Republic of Tanzania.

Independence came slowly for Kenya. The Mau-Mau rebellion, which began in 1952, lasted for seven years, and resulted in the brutal slayings of whites, Asians, and Africans. Independence was delayed as a result; but after lengthy negotiations between Kenya and Great Britain, it finally was granted in 1963. The following year Kenya became a republic within the Commonwealth under the presidency of Mzee Jomo Kenyatta. The possibility of a united republic of the four East African nations had not materialized by 1972.

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<sup>6</sup> Ibid.

## EDUCATION IN EAST AFRICA

Missionaries opened schools on the coast as early as 1844, but the real spread of the work of education followed the new access route of the Uganda Railway. In the pre-World War I period, the colonial governments left the programs of African education to the mission societies, many of which had begun work at the turn of the century. Scanlon emphasized that mission operated Western-style schools developed in the areas where the influences of Islam were least conspicuous:

The origins of Western education in Africa can be traced to those regions where the missionaries thought they could be most successful in the propagation of Christianity. Areas where Islam was firmly entrenched or regions in which local resistance appeared insurmountable were bypassed and, in some cases, remained islands surrounded by Western-type schools and mission stations. It is for this reason that many Islamic areas in Sub-Sahara Africa today are less advanced educationally and "commercially" than other areas.<sup>7</sup>

It would be incorrect to assume that, although there was little to parallel Western-style formal education in East Africa before the appearance of the missionaries, there was no education. Castle commented as follows on the allegation that missionaries did not take sufficient note of that education which was already being offered:

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<sup>7</sup>D. G. Scanlon, Traditions in African Education (New York: Columbia University, 1964), p. 4.



One of the saddest mistakes of the early missionaries was their assumption that they brought education to an entirely uneducated people. If literacy and formal schooling constitute the whole of education, they were right; but insofar as education is a preparation for living in the society into which they were born, they were profoundly wrong.<sup>8</sup>

In Uganda, as well as Kenya, education developed along racial lines. Africans, Goans, Asians, Arabs, and Europeans were, for the most part, educated separately. In Uganda, however, there were fewer Asians and Europeans than there were in Kenya; and secondary schools which developed there were largely for Africans. No European secondary school was established in Uganda because grants were made available to European students to study in Kenya or overseas. Schools which had been developed along racial lines in Uganda were transformed into multi-racial schools in 1957, some five years before a similar transformation took place in Kenya.

By 1959, militant politicians in Kenya were decrying the racial basis in educational opportunity there. European and Asian children were attending compulsory primary schools; whereas, African children, if they were fortunate, received a maximum of four years of schooling in a system which, for them, was neither compulsory nor universal. Political pressures caused a great expansion of African educational opportunities. The large and elite European secondary schools

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<sup>8</sup>E. B. Castle, Growing Up in East Africa (London: Oxford University Press, 1966), p. 39.

(Kenya High School for Girls, established in 1930; the Prince of Wales School for boys, established in 1931; and the Duke of York school for boys, established in 1949) were made multi-racial shortly after Independence in 1963. Asian schools and others were expanded and made multi-racial but could not accommodate the large numbers of African applicants. Community-initiated private schools (Harambee schools) sprang up throughout the nation, and the government was confronted with difficult problems of administration. Many localities refused to attend to government "requests" to show evidence of sufficient funds to operate schools of good quality. The localities were celebrating Independence in their way, and were in no mood to accept tampering with their plans from the Nairobi government, whether it was black or white.

#### STATEMENT OF THE PROBLEM

Much of the organized missionary activity in East Africa began in the late nineteenth and early twentieth centuries. Many Protestant denominations and faith missionary societies began work in Kenya, Uganda, and Tanzania. Missionaries serving with these societies brought their children with them, and in so doing created an immediate and difficult problem--the education of their children. Far from their homeland, and confronted with a total lack of educational opportunities, missionaries were forced to establish

schools for their children. These schools were, in the main, fashioned on educational patterns well known to the missionary pioneers.

The reasons for the establishment of these schools were many. It was the missionaries who brought formal education to East Africa. No formal education existed at the time of their arrival; indeed, it was not until 1930 that the first high school for expatriates was established. Correspondence courses, where available, could not be used effectively because of the very slow passage of mails.

The Africa Inland Mission, which had entered East Africa in 1895, founded the Rift Valley Academy at Kijabe, near Nairobi in 1905, exclusively for the education of its missionary children. President Theodore Roosevelt laid the cornerstone for the main building during his African hunting trip in 1909. From the start the school mirrored the needs of the missionaries. It provided boarding facilities, an American curriculum, and inexpensive tuition. Gradually, the academy expanded, admitting children from other Protestant missionary societies, until by 1970, 367 students were enrolled from thirty-five missionary societies. In 1970 it was the only school of its sort in east and central Africa. Students were attracted from as far away as Malawi and the Central African Republic.

In 1968 the academy administration and faculty obtained provisional accreditation for the school from the Middle States Association of Colleges and Secondary Schools.

The visiting committee appraised the school following a prolonged self-study by the school faculty and staff. Use was made of the Evaluative Criteria, a manual published by the National Study of School Evaluation, in the appraisal and self-study.<sup>10</sup> Recommendations made by the Middle States Association stressed needs for variety in the curricular offerings, expansion of library and boarding facilities, increase in sports and recreational facilities, improvement in safety precautions, and further involvement of the school in the life of the local community.

The faculty, the administration, and the visiting committee of the Middle States Association had all taken a close look at the school and evaluated it in terms of the Evaluative Criteria. The question remained: What did the students and graduates of the school think of the Rift Valley Academy and the total educational offerings of the school. Anderson, writing in the seventieth yearbook of the National Society for the Study of Education, observed that "in the planning of schools, all too seldom are the pupils themselves considered an integral part of the planning team. This is lamentable, not only because children deserve to be consulted but because they have many useful suggestions to make."<sup>11</sup> It appeared that the valuable reactions and

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<sup>10</sup>The National Study of School Evaluation. The Evaluative Criteria. Washington, D.C., 1967.

<sup>11</sup>R. H. Anderson, "The School as an Organic Teaching Aid" in The Curriculum: Retrospect and Prospect (Chicago: The National Society for the Study of Education, 1971), p. 300.

suggestions of graduates of the school should be obtained by careful survey rather than by unrepresentative hearsay or "grapevine" techniques. Sand, in his discussion of national assessment, noted that:

While the hazards are well known, national education indices may well be as essential to the educator as economic indices are to the businessman. It seems inconceivable that we should operate our schools more on the basis of ignorance than on the basis of information. Some fear that the more we know, the worse we will behave. We submit that the opposite should be true.

Without perspective regarding the progress we have made and the difficult task we face, our citizens have an inadequate basis for making judgments. As a result, decisions are frequently made on hearsay or widely publicized assertions rather than on a reasonably clear picture of the educational situation.<sup>12</sup>

Sand's observations were made concerning national assessment, but the principles are universal. Where information is available, and that information is accurate and representative, it should become the basis for the decision making process. In the case of the Rift Valley Academy, no such survey was made at the time of the accreditation inspection. It was for this reason that this study was undertaken.

The problem may be stated as follows: How did the graduates of the Rift Valley Academy who left the school shortly before and shortly after its provisional accreditation

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<sup>12</sup>O. Sand, "Curriculum Change" in The Curriculum: Retrospect and Prospect (Chicago: N.S.S.E., 1971), p. 240.

view the school's educational program and environment? What suggestions did these graduates have for the improvement of the school's educational climate and for its curricular, social, recreational, and spiritual programs? Further, was there any significant relationship between the period of graduation (the periods being 1965 to 1967--just before accreditation; and 1968 to 1970--just after accreditation) and the graduate's evaluation of his educational experiences at the school? Stated differently: Did the granting of provisional accreditation in 1968 affect the graduates' evaluations of their school?

#### PURPOSES OF THE STUDY

The purposes of this study were (1) to determine the opinions that selected graduates of the Rift Valley Academy held concerning the education they had received; (2) to determine whether or not there was a statistically significant difference between the opinions of those graduating prior to provisional accreditation and those graduating after accreditation; and (3) to solicit from the graduates suggestions for the improvement of the educational program at the academy.

#### SIGNIFICANCE OF THE STUDY

At the time this study was made, there had been no known effort to explore the reactions of graduates of high

schools established for the education of missionaries' children other than that attempted by Olson. During 1967 he conducted a follow-up study of the children of American and Canadian Seventh-Day Adventist missionaries serving in the Far East and in Latin America. Olson's study was restricted to one particular denomination and was not addressed to the problems arising from one particular school.

The contents of his study, taken with what is concluded in this investigation, may provide some basis for further examination of the particular problems faced by missionaries with respect to the education of their children. Schools for missionaries' children will, it appears, operate for as long as missionaries themselves are welcomed in foreign lands; and missionary operations around the world were increasing in 1971. Experience gained in one location, hopefully, may find application in another.

The present study was designed for immediate use. Data gathered from respondents were forwarded to the school and to some of the missions involved. These data may be used in planning for the improvement of the Rift Valley Academy. The local community at Kijabe and the host nation of Kenya may possibly benefit to some extent; both depend somewhat on volunteer personnel to provide many basic services, particularly in rural areas. Elementary, secondary, and teacher-training schools; orphanages; institutions for the deaf, blind, and maimed; and services such as printing, radio,

and famine-relief are provided by, and in part financed by, missionary societies. If a substantial number of these volunteers were to leave because it was thought that missionary children were not receiving an adequate education, many of the services provided by the missionaries would be curtailed.

#### STATEMENT OF HYPOTHESES

The major hypothesis to be tested was a null hypothesis, namely, that the period of graduation from the Rift Valley Academy and the graduate's evaluation of his high school experiences were essentially unrelated. The ten null hypotheses which were tested in the substantive areas are stated as follows:

(1) There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in grammar.

(2) There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in literature.

(3) There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in composition.



(4) There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in physics.

(5) There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in biology.

(6) There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in government.

(7) There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in Bible.

(8) There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's assessment of the value of chapel periods, Young People's Fellowship meetings, and church assemblies.

(9) There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of guidance and counseling received.

(10) There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in physical education.

#### DELIMITATIONS OF THE STUDY

The study was delimited to include only those graduates of the Rift Valley Academy who graduated from the school between the years 1965 and 1970. Many other students attended the school during that period of time but did not graduate. Included in the study were a number of African nationals who were admitted to the school as special students.

#### LIMITATIONS OF THE STUDY

The questionnaire itself could not be considered to be reliable until it had repeatedly been used to perform the task for which it was designed; nor could tentative estimates of validity (based on correlations between written and verbal responses) be considered conclusive. Factors such as one person responding in a category not used by others could eliminate the usefulness of the chi-square test where the population and sample were small. Only in areas where categories were somewhat balanced and there was a distinct shift in categories from one period to another could any meaningful conclusion be elicited by the testing of

hypotheses by means of the chi-square test.

Former students may have refrained from expressing views held in private to a former teacher and coach who had been involved in the instructional processes under investigation. Not only may personality barriers have existed, but the questionnaire items themselves may have mirrored biases held by the investigator of which he was not aware; whereas, these biases may have been very obvious to his students.

#### DEFINITIONS OF TERMS

Certain terms used in the study had particular meanings. The following are defined to assist the reader in his interpretation of the study.

##### Missionary

As used in this study, the word, missionary, refers to any person or member of a Protestant family, who is sent to a foreign country under the direction, protection, and sponsorship of a religious organization for a period of time long enough for him or her to establish a home.

##### Period of Graduation

As used in this study, the term, period of graduation, refers to a cluster of years of graduation. Specifically, Period 1 is made up of the graduation years 1965 through 1967; and Period 2 is made up of the graduation years 1968 through 1970.

## Asian

As used in this study, the term, Asian, refers to an expatriate of Indian or Pakistani origin.

### ORGANIZATION OF THE REMAINDER OF THE STUDY

Chapter 2 is a description of the literature reviewed in the study. Chapter 3 is a description of the procedures used in the study. Chapter 4 is a presentation and analysis of the data. It is made up of three parts: (1) The Profile of the Respondents; (2) The Evaluation of the Educational Program of the Rift Valley Academy; and (3) The Suggestions and Recommendations Made by the Respondents. Chapter 5 is a summary of the study.

## Chapter 2

### REVIEW OF SELECTED LITERATURE

The purpose of this chapter was to describe the literature reviewed in the study. At the time of this investigation only one research survey related to the education of the children of missionaries was found in the literature. Many other follow-up studies were reviewed as general background for this study and because they might have indirect bearing on this investigation.

#### The Seventh-Day Adventist Follow-up Study

In 1967 Olson conducted a follow-up study of the children of American and Canadian Seventh-Day Adventist missionaries serving in countries of the Far East and Latin America.<sup>1</sup> It was the purpose of his study to assess the effect of mission life upon the educational and occupational attainments of the Seventh-Day Adventist missionaries and to ascertain their views towards religion, the church, and mission service after becoming adults. In addition, Olson sought (1) to describe the educational opportunities of the

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<sup>1</sup>B. E. Olson, "A Follow-Up Study of the Children of American and Canadian Seventh-Day Adventist Missionaries Serving in Countries of the Far East and Latin America" (unpublished Doctor's dissertation, The University of Nebraska Teachers College, 1967).

children of Seventh-Day Adventists; (2) to describe the education that was secured by the children after graduating from Seventh-Day Adventist schools overseas; (3) to determine the percentage and level of educational and vocational achievement of missionary families who had attended Seventh-Day Adventist and other colleges and universities; (4) to determine the percentage and level of educational achievement of missionary children who did not attend college; and (5) to compare the findings concerning missionary children from the countries of the Far East with those of the countries of Latin America.

Olson developed a questionnaire designed to obtain (1) background information of the experiences and education of respondents overseas; and (2) information relative to the educational and vocational achievements and attitudes toward the church and mission service after the respondents had become adults. Two-hundred and twenty of the 248 questionnaires he sent were returned, representing a response of 88.71 percent.

Olson summarized the findings of the study under the following headings: (1) the description of overseas experiences; (2) overseas education; (3) returning to the homeland; (4) professional and vocational training; (5) vocations and professions; (6) marital status; (7) views expressed about religion; (8) views concerning mission service; and (9) recommendations. Olson stated that his study was the first reported in the literature on the subject

of the education of the children of missionaries.

The following findings appeared to be important when related to the objectives of this study. (1) Graduates generally rated the education which they had received overseas as "good"; however, pupils from the Far East gave their overseas education a higher rating than did pupils from Latin America. (2) Former pupils from Latin America considered the lack of equipment to be the most serious deficiency in the schools they had attended; whereas, the pupils from the Far East considered inadequate curriculum and class size to be the most serious deficiencies. (3) Of the population which Olson studied, 78.8 percent had graduated from college, 18.8 percent had attended college but had not graduated; and 2.4 percent had not attended college. (4) Marriage was listed most often as the cause for dropping-out of college. (5) The major fields of specialization in college for women were nursing, elementary education, home economics, secretarial science, and music. For men, the major fields of specialization were religion, business administration, biology, and history. (6) Nineteen percent of the graduates became nurses, 10.1 percent became doctors, 22.6 percent became educators, 10.6 percent became ministers, and 7.2 percent became housewives. (7) Eighty-four percent of the graduates were church members and attended church regularly; and religion was an important part of their lives for 87 percent of the respondents. (8) Nineteen percent of

the respondents had volunteered for careers as missionaries; 23.1 percent had described a missionary career as a goal of their lives; 26.4 had stated that they would serve if requested. Fourteen percent of the respondents had stated that they were not interested in mission work of any sort; and 3.8 percent were critical of the work of missions. An additional 1.4 percent of the respondents were described as "definitely opposed" to the work of missions.

In his summary statement, Olson emphasized the importance of strengthening the overseas elementary and secondary schools, especially in the areas of (a) class size, (b) securing adequate equipment, and (c) increasing and strengthening the curricular offerings. He also recommended that studies be made comparing children reared in other parts of the world with those reared in the homeland, and studying the cultural influences as they affect the adult life.

#### Selected Follow-Up Studies Reported in the Literature

The literature is replete with follow-up studies related to high school and college students. A description follows of the major survey and follow-up studies reviewed in the conceptual stage of this study.

