A Study of the Career Aspirations of Selected Jamaican College Students: Implications for Educational Program and National Manpower Development

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Andrews University
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A Dissertation
Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by
Newton W. Hoilette
April 1979
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APPROVAL BY THE COMMITTEE:

Chairperson: Robert A. Williams

Date approved

April 24, 1979

Committee Member: Walter B. Douglas

Dean
School of Graduate Studies
ABSTRACT

A STUDY OF THE CAREER ASPIRATIONS OF SELECTED JAMAICAN COLLEGE STUDENTS: IMPLICATIONS FOR EDUCATIONAL PROGRAM AND NATIONAL MANPOWER DEVELOPMENT

by

Newton W. Hoilette

Chairperson: Robert A. Williams
ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University
Department of Education

Title: A STUDY OF THE CAREER ASPIRATIONS OF SELECTED JAMAICAN COLLEGE
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DEVELOPMENT

Name of researcher: Newton W. Hoilette

Name and title of faculty adviser: Robert A. Williams, Ph.D.

Date completed: April 1979

Problem

The task of educating youth for the employment needs of a
developing country such as Jamaica is a challenging one. Career
aspirations is an important part of this process. Efforts are being
made on the part of the Jamaican government to meet this continuing
challenge, particularly at the secondary level.

Since no studies have previously been done to identify the
career aspirations of Jamaican college students, it was the purpose
of this study to identify those aspirations to determine if any
significant difference exists between them and the manpower needs
of the country. The problem of befitting youth for the world of work

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will be made easier if the educators and national planners are aware of the career aspirations of their youth, especially those at the college level. By this awareness program offerings can be studied for meeting the personal needs of students as well as guiding them into professions that are needed for the country.

Method

Fifteen colleges were chosen by a stratified random sampling method from among all independent and government (tertiary) institutions in Jamaica, to include rural and urban colleges as well as colleges by type (i.e., teacher training, business and commercial, community, etcetera). All available seniors were tested representing a total of 695 seniors from a population fo 790 which provided a sample size of 88 percent.

The Career Aspiration Form (CAF), which was an instrument particularly designed for the study, was used to collect the data. The CAF contained fifteen items. Analysis of the data was done using (1) Chi-square Goodness of Fit and Chi-square Contingency computer programs to test for differences of significance among variables in hypotheses 1 and 2; (2) the statistical test for finding the Standard Error of a Proportion for sub-hypotheses dealing with differences in individual categories. Since the approach taken in the study was the "ex-post facto" causal-comparative method, data not receiving statistical analysis were reported descriptively. The Cramers Phi was used as a test for the strength of the differences for hypotheses 1 and 2.
Results

The analysis of the data yielded a statistically significant difference between the career aspirations of Jamaican college seniors and the manpower needs of the country. The data also depicted a statistically significant difference between the career aspirations of seniors attending independent institutions and those attending government institutions. The strength of the difference indicated by the Cramers Phi was .70 and .57 for hypotheses 1 and 2, respectively. With an effect size of .50, the data summary not only revealed statistical significance but also practical significance. Analysis of sub-hypotheses 1A-1F resulted in statistically significant differences existing between the proportion of career aspirations of Jamaican college seniors and the proportion of need for personnel in each occupational category in Jamaica.

Conclusions

The findings of this study suggest a disparate relationship between the career aspirations of Jamaican college students and the manpower needs of Jamaica. Students attending independent colleges have career aspirations that are significantly different to students attending government institutions. Item responses to the CAF indicate that many students are not receiving professional help in career guidance, and so the educational program of the colleges do not adequately address itself either to the personal vocational development of students or the manpower needs of Jamaica. Both government and independent educational programs are in need of professional
counselors and career education services to function in a manner that will narrow this existing gap between aspirations and manpower needs.
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CHAPTER I

INTRODUCTION

The study of career aspirations is no new activity in the field of research. This area of study has provided much data that have proven useful to educators and government agencies as well as to business executives. Much of the research concerning career aspirations, however, has focused on secondary school students. This present study is concerned with the career aspirations of Jamaican college seniors with implications for program and manpower development.

Statement of the Problem

The problem to which this research addresses itself is that of identifying the career aspirations of Jamaican college students to enable better policy-making decisions by educational administrators with regards to program and manpower development. The task of educating youth for the employment needs of a young developing country such as Jamaica is a challenging one. Efforts are being made on the part of the Jamaican government to meet this continuing challenge, particularly at the secondary level.