In 1966 Flanagan and Cooley began an ambitious follow-up study of nearly half a million high school students-- a five percent sample of American high school students. The students were followed up one year later, and again five years later. Ten- and twenty- year follow-up questionnaires



were planned in one of the most comprehensive educational data-gathering enterprises ever undertaken. Project Talent was the name given to the study. It was the concern of the project staff to determine the level of stability of occupational choices made by the respondents. Thorndike and Hagen reported that "the position is clearly one of a vast amount of change from grade 9 to the year after high school, and even over an interval of a single year from the 12th grade, and shifts are frequent enough to be a matter of serious concern."<sup>2</sup>

Moore and Manunpichu conducted independent investigations with respect to the success of foreign students in American colleges and universities. Moore's study, conducted in 1953, was an attempt to evaluate some of the factors which may effect the achievement of foreign students in American colleges. He interviewed seventy-six foreign graduate students at the University of Minnesota. The intensive case studies conducted by Moore led him to conclude that (1) motivation, and (2) English language deficiency were primary factors affecting the performances of foreign students in American colleges and universities.<sup>3</sup>

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<sup>2</sup>R. L. Thorndike and E. Hagen, Measurement and Evaluation in Psychology and Education (New York: John Wiley and Sons, Inc., 1969), p. 367.

<sup>3</sup>F. G. Moore, "Factors Affecting the Academic Success of Foreign Students in American Universities" (unpublished Doctor's dissertation, University of Minnesota, 1953).

In 1964 Manunpichu surveyed the social attitudes of Thai students in American educational institutions. He employed what he termed "the six psychological objects of social attitudes, namely, oneself, family, friend, school, society, and honesty." The social attitudes of Thai students were measured by a questionnaire. The method of pair comparisons was used in the questionnaire construction. Two random samples were used in the study. One sample consisted of the students whose length of stay in the United States was less than one year when the study was conducted. In the other sample, the students included were those staying in the United States for longer than one year. Seventy-nine percent of the questionnaires were returned. Manunpichu concluded that "generally, the Thai students showed tendencies to choose the social objects other than oneself. There was no significant differences in the patterns of responses between the males and the females."<sup>4</sup>

Dreschel and Mueller conducted follow-up studies related to graduates of high schools. In 1962 Dreschel surveyed an entire tenth grade class in a study undertaken in the Ogden City Schools, Utah. His data were gathered directly from the official records of the students at the high school and were compared with their official records obtained with their permission from the colleges in which

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<sup>4</sup>K. Manunpichu, "A Survey of Social Attitudes Among Thai Students in American Educational Institutions" (unpublished Doctor's dissertation, Colorado State College, 1964), p. 14.

they later enrolled. Dreschel reported that high school performance, as reflected in grade-point averages, had been a reliable indicator of subsequent academic performance in college or university.<sup>5</sup>

In 1963 Mueller conducted a follow-up study of matched high school drop-outs and graduates of eighteen eastern Iowa schools during the years 1955 and 1956. The purpose of his study was to compare the post high school vocational experiences, citizenship, recreational pursuits, and attitudes of high school drop-outs and graduates on the basis of age, sex, socio-economic background, and academic ability. Comparisons were made between matched groups of young adults all of whom entered the ninth grade in eastern Iowa schools in 1955 and 1956. They were matched by socio-economic level as measured by father's occupation, utilizing Warner's Revised Scale of Occupational Rating. They were grouped by ability, using the Composite Score on the Iowa Tests for Educational Development as the criterion. Subjects were also grouped by sex and by drop-out or graduate status. Questionnaires were returned by 173 drop-outs and 253 graduates. Mueller concluded that there were forty-six statistically significant differences between the drop-out and the graduate groups. All but three of these differences were in favor of

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<sup>5</sup>L. G. Dreschel, "A Follow-Up Study of the Entire Tenth-Grade Class with Implications for Improved Guidance and Counselling" (unpublished Doctor's dissertation, University of Utah, 1962).

the graduates. An examination of the differences revealed that graduates achieved a higher level of occupational status than drop-outs achieved; graduates indicated a higher interest in church attendance and other activities than did drop-outs; and graduates definitely indicated a more favorable attitude toward the extra-curricular program in their high school than drop-outs indicated. Mueller concluded that broadened school curricula could have the effect of improving social relationships of potential drop-outs and thereby bring about increased interest and benefits from the instructional program.<sup>6</sup>

Olivas conducted a follow-up study of graduates of a public secondary school in Cagayan province in the Republic of the Philippines in 1962. The purposes of his study were to determine the common problems of students in the secondary schools in Cagayan province and to determine the suitability of the Mooney Problem Check List, Form H, as an instrument for research and study of student problems in foreign lands. Olivas sent questionnaires to students and faculty in the school, which he supplemented with interviews during a visit to the school. He concluded that students were troubled by (1) finances, (2) living conditions, (3) employment, (4) personal relationships, (5) social and recreational activities,

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<sup>6</sup>R. J. Mueller, "A Follow-Up Comparison of Post High School Success of Matched School Drop-outs and Graduates" (unpublished Doctor's dissertation, State University of Iowa, 1963).

(6) adjustment to school work, (7) curriculum and teaching procedures, (8) health and physical development, and (8) vocation and education. He also concluded that the Mooney Problem Check List, Form H, was suitable for the use in the Republic of the Philippines until a similar instrument which is worded according to the vocabulary and level of comprehension of the students is developed.<sup>7</sup>

In 1965 Norris conducted a survey of physical education in Texas high schools. The purpose of his study was to determine whether or not physical education programs in Texas high schools met the recommended minimum requirements of the Texas Education Agency in the areas of fitness appraisals, conditioning exercises, individual-dual activities, and track and field. Norris used a questionnaire based on the nine components of physical education recommended by the Texas Education Agency. He received a seventy-two percent return of questionnaires. From the data he inferred that ninety percent of the schools in the sample were meeting the physical education requirements of the agency. Large schools were more likely to meet the requirements than were small schools.<sup>8</sup>

Swanson and Baker conducted independent follow-up studies related to high school graduates. In 1968 Swanson

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<sup>7</sup>R. A. Oliyias, "Public Secondary Schools in Cagayan" (unpublished Doctor's dissertation, Northwestern University, 1962), p. 14.

<sup>8</sup>M. L. Norris, "Survey of Physical Education in Texas High Schools" (unpublished Doctor's dissertation, North Texas State University, 1965).

studied the approval through self-study of New Jersey secondary public schools. He developed a thirty-two item questionnaire which was circulated to graduates of the schools under investigation. He placed responses in rank order and employed the Kendall Coefficient of Concordance to determine the degree of agreement in ranking among the schools in the sample. He concluded that very little effect was made by the self-study upon the perceptions of the schools' needs by either the students or the community in general.<sup>9</sup> In 1961 Baker investigated the problems encountered by bilingual school leavers in the San Jose East Side Union High School, California. He developed and administered a short form questionnaire after an investigation into the reliability and validity theory related to questionnaire design. Baker compared the progress in careers made by bilingual drop-outs and graduates in San Jose. He concluded that graduates had succeeded in obtaining more remunerative employment than the drop-outs had obtained, many of whom had been hampered in work assignments by deficiencies in English usage.<sup>10</sup>

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<sup>9</sup>C. W. Swanson, "A Follow-Up Study of the Approval Through Self-Study of New Jersey Public Secondary Schools" (unpublished Doctor's dissertation, New York University, 1968), p. 14.

<sup>10</sup>W. P. Baker, "A Follow-Up Study of the Drop-outs and Graduates of the 1957-58 and 1959-60 with Special Reference to Problems Encountered for Bilingual Leavers" (1961, E.R.I.C.).

In 1962 Hoerger developed a questionnaire designed to survey the international opinions of selected English and American secondary school students. He attempted to eliminate point of view by the use of equal numbers of internationalist and anti-internationalist statements and by offering a range of statements from easily acceptable to very demanding.<sup>11</sup>

The Baltimore County-sponsored follow-up study of graduates (1969) was conducted to provide accurate and comprehensive data on the total number of county graduates by systematizing the process of collecting, summarizing, and disseminating the informational data. An elaborate and lengthy questionnaire was designed specifically for ease of interpretation rather than for ease in completion.<sup>12</sup> A two-page questionnaire, employing a grid technique with as many as five variables on the ordinate and abscissa, was used by the Research Institute of Connecticut for a follow-up study of Vocational Technical graduates.<sup>13</sup>

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<sup>11</sup>J. W. Hoerger, "A Survey of the International Opinions of Selected English and American Secondary School Students" (unpublished Doctor's dissertation, New York University, 1962).

<sup>12</sup>"A Follow-Up Study of the Baltimore County High School Graduates" (1969, E.R.I.C.).

<sup>13</sup>"The Five-and Ten-Year Follow-Up Study of Connecticut State Vocational-Technical Schools Graduates of Classes of 1958 and 1963" (1969, E.R.I.C.).

## Chapter 3

### PROCEDURES USED IN THE STUDY

It was the purpose of this chapter to describe the procedures which were used in the study. The chapter is divided into three sections: the population of the study is described in section one; the development of the instrument is summarized in section two; and the procedures which were used for analyzing the data are presented in the third section.

### THE POPULATION OF THE STUDY

The population under investigation was made up of the graduates of the Rift Valley Academy from 1965 through 1970. Many additional students attended the school during that period but were excluded from the study because they did not graduate from the Rift Valley Academy.

The population described above was selected because the graduates making up the population attended the Rift Valley Academy for the three years immediately preceding the accreditation appraisal by the Middle States Association of Colleges and Secondary Schools, and for the three years immediately following the appraisal in 1968. It was an objective of the study to compare the evaluations made by respondents of Period 1 (made up of the graduates of 1965,



1966, and 1967) with those made by respondents of Period 2 (1968, 1969, and 1970).

The total number of graduates comprising the population was 207. During the investigation, one of the graduates was killed in an automobile accident in Kenya. Consequently, the population under investigation numbered 206.

A fifty percent random sample, stratified by year of graduation from the Rift Valley Academy, was drawn from the population of 206. One-hundred and three individuals who graduated from the school from 1965 through 1970 were selected to receive the questionnaire.

#### DEVELOPMENT OF THE INSTRUMENT

An original questionnaire was designed for the study. The instrument was designed to collect data which would be presented in three sections: (1) The Profile of the Respondents; (2) The Evaluation of the Educational Program of the Rift Valley Academy; and (3) The Suggestions and Recommendations Made by Respondents.

The population under investigation was, at the time of the study, dispersed widely in the United States and overseas. Any attempt to interview personally more than a score of the students was impossible; consequently, the mail questionnaire appeared to be the best method of gathering the data quickly, efficiently and inexpensively.

### The Literature Related to Instrument Design

The search of the literature related to questionnaire design was confined to the following aspects of instrument construction: (1) the problems of questionnaire design; (2) the advantages and disadvantages of the mailed questionnaire; (3) the solicitation of cooperation; (4) the length and aesthetic appearance of the questionnaire form; (5) question wording and positioning; (6) pilot-testing of the instrument; and (7) the reliability and validity of the instrument, with special reference to reliability and validity measures for original questionnaires. The conclusions which were drawn from the investigation were as follows: Sampling errors; faculty designs; high non-response rates; interviewer and personnel bias; ignorance, misunderstanding, and reticence on the part of the respondents; bias in wording, recording, and coding of answers; and many other variables may effect the quality of the research being undertaken by the use of a questionnaire. Every research effort is subject to some or all of the potential difficulties, but the researcher may take steps to minimize the effects of those of which he is aware.

### Content and Structure of the Questionnaire

The minimum number of items necessary for adequate coverage of the three specific areas under investigation were included in the questionnaire. All items were designed

to avoid being unnecessarily inquisitorial and were directed to areas of investigation directly related to the school and its graduates. All items were designed to be stated in the first person. This was done to save space and to elicit a completion of a sentence or phrase. Variety in format was attempted in order to preclude the disadvantages of monotonously similar items.

Items designed to make up the respondent profile were check items set to facilitate processing. Item 3 was included to provide the categories for the horizontal axes of the tables presented in the profile. Categories requiring checks in the majority of the other items making up the profile were constructed to provide the variables for the vertical axes of the tables. Names of subject offerings, colleges, majors, and other information required in Items 13 and 14 were most easily obtained by requesting that the respondent fill in a blank with the information. All other items later used for the respondent profile were set in the check form or the brief completion form, depending upon the predictability of the response.

Items designed to make up the evaluation (Part 2 of Chapter 4) were set in the check form because the information derived from these items was to be used for testing hypotheses in the areas outlined in the evaluation. In these items, only three alternatives were given (very good; adequate; poor), inasmuch as compression of data was necessary for

testing of hypotheses where responses were likely to be restricted. Thus the years of graduation (derived from Item 3 of the questionnaire) were compressed into periods of graduation (1965 to 1967; 1968 to 1970) so that the hypotheses could be tested. The periods were designed to provide the criteria for the horizontal axes of the contingency tables, and the alternatives (very good; adequate; poor) were constructed to provide the criteria for the vertical axes of the tables.

Items designed to elicit opinions not to be presented primarily in tabular form were set in the short completion, open-ended form. Data derived from these items were presented in tabular form (appreciative; unappreciative; neutral) where possible; but in the main the responses were displayed in the body of the text rather than in a table.

#### Procedures Used in the Selection of Items

Three-hundred items, drawn mainly from the questionnaire models consulted, were identified as appropriate for inclusion in the questionnaire. Particular emphasis was placed on the questionnaires developed and used on a national scale, as extensive groundwork by competent sociometrists preceded the development of each item in those questionnaires. Instruments used in recent dissertations, items from standardized test batteries, and opinionaires appearing elsewhere in the literature were scrutinized in the selection of

the initial three-hundred items.

Five graduates of the Rift Valley Academy who visited the University of Virginia during the development of the questionnaire used in this study acted as a project advisory committee. A modified form of the Delphi technique<sup>1</sup> was employed for the elimination of items considered least suitable for inclusion in the instrument. The committee members used a five-point grid to rank the three-hundred items. This procedure was derived from the classification stage normally reached upon receipt of the first questionnaire returns in the Delphi technique. The three-hundred items were thus reduced to sixty-six by the committee members--all of whom were graduates of the Rift Valley Academy and were thoroughly familiar with its program.

The members of the project advisory committee then responded verbally to the clustered items, and their responses to the check items were noted. Later, when the questionnaire had been printed, the members of the committee received the instrument and responded to it. Check response items in the written questionnaire returns were compared with responses received verbally to the same items, and a correlation

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<sup>1</sup>The Delphi technique was used by the U.S. Air Force to develop consensus among experts with respect to a forecast of the international situation between 1966 and 2015. The technique was designed to preclude meetings and replace them with sequential interrogations interspersed with information and opinion feedback. Helmer, Marino, Pfeiffer, Adelson, Cyphert, and Gant employed the technique in an educational setting, the latter two in collecting opinions relative to teacher education in Virginia.

coefficient was computed. The correlation coefficient for all check items was .87.

The questionnaire form was prepared for distribution to the ten percent sample. The sample did not include any of the five advisory committee members, but they were asked to respond to the check items again. The test-retest correlation coefficient thus obtained was .91. Because the verbal-written and the test-retest correlation coefficients had exceeded the level of .75 (a figure originally, and arbitrarily, chosen by the project advisory committee as an adequate indication of the validity and reliability of the instrument), the questionnaire was prepared finally and circulated to the fifty percent sample.

#### Pilot-Testing of the Instrument

The questionnaire was pilot-tested with a ten percent stratified random sample. The names of graduates were stratified by class, and ten percent of each of the six strata was selected at random. Twenty questionnaires were mailed to students comprising the sample: nineteen responses were received. Respondents were asked to criticize the questionnaire and to respond to it. None of the respondents considered the questionnaire obscure or unsuitable. Those who commented favorably noted that the questionnaire was completed easily in fifteen minutes.

Projections were made from the data collected from the ten percent sample to determine the usefulness of the

chi-square test of independence<sup>2</sup> for data analysis. The chi-square test of independence used for testing independence of evaluative responses from period of graduation could not be used meaningfully if there were not a considerable dispersion of responses to each of the cells making up the contingency tables. Thus individual items, such as Item 40 on the questionnaire form (where a very uniform response was predicted on the basis of the pilot-test), could not be tested meaningfully by the chi-square procedure. Similarly, where few respondents checked any one category (such as poor quality of instruction in literature or psychology), the responses predicted were likely to be too few to be adequate for minimum expected frequencies required for the meaningful application of the chi-square test.

On the basis of an examination of the projections made from the responses received in the ten percent pilot-test, it was concluded that ten null hypotheses could be tested in the areas outlined under Statement of Hypotheses. Only two null hypotheses were considered likely to yield chi-square quotients sufficient to be significant at the alpha level .05. These were related to biology and government. In each of these cases there appeared to be sufficient shift in the respondents' evaluations from one cell (representing one period of graduation) to another cell (representing

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<sup>2</sup>See page 39.

the other period) for the chi-square quotient to approach or exceed significance at the alpha level .05.

#### Reliability and Validity of the Instrument

With all original questionnaires, such as the one designed for use in this study, the reliability of the instrument cannot fully be determined until it has been used successfully over a period of time. Test-retest reliability correlation coefficients were calculated twice, yielding coefficients of .91 and .93. Moreover, a correlation coefficient of .87 was obtained by relating verbal responses to written responses, providing an estimate of the content validity of the instrument. The face validity of the instrument was determined to some extent because fifteen persons in the ten percent sample stated that the questionnaire items appeared to elicit the responses for which they were designed.

#### Selection of the Statistic

The chi-square test of independence represents a useful method for comparing experimentally obtained results with those theoretically expected on the basis of an hypothesis. Because the data to be collected were non-parametric, the choice of suitable statistical procedures was very limited. The chi-square test was the most suitable because the contingency tables developed for the study involved more than one degree of freedom.

In the chi-square test observed frequencies may be compared with theoretically expected frequencies by evaluating



the level of probability (P). The formula used was 
$$\chi^2 = \frac{\sum (af - ef)^2}{ef}$$
 where af = actual frequencies and ef = expected frequencies. The expected frequencies (ef) were determined by the formula 
$$df = \frac{\sum r \times \sum k}{N}$$
 where r = the summation of the rows of the table, k = the summation of the columns of the table, and N = the total summation of the rows and the columns. The chi-square was then checked with the chi-square table to determine its significance at the alpha level prescribed according to the number of degrees of freedom involved. The degrees of freedom (df) were determined by multiplying the number of rows minus one by the number of columns minus one. The formula used was 
$$df = (r - 1)(k - 1)$$
 where r = the number of rows and k = the number of columns.

Siegel, citing Cochran, stated that for the chi-square test with more than one degree of freedom "fewer than twenty percent of the cells should have an expected frequency of less than five, and no cell should have an expected frequency of less than one." Only when these conditions were met could the researcher "meaningfully apply the chi-square test."<sup>3</sup> Maxwell noted that with contingency tables with more than one degree of freedom, "it is still widely believed that all of the expected frequencies should be greater than five for the chi-square test to be reliable." He added,

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<sup>3</sup> Sidney Siegel, Non Parametric Statistics for the Behavioral Sciences (New York: McGraw-Hill Book Company, 1956), p. 178.

however, that Cochran and others had pointed out that this restriction was "too stringent."<sup>4</sup>

To ensure compliance with the restrictions outlined above, tables constructed for the display of the distribution of responses with respect to the testing of hypotheses included the years of graduation 1965, 1966, and 1967 under Period 1 (approximating the three-year period immediately preceding the accreditation examination at the school). Similarly the years 1968, 1969, and 1970 were joined to make up Period 2 (approximating the three-year period immediately following accreditation). In this manner control over the minimum size of the expected frequencies was established for the reliable, meaningful application of the chi-square statistic. The Yates' correction for continuity, suitable for 2 X 2 fold tables, was not used.

#### PROCEDURES USED FOR ANALYSIS OF DATA

When the questionnaires were received from the fifty percent sample, the responses were tabulated for presentation in Parts 1 and 2 of Chapter 4. Suggestions and recommendations made by the respondents were grouped by subject area for presentation in Part 3 of Chapter 4.

Data related to The Profile of the Respondents (Part 1 of Chapter 4) were presented in eighteen tables. The

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<sup>4</sup>A. E. Maxwell, Analyzing Qualitative Data (London: Methuen and Company, 1961), p. 38.

eighteen criteria were presented on the vertical axis. The year of graduation was presented on the horizontal axis in each table. Commentary and synthesis preceded the presentation of each table.

Data related to the Evaluation of the Educational Program of the Rift Valley Academy (Part 2 of Chapter 4) were presented as follows: Tables similar to those used in The Profile of the Respondents were constructed for the subject areas; however, ten additional tables were presented in which period of graduation was substituted for year of graduation on the horizontal axes. These contingency tables were constructed to demonstrate the distribution of responses used for the testing of hypotheses by means of the chi-square test of independence. The acceptance or rejection of the hypotheses were made in commentary which accompanied the contingency tables.

Data related to the Suggestions and Recommendations Made by the Respondents (Part 3 of Chapter 4) were presented without the use of tables. Suggestions and recommendations were grouped by subject and presented in three sections (1) buildings, grounds, facilities, and services; (2) the academic program; and (3) other aspects of school life.

## Chapter 4

### PRESENTATION AND ANALYSIS OF DATA

It was the purpose of this chapter to present an analysis of the data obtained in the study. The chapter is divided into three sections in which the data are presented with respect to (1) the opinions that selected graduates of the Rift Valley Academy held concerning the education they had received; (2) the testing of hypotheses related to the differences between the opinions held by graduates of Period 1 and Period 2; and (3) the recommendations and suggestions respondents made for the improvement of the educational program of the academy.

#### RETURNS FROM THE MAILED QUESTIONNAIRE

The Rift Valley Academy follow-up questionnaire was mailed to 103 individuals who had graduated from the academy during the period 1965 through 1970. The responses received from each class are shown in Table 1. All members of the classes of 1965, 1969, and 1970 who received the questionnaire responded to it. The poorest responses came from the classes of 1966 and 1967.

Ninety-four graduates responded to the questionnaire, fifty-four of these were males and forty were females. The ninety-four returns from 103 persons receiving the question-

naire represented a 91.26 percent response. This corresponded closely with the returns of the ten percent sample, in which nineteen persons of twenty responded.

Table 1  
Response to the Mail Questionnaire  
by Year of Graduation

Year	Students in Class	Students in Sample	Students Responding	Percentage
1965	17	8	8	100.00
1966	28	14	10	71.42
1967	32	16	12	75.00
1968	27	14	13	92.87
1969	35	17	17	100.00
1970	67	34	34	100.00
Total	206	103	94	91.26

#### PART 1: PROFILE OF THE RESPONDENTS

The respondent profile is presented to show the experiences that had influenced the graduates' impressions of their high school experiences. From the profile it was possible to draw conclusions with respect to the effectiveness of the school as perceived by the students who responded to the questionnaire. The majority of the students returned to the United States or Canada very shortly after graduation

from the Rift Valley Academy, and nearly all of them enrolled in institutions of higher learning. Those who did not, sought employment or enlisted in the armed services.

#### Citizenship of Respondents

The distribution of responses with respect to the citizenship of the respondents is presented in Table 2. The majority of students graduating from the Rift Valley Academy from 1965 through 1970 were American. Five respondents were Canadian, two were from the United Kingdom, and three were from other nations including Kenya.

Table 2

#### Citizenship of Respondents by Year of Graduation

Citizenship	1965	1966	1967	1968	1969	1970	Total
U.S.A.	8	9	10	11	16	30	84
Canada		1	1		1	2	5
U.K.			1	1			2
Other				1		2	3
Total	8	10	12	13	17	34	94

#### Country of Birth of Respondents

Approximately one half of the respondents were born outside the United States. Most of these were born in the African nations of Kenya, Tanzania, and the Congo. The

distribution of responses with respect to country of birth is displayed in Table 3. None of the respondents was born in Uganda, where colonial administration policies precluded missionary development along patterns similar to those employed in other east and central African nations.

Table 3

Country of Birth of Respondents by Year  
of Graduation

Country of Birth	1965	1966	1967	1968	1969	1970	Total
U.S.A.	4	6	4	8	11	17	50
Canada			1		1	1	3
Kenya		1	3	2	2	3	11
Tanzania	2		1	1	1	4	9
Congo	2	1	3	2		5	13
Other		2			2	4	8
<b>Total</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>13</b>	<b>17</b>	<b>34</b>	<b>94</b>

Marital Status of Respondents

No respondent reported that he had married within the period of two years after graduation. The distribution of responses with respect to marital status of respondents is shown in Table 4. Members of the classes of 1966 and 1967 reported earlier marriages than did members of the Class of

1965. No respondent reported being divorced, widowed, or separated. Two respondents reported having married fellow graduates of the Rift Valley Academy. In both cases the marriages were continuations of liaisons made during high school years at the school.

Table 4

Marital Status of Respondents by Year  
of Graduation

Marital Status	1965	1966	1967	1968	1969	1970	Total
Single	6	3	6	9	9	32	65
Married	2	7	6	3			18
Engaged				1	8	2	11
Total	8	10	12	13	17	34	94

Country in which Respondents' Parents Worked

In Table 5 the distribution of responses with respect to the countries in which the respondents' parents worked is revealed. The parents of respondents worked mainly in Kenya, Tanzania, and the Congo. Eleven graduates reported that their parents were employed in Burundi. Other African nations cited by respondents were Uganda (2), Somalia (1), Ethiopia (1), and Malawi (1).



Table 5  
Country in which Parents of Respondents Worked  
by Year of Graduation

Country	1965	1966	1967	1968	1969	1970	Total
Kenya	4	4	5	6	7	11	37
Uganda		1		1			2
Tanzania	2	3	4	1	6	9	25
Congo	2	1	2	2	2	7	16
Burundi		1	1	3	2	4	11
Other						3	3
Total	8	10	12	13	17	34	94

Respondents' Fathers: Highest Level of Academic Preparation  
for a Missionary Career

The distribution of responses with respect to the academic preparation of the respondents' fathers is presented in Table 6. Twenty-four respondents reported that their fathers had graduated from Bible schools; forty stated that their fathers had earned bachelors' degrees; seventeen reported that the most advanced degrees earned had been masters' degrees; and thirteen stated that their fathers had earned doctors' degrees. All but one of the doctors' degrees were in medicine. The majority of the masters' degrees were in theology.

Table 6

Highest Level of Academic Preparation of Fathers of  
Respondents by Year of Graduation

Degrees or Diplomas	1965	1966	1967	1968	1969	1970	Total
Bible school	2	2	4	3	2	11	24
Bachelors' Degrees	4	5	6	6	6	13	40
Masters' Degrees	1	1	1	1	6	7	17
Doctors' Degrees	1	2	1	3	3	3	13
Total	8	10	12	13	17	34	94

Respondents' Mothers: Highest Level of Academic Preparation  
for a Missionary Career

The distribution of responses with respect to academic preparation of the respondents' mothers is presented in Table 7. Forty-five respondents reported that their mothers had earned Bible school diplomas; forty-six stated that their mothers had earned bachelors' degrees or equivalent (twenty-six of those in this category were registered nurses). Three respondents reported that their mothers had earned masters' degrees in education.

Table 7

Highest Level of Academic Preparation of Mothers of  
Respondents by Year of Graduation

Degrees or Diplomas	1965	1966	1967	1968	1969	1970	Total
Bible school	2	6	6	6	5	20	45
Bachelors' Degrees	6	4	5	6	11	14	46
Masters' Degrees			1	1	1		3
Total	8	10	12	13	17	34	94

Respondents' Obligations with respect to Military Service

The distribution of responses with respect to military services is presented in Table 8. All of the women respondents reported that they were not eligible for military service. One stated that she regretted that she could not serve. None of the male respondents stated that he was serving with the Reserve Officers' Training Corps (R.O.T.C.). Eleven respondents were in active service or had served in some active capacity. Forty-one respondents indicated that they were eligible to serve and expected to do so. Only one respondent stressed affective rejection of war, stating that he was opposed to any form of killing; nevertheless, he stated that he would serve if compelled. None of the respondents stated that he had claimed conscientious objector status.

Table 8

Military Obligations of Respondents  
by Year of Graduation

Military Status	1965	1966	1967	1968	1969	1970	Total
Not eligible	3	4	8	8	6	13	42
Serving (or had served)	4	1	1	2	2	1	11
Expect to serve	1	5	3	3	9	20	41
Total	8	10	12	13	17	34	94

Type of Institution of Higher Learning Attended by  
Respondents

The distribution of responses with respect to institutions of higher learning selected by respondents is presented in Table 9. The majority of the students went to church-related private colleges; thirteen respondents progressed from college to universities and seminaries. Eight respondents enrolled in Bible schools. Ten women respondents were enrolled in schools of nursing. Of note is the fact that less than ten percent of the missionaries' children had selected Bible schools for further education.

Table 9

Types of Institutions of Higher Learning Attended  
by Respondents by Year of Graduation

Type of Institution	1965	1966	1967	1968	1969	1970	Total
Bible School	2	2	1		1	2	8
College	3	5	5	6	10	26	55
University or Seminary	3	1	3	3	2	1	13
Nursing, other		2	3	4	4	5	18
Total	8	10	12	13	17	34	94

College Grade-Point Average Reported by Respondents

The distribution of responses with respect to grade-point average earned in college reported by graduates is presented in Table 10. Six respondents reported cumulative averages in excess of 3.5 (maximum = 4). Thirty-five reported averages in excess of 3.0; and twenty-two stated that their averages exceeded 2.5 but were less than 3.0. Eleven respondents reported that they were "struggling" for grades and had achieved grade-point averages of less than 2.5.

Table 10  
Grade-Point Averages Reported by Respondents  
by Year of Graduation

Grade-Point Average	1965	1966	1967	1968	1969	1970	Total
Above 3.5*		1	1	3		1	6
Above 3.0* Below 3.5	1	3	5	4	8	14	35
Above 2.5* Below 3.0	1	1	2	3	5	10	22
Below 2.5*					4	7	11
No Response	6	5	4	3		2	20
<b>Total</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>13</b>	<b>17</b>	<b>34</b>	<b>94</b>

\* Maximum = 4.

#### Careers Planned by Respondents

The distribution of responses with respect to careers planned by respondents is presented in Table 11. The majority of graduates planned careers in education, in the ministry (including missions), and in health services. Seven planned careers as surgeons, two as psychologists, and one each as artist, bio-chemist, interior decorator, journalist, aviator, business administrator, architect, and dietician. Graduates from the Classes of 1969 and 1970 (two from each) expressed interest in engineering in the United States.

Table 11

## Careers Planned by Respondents by Year of Graduation

Career Planned	1965	1966	1967	1968	1969	1970	Total
Ministry	1	1					2
Missions	2	3	2	4	5	6	22
Education	3	4	5	5	4	8	29
Engineering					2	2	4
Health Services	1	2	3	2	3	5	16
Other	1		1		3	8	13
No decision			1	2		5	8
Total	8	10	12	13	17	34	94

Acceptance at Schools of Respondents' Choice

The distribution of responses with respect to acceptance of graduates by schools and colleges is presented in Table 12. The large majority of graduates were accepted at the institutions of higher learning to which they first applied. All the remaining respondents stated that they had been accepted by the schools to which they had applied next; none attended the school which was his third choice. Only in the Class of 1965 did graduates experience comparative difficulty in gaining admission to the schools representing their first choices.

Table 12

Acceptance of Respondents by Institution of Higher  
Learning by Year of Graduation

Acceptance by Institution	1965	1966	1967	1968	1969	1970	Total
First Choice	4	9	10	9	13	26	71
Second Choice	4	1	2	3	3	8	21
Not Applicable				1	1		2
Total	8	10	12	13	17	34	94

Factors Influencing School Choice by Respondents

The distribution of responses with respect to the factors influencing respondent choice of a school of higher education is presented in Table 13. Forty-five respondents, approximately one-half of the sample, cited subject offerings as a major consideration in their selections. Twenty-nine stated that financial limitations had influenced their choices. Thirty-six respondents cited parental influence as an important factor in the selection process: this parental influence ranged from quiet, non-directive suggestion to incontrovertible edict (the latter category being reported by three respondents).