Colleges should play an important role in the development of Jamaica as in any other country. The problem of befitting youth for the world of work will be made easier if the educators of Jamaica are

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aware of the career aspirations of the youth. By this awareness, program offerings can be studied for meeting the needs of students. In addition youth could be channeled through career guidance into such professions as are needed for the country, especially youth who after completing secondary school are still undecided regarding career choice.

Since no previous studies have been done to determine the career aspirations of Jamaican college students with implications for program and manpower development, the present study could prove useful to educational planners at the college level and above.

Purpose of the Study

The purpose of this research is to study the career aspirations of Jamaican college students to determine if any significant differences exist between the aspirations of these students, the program they pursue, and the job needs of the country.

Need for the Study

Jamaican Prime Minister Michael Manley has placed the need for this study in perspective in an introductory statement made with regard to education in Jamaica. Manley (1974) states:

Every developing society must aim at free, compulsory, universal education as its highest priority. However, considerable analysis of the education process is required if the enormous effort that this objective implies is to prove worthwhile. (p. 138)

Studies have been done by Richards (1974) and Jackson (1974) relating to the career and educational aspirations and expectations of selected secondary school students in Jamaica, but no studies have sought to discover the career aspirations of college students in
Jamaica as they relate to the needs of the developing nation. Colleges ought to play a significant role in the developing country; consequently there is a need to discover what contributions college programs are making to provide expertise for Jamaica.

The Ministry of Education has issued a list of Policy Programs indicating the primary needs of the country which programs include the following:

1. The development of modern stable teaching profession on which all educational reconstruction depends

2. Expansion of vocational education for technical, industrial, business and commercial employment at middle and higher manpower levels

3. Expansion of higher education particularly to fill positions for which we remain heavily dependent on the employment of expatriates such as teachers, engineers, architects etc., etc.

4. Curriculum development in all its aspects as an ongoing dynamic for educational change

5. The development of guidance services to deploy young people into the programs and employment best suited for their individual attainments and aptitude. (The Education Thrust of the 70s, p. 2)

The above points fall completely within the rationale of this study and thus justify the need for, and significance of the study.

Background of the Problem

Educational Development

No state system of education existed in Jamaica in the early days of British colonialization. However, between 1667 and 1736, 218 legacies were left for the church, the poor and for education. Many of the existing secondary schools in Jamaica today were founded on the benevolence of early British colonists. In 1867 under the leadership
of Sir John Peter Grant, a very able administrator, a scheme for the supervision and inspection of elementary schools was drawn up. In 1879 a schools commission for secondary education was organized under the governorship of Sir Anthony Musgrave. The Institute of Jamaica was founded the same year. Under the administration of Sir Henry Morgan (1883-1889) education received long needed attention. Sixty years later in 1948, the University of the West Indies, supported by the governments of all the British Caribbean territories was established in Kingston, Jamaica.

In 1962 Jamaica successfully sought to end colonial rule by applying for independence from Great Britain. Independence was thus granted on August 6, 1962, ending three hundred years of British rule.

With the achievement of independence came the responsibility and challenges for development. Among the greatest challenges was that of formulating an educational program for Jamaica suited for the post colonial era and fit for Jamaica's development as a new nation in the Third World.

The general national policy for education developed in 1953, known as the Jamaican (Constitution) Order in Council, covered four levels known as Infant, Primary, Post Primary and Further Higher Education. This policy provided a base for expansion and a change from British colonial policies and school programs to those that were more Jamaican in their national orientation. The policy also provided greater access to education for the general population. However it was not until after independence when the Education Act was passed in 1965 that the operational aspects of the system (1953) took place. Through the Education Act, needs for greater financing capability were
attempted, a better definition of educational goals was outlined and the expansion of the system to meet both individual and national needs was pursued.

As the need for educational change became a key factor in development, educators began to voice their determination. Aubrey Phillips (1969) states:

It is now manifestly clear that Jamaica's educational system is in urgent need of improvement, expansion and streamlining. This must be done if we are to satisfy our national goals and aspirations . . . . It has become commonplace for our leaders to mouth these sentiments. It is now necessary for a government to translate them into reality . . . (p. 1)

The Ministry of Education, led by the Honorable Florizel Glasspole, issued a document entitled *The Education Thrust for the 70's* on May 14, 1973 in which a reaffirmation of policy was presented:

Jamaica's greatest resource is her people. Half these people are under the age of seventeen. A quarter of our population spends the working days in the classroom of our schools. What happens there will largely decide their own future and that of the country.