Friendships played an important part in the selection of institutions of higher learning. For many of the graduates,



the selection of schools was based on the desire to continue friendships established in Africa, in general, and at the Rift Valley Academy, in particular. Fifteen respondents cited admission policies as crucial in their decisions with regard to further education. Seven respondents emphasized that their selection had been made largely on the basis of familiarity and convenience; they planned to attend colleges which were known to them and which would be close to their homes and work.

Table 13

Factors Influencing Choice of School  
by Year of Graduation

Factors Affecting Choice	1965	1966	1967	1968	1969	1970	Total
Subject Offerings	4	6	5	5	10	15	45
Finances	1	1	2	4	7	14	29
Admission Policies	1	2	3	1	2	6	15
Parental Advice	6	3	3	7	6	11	36
Friendships	1	5	4	5	7	10	32
Not Applicable				1	1		2
<b>Total</b>	<b>13</b>	<b>17</b>	<b>17</b>	<b>23</b>	<b>33</b>	<b>56</b>	<b>159</b>

### Persons Influencing School Choice by Respondents

The distribution of responses with respect to the persons influencing respondents in their choices of schools is presented in Table 14. Thirty-three respondents cited friends as important in their choices of school. Data presented in Table 13 reveal that thirty-two respondents cited friendships as significant determiners of their choices. One respondent noted that her decision regarding a choice of college had depended upon the selection made by her roommate at the academy.

Forty-six respondents cited personal advice as instrumental in their choices; of these, sixteen stated that they were planning to attend schools which their parents had attended. Two respondents indicated that "extreme parental pressure" had affected their decisions with respect to higher education.

Nine graduates cited teachers at the academy as influential in their choices of schools. Five graduates of the Class of 1970 emphasized that their choices had been guided by counselors at the school. This appeared to represent a growing influence of guidance counselors at the school, as only one previous respondent had referred to them.

Table 14

Persons Influencing Choice of School  
by Year of Graduation

Persons Influencing Choice	1965	1966	1967	1968	1969	1970	Total
Friends	4	6	4	5	8	6	33
Parents	4	6	5	9	7	15	46
Teachers	1	1	2	1	2	2	9
Counselors					1	5	6
Self	2	7	3	3	6	21	42
<b>Total</b>	<b>11</b>	<b>20</b>	<b>14</b>	<b>18</b>	<b>24</b>	<b>49</b>	<b>136</b>

Methods of Financing Higher Education

The distribution of responses with respect to the financing of education beyond high school for graduates of the Rift Valley Academy is presented in Table 15. Forty-seven graduates cited part-time jobs, summer employment, and occasional work as the principal means of financing their waysthrough college. Fifty-seven respondents reported that they had qualified for scholarships and other financial aid from colleges, foundations, and individuals. Thirty-four graduates stated that their parents had provided part of, or all of, their financial backing in school. Eight respondents reported other, undesignated, means of support.

Table 15  
Methods of Financing Higher Education  
by Year of Graduation

Method of Financing	1965	1966	1967	1968	1969	1970	Total
Employment	6	6	9	6	6	14	47
Scholarships	6	2	9	9	10	21	57
Family help	2	4	3	5	8	12	34
Other means	1	1	1	1	1	3	8
Total	15	13	22	21	25	50	146

Successes and Satisfactions Reported by Respondents After Leaving High School

The successes and satisfaction reported by respondents with respect to experiences subsequent to graduation from the Rift Valley Academy are presented in Table 16. Fifty respondents reported pleasure at the ease with which they made new friends and acquaintances. One reported his enjoyment at being able to "rub shoulders with really intelligent people." Another stated that the "crowded dormitory life" at the Rift Valley Academy had equipped him admirably for army life.

Twenty-six respondents cited academic grades as representing a success and satisfaction to them. Twelve noted that "an abnormal amount of time" is necessary for the accumulation of a notable grade-point average. Others cited

real satisfaction with the subjects they were pursuing in college; five expressed particular interest in philosophy, seven in psychology, five in drama, and six in art and history. Ten graduates stated that they had continued their involvement in music groups. Ten respondents stated that they had done particularly well in college sports, notably soccer.

Table 16

Greatest Successes and Satisfactions of  
Respondents by Year of Graduation

Success or Satisfaction	1965	1966	1967	1968	1969	1970	Total
Social adjustment	2	5	9	9	10	15	50
Grades	2	5	4	5	6	4	26
Sports	1	1	1	3	1	3	10
Music	1	1	1	5		2	10
Religious "growth"	4	5	4	4	4	14	35
Subjects	2	3	5	6	3	5	24
Maturation	2	3	2	3	2	14	26
Engagement and marriage	1	1	4	2	1	1	10
Total	15	24	30	37	27	58	191

Failures and Disappointments Reported by Respondents After Leaving High School

The failures and disappointments reported by respondents with respect to experiences subsequent to graduation from the Rift Valley Academy are presented in Table 17. Forty-one respondents expressed regret that they had not been able to adapt successfully to the American way of life. One respondent claimed that the Rift Valley Academy had not prepared him socially, culturally, or spiritually for life in the United States. Another stated that he had "overestimated the quality of college education in the United States" and had become "disillusioned about the country and some high school friends." Eight students found the United States "dull, wicked, and boring" after having lived in Africa. One graduate stated that she was just coming to realize "what a sinful culture prevails in the United States."

Thirty-four respondents stated that they were having trouble maintaining satisfactory grade-point averages. One graduate wrote: "I thought that there would be far more academic liberty than there actually is." Others deplored the amount of time necessarily consumed in the writing of papers and theses. Thirteen graduates expressed concern with respect to their apparent lack of spiritual "growth" and involvement. Six respondents expressed anxiety with respect to their choices of careers, one stating that two years of college had brought him to no decision about his

vocation. Eight respondents expressed concern with respect to their financial status in college: "It is getting almost impossible for a student attending a private college to pay his way through by means of part-time employment and summer jobs," one graduate observed.

Table 17

Greatest Failures and Disappointments of  
Respondents by Year of Graduation

Failure or Disappointment	1965	1966	1967	1968	1969	1970	Total
Social adjustment	2	6	3	7	10	13	41 <sup>a</sup>
Finances	1	1	1	1	2	2	8
Religious "growth"	1	2	1	2	1	6	13
Career uncertainty	2		1	1	1	1	6
Grades	3	3	5	1	6	16	34
Engagement and marriage	2	1		1	1	2	7
No response	2	1	4	1	1	7	16
Total	13	14	15	14	22	47	125

Perceptions with Respect to the Christian Faith Expressed  
by Respondents

The distribution of responses with respect to perceptions of the Christian faith expressed by graduates is presented in Table 18. Fifty-eight respondents stated that the Christian faith had been relevant to their lives in high school. Of these, the majority expressed gratitude to the school for its courses in Bible and for the Christian fellowship they asserted had characterized personal relationships at the school. One graduate wrote that she did not regret "one Bible class or chapel period. The discipline gained had enabled many a graduate to weather the storms of college life."

Twenty-two respondents stated that the Christian faith had not been relevant to their lives in high school. Basically these graduates criticized (1) compulsory Bible classes; (2) compulsory chapel, Young People's Fellowship, and church attendance; and (3) the "phoney religious atmosphere" of the school. Several respondents deplored "the legalistic aspects of religion emphasized on the campus." One respondent reported that he had been permanently "turned off" by what he had seen of Christianity in the dormitories. Another stressed that it had been very difficult for her to attend a school which had a faith basis different from hers: "I couldn't change them, and they couldn't change me."

Seventy-one graduates reported that the Christian faith had been relevant to them at the time of completing



the questionnaire. Thirty-three noted that their faith had "matured" in college. One respondent wrote: "Since coming to the United States I have had to figure out who I am and who God is."

Twelve respondents stated that the Christian faith had not been relevant to their lives when they completed the questionnaire. Ten stated that they had lost all interest in religion. The other two implied that their faith had "broadened" to the extent that it was no longer "congruent" with that which they had professed at school.

Table 18

Perceptions with Respect to Relevance of the Christian Faith to Respondents by Year of Graduation

Perception of Relevance	1965	1966	1967	1968	1969	1970	Total
Relevant in high school	4	8	7	9	8	22	58
Not relevant in high school		1	1	1	9	10	22
Relevant at time of response	4	8	10	8	15	26	71
Not relevant at time of response		1		2	2	7	12
Total	8	18	18	20	34	65	163

### Profile of the Respondents: Summary

Ninety-four graduates from the stratified random sample of 103 responded to the mail questionnaire, representing a return of 91.26 percent. Males outnumbered females 54 to 40 among the respondents. The classes of 1966 and 1967 accounted for the majority of the non-respondents.

Approximately one-half of the respondents were born in the United States. The majority of the remainder were born in the African nations of Kenya, Tanzania, and the Congo. Members of the classes of 1966 and 1967 tended to marry earlier than did members of the Class of 1965. No student reported marrying within a period of two years after leaving high school. The majority of fathers of respondents had at least a Bible school academic training for careers as missionaries; thirteen had earned doctorates. About half of the mothers of respondents had at least a Bible school education; the remainder had earned bachelors' degrees or equivalents.

Eleven respondents had served (or were serving at the time of completing the questionnaire) in the armed forces; the remaining males expected to serve if drafted. More than half of the graduates selected small colleges for their immediate post-high school education; only eight reported that they had enrolled in vocational schools.

Six respondents reported grade-point averages in excess of 3.5 (maximum 4.00), and averages of less than 2.5 were reported by eleven respondents. Two were on probation.

Education was the career which most appealed to graduates. Twenty-two respondents reported planning for careers in missions. Sixteen expected to enter health services. More than seventy percent of the respondents gained admission to the schools to which they applied first. None was enrolled in the school to which he had applied third.

Subject matter, finances, parental advice, and friendships were the prime factors in the graduates' selection of a school after leaving Rift Valley Academy. Self-decision, parents, and friends influenced the choice of school. Teachers and guidance counselors at the school were cited as having an effect on the choices of fifteen of the graduates.

More than fifty percent of the respondents received scholarships for college; forty-seven graduates reported that they worked part time to pay for their higher education. Thirty-four respondents stated that their parents had given financial assistance for college.

The majority of the respondents stated that the Christian faith had been relevant to their lives in high school, and still was relevant at the time they completed the questionnaire. Twenty-two respondents stated that the Christian faith had not been relevant to their lives in high school, and twelve reported that it had had no relevance to their lives at the time they completed the questionnaire.

All the respondents indicated that they had gone on to some form of higher education, or into the armed services,

upon graduation from the Rift Valley Academy. No respondent mentioned having dropped out of college.

#### PART 2: EVALUATION OF THE EDUCATIONAL PROGRAM OF THE RIFT VALLEY ACADEMY

The data presented in Part 2 of this chapter were derived from Items 30 through 43 of the questionnaire. These items were related to the following programs at the school: (1) English studies, (2) Science studies, (3) Mathematics studies, (4) Language studies, (5) Social studies, (6) Bible studies, (7) Music studies, (8) Physical education, (9) Religious exercise, (10) Dormitory life, and (11) Guidance and counseling. In addition to the tables in which is shown the distribution of evaluations by year of graduation, contingency tables relating the evaluations to period of graduation are presented with respect to ten specific aspects of the school program. These are (1) grammar, (2) literature, (3) composition, (4) physics, (5) biology, (6) government, (7) Bible, (8) religious exercise, (9) guidance and counseling, and (10) physical education.

#### EVALUATION OF THE ENGLISH STUDIES PROGRAM

The data presented in this section were derived from Item 31 in the questionnaire. Hypotheses were tested in three areas (1) grammar, (2) literature, and (3) composition.

### The Quality of Instruction in Grammar

The distribution of responses related to the evaluation of the quality of instruction in grammar is presented in Table 19. Forty-three respondents evaluated the quality of instruction in grammar to be very good; thirty-nine considered it to be adequate; and twelve rated it to be poor. Period 2 graduates rated the quality of instruction in the subject lower than did Period 1 graduates. Responses of "very good" outnumbered responses of "adequate" by 18 to 9 in the period 1965 through 1967; whereas, responses of "adequate" outnumbered responses of "very good" in the period 1968 through 1970 by 30 to 25.

Seven respondents commented on the quality of instruction in grammar. Three stated that they considered that too much emphasis had been placed on grammar at the academy. One respondent registered approval of the quality of instruction: "The basis of grammar built up in the elementary school was excellent." Another wrote: "There should be more paper writting [sic] and better grammer [sic]."

Table 19

#### Evaluation of the Quality of Instruction in Grammar by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	4	7	7	8	5	12	43
Adequate	3	2	4	4	10	16	39
Poor	1	1	1	1	2	6	12
Total	8	10	12	13	17	34	94

Statement of Hypothesis. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in grammar.

Presentation and Interpretation of Data. The distribution of responses related to the evaluation of the quality of instruction in grammar by period of graduation is presented in Table 20. The null hypothesis was accepted. There was no significant relationship between period of graduation and the graduate's evaluation of the quality of instruction in grammar.

Table 20

Evaluation of the Quality of Instruction in Grammar  
by Period of Graduation

Evaluation	Period		Total
	1965 to 1967	1968 to 1970	
Very Good	18	25	43
Adequate	9	30	39
Poor	3	9	12
Total	30	64	94

Chi-square = 3.58                      Not significant at .05  
df = 2  
P = .10 to .20

#### The Quality of Instruction in Literature

The distribution of responses related to the evaluation of the quality of instruction in literature is presented in

Table 21. Sixty-six respondents evaluated the quality of instruction in literature to be very good; twenty-eight considered it to be adequate. None considered it to be poor. The ratings for literature remained consistently high from year to year.

Six respondents made comments on the quality of instruction in literature. One wrote: "The broad background in literature received at the academy has constantly amazed my professors here in college. The key was the daily quizzing. It kept us on our toes, and was most effective." One respondent reported that she could remember facts and concepts very clearly years later. Two respondents observed that too much emphasis was placed on literature at the academy, at the expense of creative writing, formal writing, speech, and drama: "The teachers who taught literature were very well prepared and did an excellent job."

Table 21

Evaluation of the Quality of Instruction in  
Literature by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	6	5	8	7	13	27	66
Adequate	2	5	4	6	4	7	28
Poor	0	0	0	0	0	0	0
Total	8	10	12	13	17	34	94

Statement of Hypothesis. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in literature.

Presentation and Interpretation of Data. The distribution of responses related to the evaluation of the quality of instruction in literature by period of graduation is presented in Table 22. The null hypothesis was accepted. There was no significant relationship between period of graduation and the graduates' evaluations of the quality of instruction in literature.

Table 22

Evaluation of the Quality of Instruction in  
Literature by Period of Graduation

Evaluation	Period		Total
	1965 to 1967	1968 to 1970	
Very Good	19	47	66
Adequate	11	17	28
Total	30	64	94

Chi-square = 1.17                      Not significant at .05  
df = 1  
P = .20 to .30

The Quality of Instruction in Composition

The distribution of responses related to the evaluation of the quality of instruction in composition is presented in



Table 23. Thirteen respondents evaluated the quality of instruction in composition as very good; thirty-four considered it to be adequate; and forty-seven rated it to be poor.

Most of the forty-seven graduates who rated the quality of instruction in composition to be poor stated that they did so because (1) no insistence on correct formal procedure in scholarly writing was evident in most classes; (2) students were permitted to hand in poorly researched, plagiarized papers to overworked instructors; and (3) writing efforts by students were not reinforced by instructors who placed little emphasis on writing.

One graduate wrote: "I can remember writing only two papers in my entire time at Rift Valley Academy. The only footnoting I was required to do ever was in American literature class." A second observed that she had been "swamped" in Freshman writing courses in college.

Table 23

Evaluation of the Quality of Instruction in  
Composition by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	2	3	2	4	1	1	13
Adequate	6	3	4	7	6	8	34
Poor		4	6	2	10	25	47
Total	8	10	12	13	17	34	94

Statement of Hypothesis. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in composition.

Presentation and Interpretation of Data. The distribution of responses related to the evaluation of the quality of instruction in composition by period of graduation is presented in Table 24. The null hypothesis was accepted; however, the probability of the frequencies making up the table being a chance distribution was only .05 to .10, indicating that the chi-square derived from this distribution very closely approximated significance. Period 2 evaluations of composition were so much poorer than were those of Period 1 that the difference closely approximated significance at the alpha level .05.

Table 24

Evaluation of the Quality of Instruction in  
Composition by Period of Graduation

Evaluation	Period		Total
	1965 to 1967	1968 to 1970	
Very Good	7	6	13
Adequate	13	21	34
Poor	10	37	47
Total	30	64	94

Chi-square = 5.95                      Not significant at .05  
df = 2  
P = .05 to .10

### English Studies: Summary

Grammar instruction at the school was evaluated as better than adequate. Period 2 evaluations were substantially poorer than those of Period 1; however, the difference did not approach significance at the alpha level .05. The quality of instruction in literature was evaluated as substantially above adequate, an evaluation which varied little from period to period. The quality of instruction in composition was evaluated at less than adequate. Period 2 evaluations were substantially poorer than were those of Period 1, the difference between the evaluations closely approximating significance at the alpha level .05.

Respondents expressed a need for (1) reducing the time devoted to the study of grammar while improving the quality of instruction in the subject; (2) broadening the interests covered in the study of literature while maintaining the quality of instruction; and (3) drastically modifying the approach to composition, making it mandatory for students to have wide experience in the production of quality research papers, essays, book critiques, and poems.

### EVALUATION OF THE SCIENCE STUDIES PROGRAM

The data presented in this section were derived from the responses to Item 32 in the questionnaire. Hypotheses were tested in two areas (1) physics, and (2) biology.

### The Quality of Instruction in Chemistry

The distribution of responses related to the evaluation of the quality of instruction in chemistry is presented in Table 25. Ten respondents evaluated the quality of instruction in chemistry as very good; twenty-seven considered it to be adequate; and nineteen rated it to be poor. The quality of instruction in chemistry was evaluated as less than adequate. There were insufficient responses in the "very good" category for the expected frequencies in the periods of graduation to meet the minimum expected frequencies required for the application of the chi-square test.

Ten respondents commented on the quality of instruction in chemistry. Those who commented favorably mentioned the working relationship which had been established between teacher and student, and the progress which had been made despite inadequate facilities in the laboratory. Those who commented unfavorably stressed (1) poor laboratory facilities, (2) dull and uninspiring instructors, and (3) out-dated textbooks and instructional materials.

Three respondents observed that it was very unlikely that the Rift Valley Academy could compare favorably with public schools in the United States with respect to instruction and facilities in chemistry. One graduate wrote: "We were not asking for elaborate laboratories and great depth in instruction. What we really wanted was the maximum use of the facilities which were available."

Table 25

Evaluation of the Quality of Instruction in  
Chemistry by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	2	1	2	1	3	1	10
Adequate	2	6	3	5	6	5	27
Poor	1	1	2	3	4	8	19
Total	5	8	7	9	13	14	56

The Quality of Instruction in Physics

The distribution of the responses related to the quality of instruction in physics is presented in Table 26. Thirteen respondents rated the quality of instruction in physics as very good; twenty-three rated it to be adequate; and thirteen considered it to be poor. Only in 1970 did the "poor" responses outnumber the "adequate" responses, indicating that for that year graduate responses were poorer than those of previous years.

Four respondents commented on the quality of instruction in physics. Two students criticized the instructors for lack of interest and preparation for class sessions; and two commented on the lack of fresh textual materials and laboratory facilities for the course. None of the respondents indicated that he had experienced serious disorientation in college Freshman classes in physics.

Table 26

Evaluation of the Quality of Instruction in  
Physics by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	3	2	2	2	2	2	13
Adequate	2	5	3	4	4	5	23
Poor	1	1	1	1	1	8	13
Total	6	8	6	7	7	15	49

Statement of Hypothesis. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduates' evaluations of the quality of instruction in physics.

Presentation and Interpretation of Data. The distribution of responses related to the evaluation of the quality of instruction in physics by period of graduation is presented in Table 27. The null hypothesis was accepted. There was no significant relationship between period of graduation and the evaluation; however, Period 2 graduate evaluations of instruction in physics were substantially poorer than were those of Period 1. The differences did not approach significance at the alpha level .05.

Table 27

Evaluation of the Quality of Instruction in  
Physics by Period of Graduation

Evaluation	Period 1965 to 1967	Period 1968 to 1970	Total
Very Good	7	6	13
Adequate	10	13	23
Poor	3	10	13
Total	20	29	49

Chi-square = 3.04                      Not significant at .05  
df = 2  
P = .20 to .30

The Quality of Instruction in Biology

The distribution of the responses related to the quality of instruction in biology is presented in Table 28. Sixteen respondents evaluated the quality of instruction in biology as very good; thirty-eight considered it to be adequate; and twenty-six considered it to be poor. An examination of Table 28 reveals that Period 2 graduates rated the quality of instruction much lower than the Period 1 graduates rated it.

Fourteen respondents commented on the course. Of those who commented favorably, one stated that the instructors had to contend with uninterested students, poor laboratories, and out-dated instructional materials. Those who commented un-

favorably noted that (1) too much time had been spent attempting to emphasize the unreliability of evolutionary hypotheses vis-à-vis the veracity of the Holy Bible; (2) little had been expected of the students with respect to self-initiated research projects and reports; and (3) too much emphasis had been placed on the accumulation of unimportant, even obsolete facts.

Table 28

Evaluation of the Quality of Instruction in  
Biology by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	4	3	2	2	2	3	16
Adequate	1	4	5	7	8	13	38
Poor	1	1	4	4	5	11	26
Total	6	8	11	13	15	27	80

Statement of Hypothesis. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduates' evaluations of the quality of instruction in biology.

Presentation and Interpretation of Data. The distribution of responses related to the evaluation of the quality of instruction in biology by period of evaluation is presented in Table 29. An examination of the contents of the table



reveals that Period 2 respondents considered the quality of instruction to be much poorer than did graduates of Period 1. The null hypothesis was rejected. There was a significant relationship at the alpha level .05 between period of graduation and the evaluation of the quality of instruction in biology.

Table 29

Evaluation of the Quality of Instruction in  
Biology by Period of Graduation

Evaluation	Period 1965 to 1967	Period 1968 to 1970	Total
Very Good	9	7	16
Adequate	10	28	38
Poor	6	20	26
Total	25	55	80

Chi-square = 6.15                      Significant at .05  
df = 2  
P = .02 to .05

Science Studies: Summary

Instruction in chemistry, physics, and biology were all considered to be less than adequate because evaluations of "poor" outnumbered evaluations of "very good." In all three subjects Period 2 respondents considered the quality of instruction to be poorer than did graduates in Period 1.

The difference was most obvious in biology. Graduates cited unprepared teachers, poor laboratories and equipment, and out-dated textbooks and instructional materials as reasons for the unfavorable evaluation. Graduate suggestions for improvements to the science studies program included (1) the acquisition of fully trained, dedicated science teachers with considerable autonomy over the selection and purchase of texts and instructional materials; and (2) fuller exploitation of local resources, such as game parks and science facilities in the city of Nairobi, in the development of a science program centered on the environment rather than on the traditional subjects of chemistry, physics, and biology.

#### EVALUATION OF THE MATHEMATICS STUDIES PROGRAM

The data presented in this section were derived from Item 33 in the questionnaire. Algebra was taught in the 9th grade at the academy, and geometry and trigonometry were offered on an elective basis to students in grades 10, 11, and 12. No hypotheses were tested with respect to algebra, geometry, and trigonometry because there were inadequate responses in certain categories.

##### The Quality of Instruction in Algebra

The distribution of responses related to the evaluation of the quality of instruction in algebra is presented in Table 30. Thirty-four respondents evaluated the quality of

instruction in algebra as very good; forty-five considered it to be adequate; and six rated it as poor.

Nine respondents commented on the quality of instruction in algebra. Many of these praised the instructors in the subject for their patience, knowledge, willingness to coach after school hours, and their general suitability for the job. Of those who made unfavorable remarks, the following shortcomings were identified: (1) The instructors did not compel students to "come up with the answers." (2) Occasionally, struggling students found themselves drifting further behind the class.

Table 30

Evaluation of the Quality of Instruction in  
Algebra by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good		7	1	7	8	11	34
Adequate	6	3	7	5	7	17	45
Poor	1			1	2	2	6
Total	7	10	8	13	17	30	85

The Quality of Instruction in Geometry

The distribution of responses related to the evaluation of the quality of instruction in geometry is presented in Table 31. Fifty-two respondents considered the quality of

instruction in the subject to be very good; twenty-six rated it adequate; and two considered it to be poor. In all years, respondents considered the instruction received to have been better than adequate, with the best ratings in 1966, 1969, and 1970.

Students who commented on the instruction in geometry were generally appreciative of the instructors, particularly those graduates of 1968 and 1969. One respondent registered his thanks for the instructor's "patience with plodders." Others emphasized that the courses had been based on modern textual materials and up-to-date teaching methods. One graduate of 1968 complained that teachers had been transferred during the course, which had disturbed the rhythm of the progress.

Table 31

Evaluation of the Quality of Instruction in  
Geometry by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	2	8	5	4	14	19	52
Adequate	4		4	6	3	9	26
Poor						2	2
Total	6	8	9	10	17	30	80

The Quality of Instruction in Trigonometry

The distribution of responses related to the evaluation of the quality of instruction in trigonometry is presented in Table 32. Seventeen graduates considered the quality of instruction to be very good; thirteen rated it adequate; and three thought it to be poor. The respondents of the Class of 1970 were particularly complimentary about trigonometry classes at the school.

Three graduates commented on the quality of instruction. All three praised the instructor for "excellence in teaching," although one stated that he felt the "pace had been a little too fast." Modern textual materials and up-to-date teaching methods employed by the instructors were appreciated by respondents of the Class of 1970.

Table 32

Evaluation of the Quality of Instruction in  
Trigonometry by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good		1	1	3	2	10	17
Adequate	4	1	2	2	3	1	13
Poor		2		1			3
Total	4	4	3	6	5	11	33

### Mathematics Studies: Summary

Instruction in algebra, geometry, and trigonometry was considered to be better than adequate because responses of "very good" outnumbered responses of "poor." The classes of 1969 and 1970 rated the quality of instruction in geometry and trigonometry very highly as is revealed by an examination of Table 31 and 32. Graduates commended instructors on the use of modern textual materials and current teaching methods. Suggestions made by the graduates included the following:

(1) Calculus should be added to the curriculum as soon as possible; (2) Individual interests in the mathematical sciences should be encouraged and sponsored; (3) Differential programs for the gifted should be initiated to avoid a "locked-step mentality" on the part of instructors and students.

### EVALUATION OF THE LANGUAGE STUDIES PROGRAM

The data presented in this section were derived from Item 34 in the questionnaire. No null hypotheses were tested because of inadequate responses in certain categories. French and Latin were taught regularly on an elective basis at the academy, with instruction in Swahili and German being offered contingent upon the availability of a suitably qualified instructor. The introduction of Swahili as a compulsory subject was contemplated for advanced elementary school students.

### The Quality of Instruction in Latin

The distribution of responses related to the evaluation of the quality of instruction in Latin is presented in Table 33. Twenty-eight respondents considered the quality of instruction in Latin to be very good; fifteen thought it to be adequate; and three thought that it was poor. The quality of instruction was considered by graduates to be better than adequate because responses of "very good" outnumbered responses of "poor."

Respondents commenting on the quality of instruction in Latin noted (1) the advantage derived from a study of the language with respect to later understanding of English; (2) the elective basis for the subject. One noted: "Latin was by far the best elective available at the Rift Valley Academy." Students suggested the use of programmed texts and additional use of tapes and records in class sessions.

Table 33

#### Evaluation of the Quality of Instruction in Latin by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	2	1	4	6	8	7	28
Adequate	2	5	2	1	1	4	15
Poor					1	2	3
Total	4	6	6	7	10	13	46

The Quality of Instruction in French

The distribution of responses related to the evaluation of the quality of instruction in French is presented in Table 34. Thirty respondents considered the quality of instruction in French to be very good; thirty-two evaluated it as adequate; and six thought it to be poor.

Nineteen respondents commented on the quality of instruction in French. Those who commented favorably praised the instructors for their understanding of the subject and their patience with beginners. Those whose comments were less favorable stated that (1) too much emphasis appeared to have been placed on written French, and (2) the emphasis on formal French had been established at the expense of facility with verbalized idiomatic expression.

Table 34

Evaluation of the Quality of Instruction  
in French by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	4	1	3	3	7	12	30
Adequate	4	4	4	3	8	9	32
Poor		1	1	2	1	1	6
Total	8	6	8	8	16	22	68



### Language Studies: Summary

Instruction in both Latin and French was rated by respondents to be considerably above adequate because responses of "very good" outnumbered responses of "poor." Many respondents wrote of experiences in language classes and of their admiration for the instructors in each language. Respondents stressed the need for (1) increased awareness by the instructors of the spoken language rather than an emphasis on written grammar and syntax; (2) the purchase of tapes, programmed texts and other materials for the easy acquisition of basic language skills; and (3) closer contacts, where possible, of the instructors with individuals who speak French fluently. One respondent suggested that, rather than holidaying in the United States, the instructor could consider spending part of his or her furlough in Switzerland or France.

### EVALUATION OF THE SOCIAL STUDIES PROGRAM

The data presented in this section were derived from responses to Item 35 in the questionnaire. A null hypothesis was tested in the area of government. An examination of the contingency tables revealed that the number of expected frequencies in some areas was too small for meaningful application of the chi-square test of independence. World history was taught regularly in the 10th grade, American history was taught

in the 11th grade, and government was taught in the 12th grade. Psychology was taught as an elective to high school students.

### The Quality of Instruction in World History

The distribution of responses relative to the evaluation of the quality of instruction in world history is presented in Table 35. Nineteen respondents considered the quality of instruction to be very good; fifty thought it to be adequate; and five rated it as poor. Those students who commented on the course stated that too much emphasis had been placed on the memorization of lists of unimportant dates and names rather than on concepts and theories which would be of more value to students subsequently. Graduates of the classes of 1969 and 1970 commended the instructors for their selections of current textual materials and on their "international outlook."

Table 35

#### Evaluation of the Quality of Instruction in World History by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	2	1	5	4	2	5	19
Adequate	4	4	5	6	12	19	50
Poor		1		2	1	1	5
Total	6	6	10	12	15	25	74

The Quality of Instruction in American History

The distribution of responses related to the evaluation of the quality of instruction in American history is presented in Table 36. Thirty-one respondents rated the quality of instruction in the course as very good; forty-three considered it to be adequate; and seven thought that it was poor. The Class of 1970 rated the course more highly than did its predecessors.

Students recommended (1) the use of current paperback books to supplement the textbook; (2) the discussion of current racial, cultural, and economic problems in the United States rather than a meticulous investigation of its history; and (3) a free interplay of American and African historical studies. Classes should be supplemented by numerous guest speakers, field trips to museums, and debates with history classes in nearby high schools.

Table 36

Evaluation of the Quality of Instruction in  
American History by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	2	1	5	3	4	16	31
Adequate	6	4	5	7	10	11	43
Poor		4	1	1	1		7
Total	8	9	11	11	15	27	81

The Quality of Instruction in Government

The distribution of responses related to the evaluation of the quality of instruction in government is presented in Table 37. Twenty-three respondents considered the quality of instruction in government to be very good; thirty-eight considered it to be adequate; and twenty rated it poor.

Graduates suggested that (1) emphasis be placed on government, particularly on the involvement of individuals in the process of representative democracy; and (2) instructors make every effort to keep abreast of developments in "politics and the machinery of government in the United States." Two respondents stated that they knew "next to nothing" about politics in the United States. Another stated that he thought that students at the Rift Valley Academy should be made aware of issues in African government and politics.

Table 37

Evaluation of the Quality of Instruction in  
Government by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	4	1		2	5	11	23
Adequate	4	3	1	7	10	13	38
Poor		6	9	3	2		20
Total	8	10	10	12	17	24	81

Statement of Hypothesis. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in government.

Presentation and Interpretation of Data. The distribution of responses related to the evaluation of the quality of instruction in government by period of graduation is presented in Table 38. The null hypothesis was rejected. There was a significant relationship between period of graduation and the evaluation. Period 2 responses rated the quality of instruction as above adequate; whereas Period 1 responses rated it below adequate. The difference was sufficient to be significant at the alpha level .05.

Table 38

Evaluation of the Quality of Instruction in  
Government by Period of Graduation

Evaluation	Period 1965 to 1967	Period 1968 to 1970	Total
Very Good	5	18	23
Adequate	8	30	38
Poor	15	5	20
Total	28	53	81

Chi-square = 35.88  
df = 2  
P = Less than .01

Significant at .05

The Quality of Instruction in Psychology

The distribution of responses related to the evaluation of the quality of instruction in psychology is presented in Table 39. Forty-five respondents considered the quality to be very good; fifteen considered it to be adequate; and five thought it to be poor. Most of the respondents were enthusiastic about psychology as taught at the school. Five respondents appreciated the "broad scope of psychology" taught at the school. Three of them preferred high school psychology to that taught to them in college, where the emphasis was on "Skinnerian Behaviorism." Many graduates spoke warmly of their relationships with the psychology instructors. Five respondents stated that they had contemplated teaching psychology as a career.

Table 39

Evaluation of the Quality of Instruction in  
Psychology by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	4	2	8	5	3	23	45
Adequate	2	2		2	5	4	15
Poor		2		2		1	5
Total	6	6	8	9	8	28	65

### Social Studies: Summary

Small cell restrictions precluded chi-square analysis of the data in subject matter areas other than in government. The quality of instruction in world history, American history, and psychology was evaluated to be above adequate, and that of government to be adequate. Respondent suggestions for the social studies curriculum at the school included (1) increased emphasis on the individual's role in the procedure of government as it now exists; (2) increased emphasis on African history, government, sociology, and anthropology; (3) interchange of ideas with African scholars and students in seminars and field trips.

### EVALUATION OF THE RELIGION STUDY PROGRAM

The data presented in this section were derived from responses to Items 36 and 41 in the questionnaire. Hypotheses were tested in the two areas in which sufficiently dispersed responses permitted the use of the chi-square statistic: (1) The quality of instruction in Bible, and (2) The reactions to chapel periods, Young People's Fellowship meetings, church assemblies, and special speakers. Bible was taught to students in all grades. Attendance at chapel periods was required of all students on schooldays, and attendance at Sunday school, church meetings and Young People's Fellowship was mandatory on Sundays.

### The Quality of Instruction in Bible

The distribution of responses relative to the evaluation of the quality of instruction in Bible is presented in Table 40. Thirty-three respondents rated the quality of instruction in Bible as very good; thirty-two considered it to be adequate; and twenty-nine thought it to be poor. Student perception of the quality of instruction did not change significantly from Period 1 to Period 2.

Fifty-four graduates commented on the courses in Bible. Of those who appraised the courses favorably five recalled with pleasure Bible classes under instructors who "obviously believed very deeply all that they taught." Those who commented unfavorably cited the following objections to the Bible classes: (1) Twenty-two respondents objected to the "basic assumptions" held by some of the instructors. One noted: "All classes were delivered from an extremely one-sided, fundamentalist, conservative point of view." (2) Fifteen students objected to what one termed "a lack of focus and planning in the teaching of Bible." One respondent wrote: "I studied Genesis three times, Romans twice, and several other books several times over." (3) Ten graduates objected to what one termed "the teaching of doctrine instead of Bible." (4) Five respondents stressed the need for classes in comparative religion. One graduate wrote: "We should have the privilege of learning about the Islamic faith, for instance, from a Moslem--and not from an



American Protestant." (5) Fifteen graduates observed that there had not been sufficient latitude in the classes to tolerate strongly variant views. One graduate observed: "I had real questions about inspiration, cosmology, and the interplay of religious and cultural norms. All I got was predigested doctrine."

Table 40

Evaluation of the Quality of Instruction in Bible by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	6	5	2	8	2	10	33
Adequate	2	2	4	1	10	13	32
Poor		3	6	4	5	11	29
Total	8	10	12	13	17	34	94

Statement of Hypothesis. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in Bible.

Presentation and Interpretation of Data. The distribution of responses related to the evaluation of the quality of instruction in Bible by period of graduation is presented in Table 41. The null hypothesis was accepted. There was

no significant relationship between period of graduation and the evaluation at the alpha level .05.

Table 41

Evaluation of the Quality of Instruction in  
Bible by Period of Graduation

Evaluation	Period 1965 to 1967	Period 1968 to 1970	Total
Very Good	13	20	33
Adequate	8	24	32
Poor	9	20	29
Total	30	64	94

Chi-square = 1.59

Not significant at .05

df = 2

P = .30 to .50

The Value of Chapel Periods, Young People's Fellowship Meetings,  
and Church Assemblies

The distribution of responses related to the evaluation of the value of chapel periods, Young People's Fellowship meetings, and church assemblies is presented in Table 42. Thirty-four respondents made comments which were favorable towards these religious exercises; thirty-two made comments which were generally critical of them; and twenty-eight made comments which were generally neutral or made no comment at all.

Those commenting favorably on the meetings stated that they benefited from the meetings and learned a great deal that was valuable to them later. One respondent wrote: "Generally, I found the meetings lively, interesting, and beneficial. I do not regret having sat through any of them." Those who criticized the program did so on the following grounds: (1) Compulsory attendance at worship services tended to invalidate the entire concept of voluntary, personal religion. (2) Speakers and preachers, for the most part, had tended to stress a "tunnel-visioned, narrow, parochial, Bible-belt fundamentalist view of God and man." One girl wrote: "All these meetings added up to a very tyrannical form of religion."

Table 42

Assessment of the Value of Chapel Periods, Young People's Fellowship Meetings, and Church Assemblies by Year of Graduation

Assessment	1965	1966	1967	1968	1969	1970	Total
Appreciative	6	6	1	6	4	11	34
Critical	1	2	7	3	6	13	32
Neutral or no comment	1	2	4	4	7	10	28
Total	8	10	12	13	17	34	94

Statement of Hypothesis. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's assessment of the value of chapel periods, Young People's Fellowship meetings, and church assemblies.

Presentation and Interpretation of Data. The distribution of responses related to the value of religious meetings by period of graduation is presented in Table 43. The null hypothesis was accepted. There was no significant relationship between period of graduation and the graduate's assessment of the value of religious meetings.

Table 43

Assessment of the Value of Chapel Periods, Young People's Fellowship Meetings, and Church Assemblies by Period of Graduation

Assessment	Period 1965 to 1967	Period 1968 to 1970	Total
Appreciative	13	21	34
Critical	10	22	32
Neutral or no comment	7	21	28
Total	30	64	94

Chi-square = 2.09

Not significant at .05

df = 2

P = .30 to .50

Religion Studies: Summary

The evaluation of the quality of instruction in Bible and the assessment of the value of attendance at religious meetings at the school yielded the following suggestions from the graduates: (1) The teaching of Bible should be just that, not a teaching of theology or doctrine. (2) Bible classes should provide a forum for the discussion of comparative religion, with specialists from other faiths invited to participate from time to time. Wide varieties of point of view should not only be tolerated, but encouraged. In this way issues could be clarified, dogmatism challenged, and commitment crystalized. (3) Students and faculty should plan the courses together. In this way the students would have equal input instead of having to accept instructor's ground rules and assumptions from the outset. (4) Chapel periods should be entirely voluntary for students and faculty alike, as required attendance to express an entirely personal faith is paradoxical. (5) If the administration and faculty will not accept voluntary attendance, then a "cut system" whereby a student may select which meetings he wishes to attend should be initiated. (6) Compulsory seating charts for all meetings should be abandoned. (7) As the school is an educational facility, rather than an indoctrinating agency, adult eagerness to proselytise should not preclude fair and impartial discussions and the holding of radically divergent views on the part of students.

## EVALUATION OF THE MUSIC STUDIES PROGRAM

The data presented in this section were derived from Item 37 in the questionnaire. No null hypotheses were tested in the area of music studies at the school because insufficient responses were obtained for the application of the chi-square test of independence. Instrumental music lessons were available to selected students on an elective basis. The variety of offerings depended on the availability of qualified instructors. Usually, however, lessons in piano, organ, piano-accordion, and trumpet were available. Choral music instruction was limited usually to that extended to membership in the Rift Valley Academy chorale, a sixty-voice ensemble well known in East Africa for its public concerts, personal and television appearances.

The Quality of Instruction in Instrumental Music

The distribution of responses related to the evaluation of the quality of instruction in instrumental music is presented in Table 44. Twelve respondents considered the quality of instruction to be very good; twenty-two thought it to be adequate; and seven rated it to be poor. Six respondents commented on the instruction they had received. Three expressed appreciation to their teachers for long hours of patient practice. Two stated that they had been very disappointed when the band at the school had been discontinued. One girl complained that subsequent instruction in the United

States had convinced her that what she had learned at the academy was "all wrong."

Table 44

Evaluation of the Quality of Instruction in  
Instrumental Music by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good		2	3	2	2	3	12
Adequate	2	5	5	4	1	5	22
Poor				2	2	3	7
Total	2	7	8	8	5	11	41

The Quality of Instruction in Choral Music

The distribution of responses related to the evaluation of the quality of instruction in choral music is presented in Table 45. Sixty respondents considered the quality of instruction in choral music to be very good; six thought it to be adequate; and one considered it to be poor. Twenty-five respondents commented on the instruction in choral music. Nearly all of them praised the choir directors for having provided outstanding leadership and gifted instruction. One respondent wrote: "The choir provided one of the outstanding highlights in my very full and happy life at the academy." Another wrote: "The choir was a terrific experience."

We had a wonderful sense of oneness. Perhaps a little extra instruction in basic music reading would have been beneficial." Five respondents expressed reservations with respect to the quality of instruction in choral music. They criticized the "club-like atmosphere" of the choir. One respondent noted: "Belonging to a certain musical group should never be such a status symbol that it excludes the ones who aren't members as being 'out of it'."

Table 45

Evaluation of the Quality of Instruction in  
Choral Music by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	6	6	11	8	11	18	60
Adequate		2		2	1	1	6
Poor				1			1
Total	6	8	11	11	12	19	67

Music Studies: Summary

Instrumental and choral music evaluations resulted in the following respondent's suggestions: (1) Consideration should be given to expanding the variety of choices open to the student of instrumental music with respect to the selection of instruments, with special reference to the



guitar. (2) The band should be reestablished if a qualified and interested instructor can be found for it on a permanent basis. (3) The repertoire of songs for the choir should be broadened to include a wider variety of genres, including those local to Kenya and folk musicals. (4) The choir director should emphasize basic reading skills. (5) A public relations drive among the students in the school should be initiated by the choir members to offset an elitist image allegedly associated with the group. This should be replaced with an increased awareness that the choir has an important ministry in Kenya which transcends its "club-like elitism" on the campus.

#### EVALUATION OF THE PHYSICAL EDUCATION PROGRAM

The data presented in this section were derived from responses to Items 38, 39, and 40 of the questionnaire. One null hypothesis was tested: the evaluation of physical education classes. Physical education at the Rift Valley Academy included compulsory physical education classes during school hours, and voluntary intramural and extramural sports after school hours. Intramural sports included an inter-house competition between Stanley and Livingstone houses. Extramural sports included soccer games (September term), basketball games (January term), and rugby games (May term).

The Quality of Instruction in Physical Education

The distribution of responses related to the evaluation of the quality of instruction in physical education is presented in Table 46. Twenty respondents thought the quality of instruction to be very good; forty-seven considered it to be adequate; and twenty-four rated it to be poor. Students were generally critical of the quality of instruction. The criticisms were based on the following: (1) There was not a sufficient number of trained physical education instructors. Teaching was done, as one student put it, by "moonlighters." (2) Individual skills were not developed to the extent that team skills were. Emphasis on tennis, golf, archery, and other individual sports eventually would serve graduates better socially. (3) Programs designed for girls "reflected male chauvinist tendencies." One girl wrote: "As soon as school was out, that was it for girls."

Table 46

Evaluation of the Quality of Instruction in  
Physical Education by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Very Good	2	4		4	2	8	20
Adequate	4	4	9	3	10	17	47
Poor	2	2	3	6	5	6	24
Total	8	10	12	13	17	31	91

Statement of Hypothesis. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in physical education.

Presentation and Interpretation of Data. The distribution of responses related to the evaluation of the quality of instruction in physical education by period of graduation is presented in Table 47. The null hypothesis was accepted. There was no significant relationship between period of graduation and the evaluation at the alpha level .05.

Table 47

Evaluation of the Quality of Instruction in  
Physical Education by Period of Graduation

Evaluation	Period		Total
	1965 to 1967	1968 to 1970	
Very Good	6	14	20
Adequate	17	30	47
Poor	7	17	24
Total	30	61	91

Chi-square = .58

df = 2

P = .70 to .80

Not significant at .05

### The Value of the Inter-House Competition

The distribution of the responses related to the inter-house competition is presented in Table 48. Sixty-two respondents made positive or appreciative remarks about the competition; thirty-two criticized the competition; and sixteen respondents were ambivalent.

Those who appreciated the inter-house competition stressed its importance in helping fill long Saturday afternoons. Others saw it as suitable for inculcating the values of sportsmanship and fair play. Those criticizing the program stated that it had been largely supplanted by inter-school sports events. The program was observed to have particular merit for girls, because inter-school sports programs for them had not been developed on an adequate basis. Most of the respondents appreciated the physical sports characteristics of field days, but did not show an equal interest in the play-acting and general knowledge quizzes which were programmed occasionally.

Table 48

#### Assessment of the Value of the Inter-House Competition by Year of Graduation

Assessment	1965	1966	1967	1968	1969	1970	Total
Appreciative	4	10	8	9	11	20	62
Critical	4		4	4	6	14	32
Total	8	10	12	13	17	34	94

The Value of the Inter-School Competition

The distribution of responses related to the value of inter-school competition is presented in Table 49. Eighty-nine respondents wrote appreciatively of the program, and five were critical of it. Those who wrote appreciatively praised the individual coaches for their enthusiasm, interest, and willingness to spend so much time coaching the students. Those who criticized the competition did so on the following grounds: (1) Inter-school competition was almost exclusively for boys; (2) An "elitist mentality" was associated with membership on varsity soccer, basketball, and rugby teams; and (3) Almost all inter-school sports were for teams: there was little that the gifted individual could do because track, tennis, squash, shooting, and swimming skills were not emphasized at the Rift Valley Academy, largely because of the lack of suitable facilities.

Table 49

Assessment of the Value of the Inter-School  
Competition by Year of Graduation

Assessment	1965	1966	1967	1968	1969	1970	Total
Appreciative	7	9	10	12	17	34	89
Critical	1	1	2	1			5
Total	8	10	12	13	17	34	94

### Physical Education: Summary

The majority of the graduates thought that the inter-house competition was of merit and should be continued. Only five respondents were critical of the inter-school competition which was one of the most popular activities in the school. Suggestions for the improvement of physical education at the school included (1) careful supervision of the physical education classes at the school, and (2) the orderly development of behavioral objectives for physical education, the development of means to meet these objectives, and periodic evaluation in the light of the objectives.

With respect to the inter-house competition, the respondents suggested that adequate organization of the field days by a faculty-student committee be one of the first priorities. Concerning soccer, basketball, and rugby, the respondents suggested that meets be arranged with as many schools as possible, particularly African schools in the Kiambu district. Respondents suggested that special emphasis should be placed on the development and maintenance of safe and attractive sports facilities at the school; on the girls' athletic program (particularly in hockey, tennis, and basketball); and on a public relations drive to stress the ambassadorial aspects of competitive teams representing the school rather than on the prestige and status accruing with membership in varsity teams.

EVALUATION OF DORMITORY LIVING AT THE  
RIFT VALLEY ACADEMY

Data presented in this section were derived from Item 42 in the questionnaire. No null hypothesis was tested in this area because of insufficient expected frequencies for the application of the chi-square test. All students, except those who lived in the immediate vicinity of Kijabe, boarded at the Rift Valley Academy. Assignment to the dormitories was based on the criteria of sex and grade placement. In most dormitories house parents and prefects were responsible for the operation of the unit. House parents usually lived in an apartment in, or adjoining, the dormitory. Prefects usually were elected by their schoolmates.

The distribution of responses related to the quality of dormitory life is presented in Table 50. Most of the respondents commented very favorably on the life in the dormitories, the consensus being that dormitory life had provided an excellent opportunity for students to adjust to one another. One respondent stated: "Dormitory life was probably the highlight of school life at the Rift Valley Academy. I made lots of good friends and had a very good time." Another noted: "Can there be a girl who doesn't still love Kiambogo, her supervisor, and her roommates? College life wasn't nearly as much fun or wicked."

Those who criticized dormitory life at the school did so on the following grounds: (1) The physical conditions

of many of the dormitory buildings left much to be desired.

(2) Unnecessarily strict rules governed certain aspects of dormitory life, such as lights, dining-room attendance, and admission to dormitories other than one's own. (3)

Privacy was reduced to an absolute minimum in certain overcrowded dormitories. (4) The initiation of new students

to the dormitories occasionally was capricious and cruel.

(5) Uncorrected prejudice was evident with respect to relationships between students and outsiders of different social and cultural backgrounds. Particular criticism was levelled at one dormitory which was built in such a way that students had to walk outside to move from their bedrooms to the washrooms.

Table 50

Assessment of the Quality of Instruction in  
Dormitory Life by Year of Graduation

Assessment	1965	1966	1967	1968	1969	1970	Total
Appreciative	5	8	9	11	14	28	75
Critical	2	1	2	1	2	3	11
Ambivalent or no response	1	1	1	1	1	3	8
Total	8	10	12	13	17	34	94



## EVALUATION OF THE GUIDANCE AND COUNSELING PROGRAM

The data presented in this section were derived from Item 43 in the questionnaire. One null hypothesis was tested in the area of guidance and counseling. Until 1968 no centralized guidance office was established at the school. Each teacher and staff member at the academy understood that he or she was available for counseling at the student's request. The coordination of that system was the responsibility of the principal.

The distribution of responses related to guidance and counseling at the school is presented in Table 51. Thirty respondents expressed appreciation for the guidance and counseling they had received. Fifty-five made negative or unappreciative comments. Nine graduates made no comment.

Those responding appreciatively stressed that staff members always were available and willing to discuss problems faced by students. Some stated that they had not taken advantage of the opportunities that existed for them. One respondent noted: "I didn't get any counseling in my entire time at the school, and I am glad I didn't." Another stressed that counseling at the school was indirect: "We spent a lot of our time in teacher's homes. We didn't know we were being counseled, but we were." One graduate wrote: "I always felt completely at home in the homes of some of the faculty. They seemed genuinely glad to see us whatever the time."

Those respondents who made critical remarks did so on the following grounds: (1) Those staff members who were qualified by temperament and personality to be counselors usually were the busiest, always involved in extra-curricular activities and consequently unavailable for appointments. (2) Some conforming students appeared to have access to and influence with the staff and faculty. (3) Students often felt very alone, feeling that self-sufficient staff and faculty members could not understand and sympathize. (4) Although most faculty and staff were available, few had the qualifications necessary for a good counselor. One girl wrote: "I felt there was no one sufficiently qualified to help me spiritually or emotionally."

Table 51

Assessment of the Quality of the Guidance and  
Counseling Program by Year of Graduation

Evaluation	1965	1966	1967	1968	1969	1970	Total
Appreciative	1	4	1	6	2	16	30
Critical	5	5	9	6	14	16	55
No response	2	1	2	1	1	2	9
<b>Total</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>13</b>	<b>17</b>	<b>34</b>	<b>94</b>

Statement of Hypothesis. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's assessment of the quality of guidance and counseling.

Presentation and Interpretation of Data. The distribution of responses related to the assessment of the quality of guidance and counseling by period of graduation is presented in Table 52. The null hypothesis was accepted. There was no statistically significant relationship between period of graduation and the assessment of the quality of guidance and counseling. However, an examination of Table 52 reveals that graduates of Period 2 were more complimentary of the program than were graduates of Period 1. This difference was not significant at the alpha level .05.

Table 52

Assessment of the Quality of the Guidance and Counseling Program by Period of Graduation

Assessment	Period 1965 to 1967	Period 1968 to 1970	Total
Appreciative	6	24	30
Critical	19	36	55
Total	25	60	85

Chi-square = .92  
 df = 1  
 P = .30 to .50

Not significant at .05

## EVALUATION OF SCHOOL RULES AND REGULATIONS

The data presented in this section were derived from Item 45 in the questionnaire. Because of insufficient responses in certain categories, no null hypothesis was tested in the area of student evaluations of the rules and regulations at the school. In general, rules were implemented in the school by directive of the school board through the administrative officers, faculty, and staff members.

Twelve respondents made appreciative comments with respect to the rules and regulations. Fifty-four were critical of them; and twenty-eight either did not express an opinion or appeared to be neither critical nor appreciative of the rules and regulations.

Most of those respondents who were appreciative of the rules and regulations stressed that (1) any institution has to have a set of rules, (2) the rules at the school were necessary and, in most cases, "were administered in love." Others noted that the school was obliged to act in loco parentis, and was bound to administer the program for the safety and benefit of all.

Those who criticized the rules and regulations did so on the following grounds: (1) The rules were absurdly strict; (2) The enforcement was arbitrary and spasmodic; (3) The punishments varied; and (4) The conduct expected of the students was not congruent with that normally expected

of teenagers in the United States. One respondent wrote: "The rules tried forcibly to marry a Victorian ethic to the Christian faith. The result was an abortion." Another observed: "Rules at the academy were twenty years behind the times. When I came home to the United States it was like coming out of a darkroom into the blinding sun." Other respondents criticized the censorship of books, magazines, movies, and music on the campus. Others commented on rules applied to dating. One respondent wrote: "The pressure to conform to school board and faculty regulations was so pervasive that the moment one got together with a member of the opposite sex one either froze or felt obliged to break every rule in the book."

Table 53

Assessment of the Rules and Regulations by  
Year of Graduation

Assessment	1965	1966	1967	1968	1969	1970	Total
Appreciative	2	2	2	3	1	2	12
Critical	3	5	5	5	14	22	54
Ambivalent or no response	3	3	5	5	2	10	28
Total	8	10	12	13	17	34	94

SUMMARY OF GRADUATES' LIKES AND DISLIKES WITH  
RESPECT TO SCHOOL LIFE AT THE ACADEMY

Data presented in this section were derived from Items 47 and 48 in the questionnaire. No null hypotheses were tested in the area of student likes and dislikes.

The distribution of responses related to student likes at the school is presented in Table 54. Sixty-three respondents cited friends and friendships as some of the best-liked consequences of having attended the school. Fifty-seven stated that sports, particularly rugby and basketball, had brought special pleasure. Fifty-one graduates cited good relationships with faculty and staff in general, and with individual staff and faculty in particular. Forty respondents stressed their enjoyment of the locale of the school; thirty-eight stated that they had enjoyed their academic classes, with special reference to electives they had been able to take. Thirty-seven stated that they had enjoyed the social activities. Thirty respondents stated that they had particularly enjoyed dormitory life. Twenty-three affirmed their enjoyment of the choir. Twenty-one made reference to perceived "religious growth" at the school; and fifteen recalled with particular pleasure class activities, such as the senior 'safari' and the banquet.

Mention also was made of the school yearbook, the short-lived school newspaper, club activities, field days,

and impromptu games such as tennis, horseshoes, volleyball, and golf. Many students expressed their gratitude to certain faculty and staff members for the "open door policy" of their homes for coffee breaks and discussions.

Table 54

## Summary of Student Likes by Year of Graduation

Likes	1965	1966	1967	1968	1969	1970	Total
Friendships	5	5	8	7	12	26	63
Sports	3	9	9	6	11	19	57
Staff	4	5	6	8	8	20	51
Locale	4	2	2	7	9	16	40
Classes	4	6	4	9	8	7	38
Social Activities	2	5	3	6	7	14	37
Dormitory Life	2	4	2	3	8	11	30
Chorale	1	3	3	4	4	8	23
Religious "Growth"	2	5	1	3	2	8	21
Class; Safari Banquet etc.	1	1	3	2	3	5	15
<b>Total</b>	<b>28</b>	<b>45</b>	<b>41</b>	<b>55</b>	<b>72</b>	<b>134</b>	<b>375</b>

Student Dislikes. The distribution of responses related to student dislikes is presented in Table 55. Sixty-two respondents cited rules and regulations at the school as constituting one aspect of the school which they disliked. Thirty-five respondents objected to the dining-room, its "institution-like appearance" and its unpalatable food; thirty-three objected to compulsory attendance at meetings, such as Sunday school, church assemblies, and other religious gatherings. Twenty-seven respondents cited specific incidents of conflict with faculty and staff members collectively and individually.

Twelve respondents complained about the "dreary, prison-like dormitories and other buildings," over-strict dormitory and dating rules, and "unreasonable rules for near-adult students." Twelve graduates complained of the compulsory school uniforms, especially those worn by the boys. One respondent wrote: "The boys' uniform looks like a military battle-dress. We were required to wear an Eisenhower jacket. This gave the school a military air. Many of us despised anything that even hinted of war." Ten respondents stated that some of their major dislikes had centered on the classroom. One respondent complained of "eye-for-an-eye competition, rote memorisation of worthless material. There was too much emphasis on the 'what' of education, and not nearly enough on the 'how' and 'why'."



Graduates also mentioned the lack of recreational facilities, unpleasant relationships over laundry, and the state of repair and cleanliness of washrooms. One respondent summarized his reactions as follows: "Rift Valley Academy was almost totally faculty and staff dominated. It is time the students took over some of the responsibilities."

Table 55

## Summary of Student Dislikes by Year of Graduation

Dislikes	1965	1966	1967	1968	1969	1970	Total
Rules and Regulations	6	6	8	2	10	30	62
Religious Meetings		3	7	2	7	14	33
Dining-room; Food	4	5	6	1	8	11	35
Staff: faculty		4	1	1	9	12	27
Dormitories	2	1		1	2	6	12
Religious "lack of growth"			1			1	2
Dress Code		1		2	1	8	12
Academic Classes	4	1	2	1	1	1	10
<b>Total</b>	<b>16</b>	<b>21</b>	<b>25</b>	<b>10</b>	<b>38</b>	<b>83</b>	<b>193</b>

PART 3: SUGGESTIONS AND RECOMMENDATIONS  
MADE BY THE RESPONDENTS

The data presented in Part 3 of this chapter were derived from Items 44, 46, 49, and 50 in the questionnaire, and from comments made elsewhere on the forms by the respondents. Item 44 was included to obtain respondent suggestions with respect to improving Rift Valley Academy buildings, grounds, facilities, and services. Item 46 was designed to obtain suggestions for improving student morale at the school. Item 49 was related to suggestions for the improvement of student-faculty relationships at the academy; and Item 50 was designed to allow respondents to comment as they wished on the entire school program.

Buildings, Grounds, Facilities, and Services

Thirteen respondents recommended the removal of unsightly temporary buildings. One graduate wrote: "I arrived back at the school after an absence of five years and I was appalled by the shape of the buildings." Particular emphasis was placed on the removal of iron buildings in the vicinity of the boys' dormitory and the dining room. Seventeen respondents recommended that "the dreary grey, prison-like" buildings be painted even though such painting would be costly and not permanent. Three students recommended that covered walkways be built between the main buildings. Seven respondents

suggested the employment of full-time janitorial help to ensure the cleanliness of halls, rooms, and bathrooms.

Three respondents emphasized the need for constant and prompt maintenance of all drains, washroom facilities, and toilets. Seven respondents suggested the building of a home economics area for girls. Other building projects recommended by the graduates were: (1) A poolroom, (2) A squash or handball court, (3) A language laboratory, (4) Study carrels, (5) Additional classrooms with movable fittings, and (6) Heaters and water filters in all existing buildings.

Fifteen respondents recommended that grass on the campus be trimmed on a regular basis to improve the appearance of the grounds and to reduce the possibility of snakes approaching the school. Many respondents commented on what one termed the "general messiness" of the grounds, and on the lack of flowers, shrubs, plants, and gardens. Six respondents objected to the practice of disposing of litter and garbage by dumping into forest ravines. Five respondents suggested that, if full-time employment of gardeners were beyond the school's financial capabilities, students should be paid small sums to work on the campus to ensure its neatness. Three respondents described their pleasure at the beauty of several school grounds in the city of Nairobi. One wrote: "Rift Valley Academy has a more lovely setting than any school in Nairobi. This advantage needs to be exploited."

Ten respondents suggested that a faculty-student committee be established to find ways and means for developing community pride in their school and its campus. Five respondents recommended that committees be appointed to (1) examine the dining room procedures and make recommendations for the faster supply of better food; (2) explore laundry conditions at the school with the purpose of relaxing dress code requirements and bringing the school's clothing policy more in line with those of American public schools; (3) recommend the increased expenditure of funds for library books, magazines, and audio-visual materials; and (4) suggest improvements to the main access road to the school. One respondent wrote: "If all-weather surfacing is beyond the means of the school, the road could be widened to allow two vehicles to pass, even in wet weather."

Five respondents suggested that the Rift Valley Academy Planning Committee be reconstituted to include adequate student representation. Respondents stressed the need for adequate planning, noting that (1) haphazard building growth, particularly in the senior boys' dormitory area, was evident; and (2) teachers had apparently been assigned to teach some courses with very little warning. In order to prepare students and faculty alike for the future, one graduate noted, a committee composed of faculty and students should be established to plan for all curricular changes.

### The Academic Program

In English studies at the school, respondents recommended that (1) less time be devoted to the study of grammar; (2) broader perspectives be envisioned in the study of literature, with continued emphasis placed on improving the quality of instruction in the subject; and (3) immediate and far-reaching reform of the teaching of composition be accomplished with minimum loss of time. Creative writing, research papers, critiques, stories, and poems should receive top priority.

In science studies at the school, respondents suggested (1) the active recruitment of specialized teachers in biology, chemistry, and physics; and (2) the emphasis upon the environment rather than on the relatively discreet subjects of biology, chemistry, and physics. All three subjects were rated more poorly by Period 2 graduates than by Period 1 respondents, and attempts to elevate the quality of instruction in all three were strongly recommended by the respondents.

In mathematics studies at the school, the respondents recommended that (1) emphasis be placed on permitting students to proceed at their own pace and in accordance with their own learning styles; and (2) calculus be added to the course offerings as soon as possible. Differential programs for the gifted were recommended. Three respondents emphasized that the study of mathematics lends itself to goal setting

and evaluation, and may be considered an ideal forum for the experimentation of student-directed study programs.

In language studies at the school, the respondents recommended (1) emphasis on the spoken language vis-à-vis the written form; (2) the use of language laboratory techniques, with special reference to language records and tapes and programmed textual materials; (3) continued efforts on the part of the instructors in language to interact more with those persons fluent in the language being taught--to the point that the instructor schedule part of his or her furlough in a country where the language is primarily used.

In social studies at the school, the respondents recommended that (1) emphasis be placed on the individual's role in the procedure of government; (2) special emphasis be placed on African history, government, sociology, and anthropology; and (3) interchange of ideas with African scholars and students in seminars and field trips, be established, at the expense, if necessary, of the prescribed syllabus.

In religion studies at the school, the respondents suggested (1) the teaching of Bible, rather than doctrine and theology; (2) the increased emphasis on comparative religion studies with emphasis placed on recognizing and tolerating different points of view and interpretations; (3) the implementation of course outlines planned together by faculty and students; (4) the removal of attendance

requirements for students at all religious gatherings; (5) the removal of all seating charts and check systems at religious meetings; and (6) the acknowledgment by faculty and staff that their concern for student welfare is welcomed, but that the temptation to proselytize should not preclude the fair and impartial discussion of variant points of view.

In music studies at the school, the respondents suggested (1) increasing the choice of instruments available for study; (2) consideration for the reactivation of the school band; (3) broadening of the repertoire of the chorale and other groups to include a wider variety of genres, particularly those local to Kenya; (4) the concentration on the fundamentals of music, such as sight reading and music theory; and (5) an emphasis on the chorale as a service group to the community and the nation rather than on its role as a status symbol within the school.

In physical education studies at the school, the respondents suggested (1) that full-time, skilled and competent teachers be recruited to teach physical education; (2) that until such personnel are found, close supervision by part-time physical education teachers be applied to classes in that subject; (3) that the inter-house competition be continued, especially for the lower grades, but that tighter control be exercised over field days and inter-house competitions; (4) that clear-cut behavioral objectives be established for

the physical education program, that the means for achieving these objectives be available, and that occasional evaluation of the objectives take place; (5) that every effort be expended to improve the recreational facilities at the school; (6) that special emphasis be placed on the girls' physical education opportunities in an attempt to make them comparable to those available for boys; (7) that particular emphasis be placed in stressing the ambassadorial role of the rugby, soccer, and basketball teams representing the school, rather than emphasizing the status and prestige associated with membership in the respective teams.

#### Other Aspects of School Life

With respect to dormitory life at the school, the respondents suggested (1) that newcomers be made to feel welcome and protected; (2) that full-time janitorial staff be employed to service dormitory areas, particularly washrooms; (3) that older students be accorded privileges commensurate with their advanced standing; and (4) that immediate maintenance follow the breakdown of any facility or building.

Concerning guidance and counseling at the school, the respondents suggested that (1) each student be assigned a counselor for his period of attendance at the academy from the 7th grade onward; (2) that the student have the right to change this appointment if the relationship did not prove satisfactory; (3) that the counselor call regular



meetings with his counselee and at all times remain available for counsel; (4) that each counselor be required to keep up to date with changing emphases in the United States by the reading of current books and education journals; and (5) that each counselor cooperate fully with the guidance and counseling coordinator at the school.

With respect to rules and regulations at the school, the respondents suggested (1) that students and faculty meet and discuss all proposed rules and regulations, and review all existing rules and regulations; (2) that students be punished only as a last resort, after all efforts to counsel them have failed; (3) that student initiative and enterprise be encouraged and reinforced, inasmuch as students face situations demanding independent decision-making immediately after leaving high school; and (4) that a student court be established to handle all but the most serious violations of rules commonly established by students and faculty.

With respect to the general atmosphere and the raising of student morale at the school, the respondents suggested (1) that teachers and staff be recruited on their ability to relate comfortably and naturally with students as well as on the basis of their academic expertise or other particular skill; (2) that students be invited to participate meaningfully in all decision-making situations at the school which will affect them directly or indirectly; (3) that

grades be eliminated in all classes where such a procedure is possible, and that a 'passed' or 'not yet passed' alternative be offered in their place; (4) that an honor system, similar to those used in many U.S. colleges and universities, be tried on the campus; (5) that increased trust be demonstrated by faculty in students; (6) that all rules be reevaluated, and only those considered as absolutely necessary for the smooth running of the school be retained; and (7) that mini-courses be substituted for the last semester of the senior year. Subjects for these courses could include law, anthropology, sociology, astronomy, statistics, archeology, and linguistics.

## Chapter 5

### SUMMARY, FINDINGS, AND CONCLUSIONS

The purposes of this chapter were to summarize the study and to present the findings and conclusions. The background and purpose of the study are summarized in section one. The literature which was reviewed is described in section two. The procedures used are reviewed in section three. The findings of the study are presented in section four. Section five is a brief, concluding statement.

### BACKGROUND AND PURPOSE OF THE STUDY

The Rift Valley Academy was founded in 1905 for the education of the children of missionaries serving in east and central Africa. Gradually the school was enlarged until, in 1970, it enrolled 367 students from more than thirty-five missionary societies. In 1968 the school was awarded provisional accreditation by the Middle States Association of Colleges and Secondary Schools, an accreditation later ratified by that body.

The accreditation committee appraised the school and made recommendations for its improvements. The visiting committee, the faculty, and the staff of the school were involved in the appraisal. It appeared, however, that one segment of the school's population had not been included in

the investigation: the students had not been accorded the opportunity to appraise the quality of their educational experiences at the school. It was to compensate for this shortcoming that this study was conceptualized.

The purposes of this study were (1) to determine the opinions that selected graduates of the Rift Valley Academy held concerning the education they had received; (2) to determine whether or not there was a statistically significant difference between the opinions of those graduating prior to the provisional accreditation and those graduating after accreditation; and (3) to solicit from graduates suggestions for the improvement of the educational program at the academy.

To give direction to the study, the evaluations were classified by year of graduation of the respondents. Further, to determine whether the accreditation appraisal and recommendations had been a turning-point in the respondents' evaluations of the school, the responses were stratified by period of graduation. The responses of those graduates of Period 1 (1965 - 1967), which preceded the appraisal, and Period 2 (1967 - 1970), which followed it, were compared. Only ten such comparisons were possible because of small cell restrictions which regulate the use of the chi-square test of independence. One major null hypothesis, and ten subsidiary null hypotheses, were developed to determine

the level of independence of the evaluations from the period of graduation.

#### REVIEW OF THE RELATED LITERATURE

The review of the literature was presented in two sections. Section one includes an examination of the only study found in the literature related to the education of the children of missionaries. In section two a summary of follow-up studies reviewed was summarized to provide general background in research procedure for the study.

#### PROCEDURES USED IN THE STUDY

Literature related to questionnaire theory was presented in Chapter 3. The problems of questionnaire design were studied with special reference to (1) the advantages and disadvantages of the mail questionnaire; (2) the solicitation of cooperation; (3) the length and aesthetic appearance of the questionnaire; (4) question wording and positioning; (5) pilot-testing of the instrument; and (6) the reliability and validity of the instrument.

The population selected was made up of the graduates of the Rift Valley Academy from 1965 through 1970. A fifty percent random sample, stratified by year of graduation, was selected for the study. One-hundred and three individuals were chosen to receive the questionnaire. Ninety-four individuals returned the questionnaire, representing a response

of 91.26 percent. A fifty-item original questionnaire was constructed in the following manner: three-hundred questionnaire items were composed or drawn from instruments which had been used successfully and were reported in the literature. A project advisory committee, composed of five graduates of the school, employed a modified form of the Delphi technique to select sixty-five items considered most suitable for inclusion in the instrument. These items were arranged and numbered to constitute the fifty-item questionnaire used in this study. The completed instrument was pilot-tested on a ten percent stratified random sample of the graduate population of the school from 1965 through 1970. The instrument was evaluated in light of the respondents' evaluations, and was mailed to a fifty percent stratified random sample from the same population. The data derived from these responses were analyzed and presented in this study.

The chi-square test of independence was selected because it is suitable for comparing experimentally obtained non-parametric responses with those theoretically expected on the basis of an hypothesis. The use of the chi-square test was dependent upon (1) the number of responses in each cell of the contingency tables; and (2) the number of degrees of freedom involved.

## PRESENTATION AND ANALYSIS OF DATA

The presentation of the data was made in Chapter 4. In Part 1, entitled Profile of the Respondents, were presented data with respect to sex, date of birth, year of graduation, citizenship, country of birth, marital status, mission board affiliation, African country of domicile, academic preparation of father and mother, obligations to military service, college or school attended after graduation, major subject, grade-point average, educational objectives, acceptance by college, factors and persons influencing choice of college, financial means of support for higher education, career plans, perceptions of success and failure, perceptions of adequacy of high school preparation, and attitude towards the Christian faith.

Part 2, entitled Evaluation of the Educational Program at the Rift Valley Academy, included the respondents' evaluations of the following: English grammar, literature, and composition; chemistry, physics, and biology; algebra, geometry, and trigonometry; Latin and French; world history, American history, government, and psychology; Bible, and religious meetings attendance; instrumental and choral music; physical education, inter-house and inter-school sports; dormitory life; guidance and counseling; rules and regulations; and likes and dislikes with respect to life at the school. In the majority of these areas the respondents were asked

to evaluate the quality of instruction as very good, adequate, or poor. Tables were presented in each category showing the distribution of responses by year of graduation.

Part 3, entitled Suggestions and Recommendations, included a synthesis of the respondents' comments and suggestions with respect to (1) buildings, grounds, facilities, and service; (2) the academic program; and (3) other aspects of school life, such as student morale, dress codes, and student participation in decision-making.

#### SUMMARY OF THE FINDINGS

The summary of the findings is presented in this section. The summary is divided into four parts: (1) Part 1 is a summary of the Profile of the Respondents; (2) Part 2 is a summary of the Evaluation of the Educational Program at the Rift Valley Academy; (3) Part 3 includes a restatement of the major null hypothesis and the ten subsidiary null-hypotheses and of the conclusions reached in each case; and (4) Part 4 includes a synthesis of the suggestions and recommendations made by the respondents.

##### The Profile of the Respondents

Of the ninety-four respondents, males outnumbered females by fifty-four to forty. The majority of the graduates were citizens of the United States, and almost one half of them were born outside of their homeland. Graduates of the classes



of 1966 and 1967 married earlier than those of the Class of 1965. No respondent reported having married within the first two years after graduation from high school. The parents of the majority of students worked in Kenya, Tanzania, and the Congo. The fathers of the graduates had earned more advanced degrees than had the mothers: thirteen of the fathers had earned doctors' degrees, whereas only three of the mothers had earned masters' degrees.

All eligible males were prepared to serve in the armed forces if drafted. The majority of the graduates proceeded to private, liberal arts colleges almost immediately after leaving East Africa. Only one of the ninety-four respondents reported having been in critical academic trouble in college, and none reported having dropped out for academic reasons. The majority of the respondents were accepted by the colleges of their first choice. None attended his third choice. Many of the graduates received scholarships and other financial aid in college, which was augmented in many cases by gifts from parents and by part-time employment. Social adjustment was considered a major factor in the respondents' assessments of successes and failures in college. Other significant factors mentioned in this connection were grades, religious "growth", finances, and career decisions. The majority of students claimed that the Christian faith had been relevant to them while they were students at the school, and that it still was at the time of responding to the questionnaire.

The Evaluation of the Educational Program

"Very good" responses outnumbered "poor" responses in English grammar, literature, algebra, geometry, trigonometry, Latin, French, world history, American history, government, psychology, Bible, religious meetings, instrumental music, and choral music. In physics, "very good" responses and "poor" responses were equal. "Poor" responses outnumbered "very good" responses in composition, chemistry, biology, and physical education. Appreciative comments outnumbered critical comments in the evaluation of the inner-house competition, the inter-school competition, and dormitory life at the school. Critical comments outnumbered appreciative comments with respect to guidance and counseling, and rules and regulations.

Those respondents who stated that they had liked life at the academy did so mainly because of the friendships established, participation in sports, staff relationships, the locale and setting of the school, classes, social activities, dormitory life, participation in chorale, and religious "growth" opportunities. Those who registered dislike for the school did so because of the rules and regulations, compulsory attendance at religious meetings, the dining-room and food arrangements, difficulties with staff and faculty members, dormitory facilities, dress code requirements, and academic classes.

### The Testing of Hypotheses

The major null hypothesis tested was stated as follows: The period of graduation from the Rift Valley Academy and the graduate's evaluation of his high school experiences there were essentially unrelated. The null hypothesis was accepted conditionally. There was no significant relationship between period of graduation and the respondent's evaluation of his high school experiences. The perceptions of graduates from 1965 to 1967 (Period 1) were not significantly different from those of graduates from 1968 to 1970 (Period 2). The accreditation appraisal was not a significant turning-point in students' assessments of the quality of their educational experiences at the school. The conclusions drawn from eight of the ten subsidiary null-hypotheses substantiated the conditional acceptance of the major null hypothesis. The ten subsidiary null hypotheses were as follows:

English grammar. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in grammar. The null hypothesis was accepted. There was no significant relationship between period and evaluation.

Literature. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of

instruction in literature. The null hypothesis was accepted. There was no significant relationship between period and evaluation.

Composition. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in composition. The null hypothesis was accepted. There was no significant relationship between period and evaluation; however, Period 2 evaluations were substantially poorer than those of Period 1. The difference closely approximated significance at the alpha level .05.

Physics. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in physics. The null hypothesis was accepted. There was no significant relationship between period and evaluation; however, Period 2 evaluations were poorer than those of Period 1.

Biology. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in biology. The null hypothesis was rejected. There was a significant relationship between period and evaluation. Period 2 evaluations were significantly poorer than those of Period 1.

Government. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in government. The null hypothesis was rejected. There was a significant relationship between period and evaluation. Period 2 evaluations were significantly better than those of Period 1.

Bible. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in Bible. The null hypothesis was accepted. There was no significant relationship between period and evaluation; however, Period 2 evaluations were substantially poorer than those of Period 1.

Religious meetings. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's assessment of the value of chapel periods, Young People's Fellowship meetings, and church assemblies. The null hypothesis was accepted.

Physical Education. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of instruction in physical education. The null hypothesis was accepted. There was no significant relationship between period and evaluation.

Guidance and Counseling. There was no significant relationship at the alpha level .05 between period of graduation and the Rift Valley Academy graduate's evaluation of the quality of guidance and counseling. The null hypothesis was accepted. There was no significant relationship between period and evaluation.

#### Suggestions and Recommendations

The respondents' suggestions and recommendations for the improvement of the school and its programs were summarized in Part 3 of Chapter 4. In general the suggestions centered on the subject of student representation in decision making at the school. Graduates stressed that the academy was faculty- and staff-dominated to the extent that students were forced to conform to staff-determined institutional norms or to face the consequences of estrangement from faculty, staff, and peers. Specific graduate recommendations were made in the areas of (1) buildings, grounds, facilities, and services, (2) the academic program; and (3) other aspects of school life including dormitory life, dining facilities, student-staff relationships, and morale. The respondents recommended that all school committees which make decisions which affect students in any way, directly or indirectly, be reconstituted to admit strong student representation.

## CONCLUDING STATEMENT

On the basis of the findings the following conclusions appeared to be warranted. (1) It appeared that the graduates of the Rift Valley Academy who responded to the questionnaire considered that their schooling had provided a good basis for entry into higher education and employment. (2) The graduates apparently considered themselves to be successful in their pursuit of higher education and in their careers. (3) An examination of the findings related to the testing of hypotheses revealed that the accreditation appraisal by the Middle States Association of Colleges and Secondary Schools in 1968 had not been a significant turning point with respect to the graduates' evaluations of the educational program at the school. The general null hypothesis that the evaluations and the periods of graduation were essentially unrelated could be sustained conditionally. (4) On the basis of the evaluations, it was inferred that the most successful aspects of the program at the academy were in the areas of grammar, literature, algebra, geometry, trigonometry, Latin, French, world history, American history, psychology, choral music, inter-house and inter-school competition, and dormitory life. Those aspects which were marginally successful were in the areas of physics, Bible, instrumental music, and religious meetings. Those aspects of the school which were not successful were in the areas of composition, biology, chemistry,

guidance and counseling, and rules and regulations.

With respect to the graduates' suggestions and recommendations, it appeared that it would be in the interests of the school (1) to restructure the curriculum to allow for student participation in the planning of all courses; (2) to allow wide latitude and independence for students in the choice of electives; (3) to introduce mini-courses for credit in subject areas such as environment, astronomy, law, statistics, economics, anthropology, sociology, philosophy, sex education, comparative religion, and human growth and development; (4) to restructure all committees entrusted with the formulation of rules and regulations affecting students directly or indirectly. Representative student participation on all such committees could ensure a measure of cooperation by the student body in matters related to the governance of the school; and (5) to evaluate completely the established system of authority at the school. The faculty and staff should encourage the students to set, and adhere to, their own standards; to consider themselves accountable primarily to themselves rather than to their teachers, supervisors, or administrators. This process would necessitate the acceptance of responsibility on the part of the students. It would be essential also that the faculty and staff place responsibility and trust in the students.



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A P P E N D I X

78 Bitternut Lane  
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Dear R.V.A. Graduate:

I am afraid that I have made too many demands on you in the past to expect another favor from you. I am, however, involved in a follow-up research study for my doctoral dissertation here at the University of Virginia, and I badly need your help . . . once again!

I have enclosed a questionnaire form and a stamped, addressed envelope. Would you consider taking about twenty minutes to respond to the questionnaire, adding as many comments as you have appetite for, and dropping it in the mailbox before the postman knows what's going on?

The responses will be key-punched and engorged by a computer. The feedback will be interpreted and assembled in diagram and table form in the body of the dissertation. You are not asked to identify yourself by name, but are asked to be absolutely frank in your reactions, comments and suggestions. Naturally, your responses will be treated as valuable and completely confidential. Depend on it.

Surveys are only really effective when the response is total. By taking a few moments of your busy life to help in this project you can contribute to making The Rift a livelier, happier and friendlier place to live and learn.

With warm personal greetings,

David Reynolds