The policy of the government is to develop effective educational programs so that young people can serve the needs of their own community and the nation, and at the same time their own need for better levels of living. (p. 1)

It is evident that the leaders of government in the early post colonial era, (The Jamaica Labor Party--JLP) as well as the present leaders of government (The Peoples National Party--PNP) who took office in 1970 (the first change of government since independence), were both committed to education "as the key aspect" of their overall developmental policy (*Statistical Yearbook*, 1974, p. 316). The new government proclaimed free education for all its youth from primary to university level. While emphasizing growth and expansion for secondary schools, the government also emphasized raising the level of
primary schools. The idea was to provide a better flow of students into secondary, tertiary and further higher education.

But Jamaica continues to face a problem of skilled labor to meet the needs of economic development. Michael Manley (1974) Prime Minister of Jamaica, places the situation in perspective when he states that "the Jamaican educational system does not reflect a realistic balance between the needs of economic development and the actual training that is provided" (p. 141).

Manley points out that there is still a continuation of a system that offers courses reflecting the social prejudices which have been inherited from the past and which bear little relationship to the present need of Jamaica. In the past the circumstances prevailing in the colonial system demanded that among the middle class the majority of Jamaicans be the manual labor force. The minority, who may have had a little grasp of classical education, enjoyed privileged status. The desirable professions of law and medicine were actually reserved for the very privileged and skillful youth. Those who were not so skillful at best may have been store clerks, since they, as the masses, only received the elementary "three R's" (p. 141).

A further social injustice of the colonial system was that the children of the landowners (who were above the lower and middle classes) were so privileged by virtue of birth that education was not necessarily a major requirement for prominence in the economy. It seemed that exposure to learning had no great bearing on position in society and thus influenced the educational system very little. Manley (1974) summarizes the situation:

Thus, the traditional pattern of education exactly reflected
the realities of power within the system. The hereditary rights of the big landowners made education irrelevant; the professional bureaucratic and clerical needs of a colonial economy were supplied by the middle class who were content with a system based on the English public school of the late nineteenth century; and the three R's which were made available to some of the children of the masses exactly reflected the latter's position in the social and economic ladder. (p. 141)

What seems to have functioned well for a colonial system cannot be adapted for a developing Third World country. An array of human skills are needed so that Jamaica can maintain itself and prove a viable nation. As part of the effort to meet this need the government of Jamaica committed itself to a total of J$163,449,620 for 1976/77 recurrent and capital expenditure, J$139,820,440 recurrent and J$23,629,180 capital expenditure to education (Educational Statistic 1975-76, Ministry of Education, Jamaica). This represented an increase in recurrent expenditure of 11.8 percent over the previous financial year and an increase in total educational expenditure of 4 percent over the previous financial year. During the course of the year the amount was revised to J$32 million.

Economic development for an independent nation such as Jamaica is dependent on more than just the single factor of training people. However, the development of national expertise is crucial; therefore, in order to train people so that they can find employment and personal economic satisfaction as well as provide needed expertise to build Jamaica's economy, the educational system should be prepared for this challenge.

Training specifically skilled people such as engineers of all types, architects, statisticians, cost accountants, computer analysts, research scientists, radiologists, soil chemists, agronomists, farm
managers, business administrators and a number of other fields should probably be a priority. If these types of people are not trained for service to Jamaica, the country will become increasingly dependent on foreign expertise.

Phillips (1975), Special Advisor in Education for Jamaica states that "Jamaica's history has bequeathed her an educational system that was structured strictly along social lines" (p. 1). Great evidence of this system has been seen in the area of secondary education. What the colonial era left Jamaica with was, as Phillips puts it, "a very small and elitist secondary school system, quite incapable of meeting the developmental needs of the society and not providing opportunities to the large mass of the poorer elements" (The Future of Secondary Education in Jamaica, p. 1).

Upon recognizing these concepts subsequently expressed by Manley and Phillips, by the mid 1960s the Ministry of Education expanded the secondary school system, broadened the course offerings, made entry dependent on intellectual ability and for the first time gave serious attention to technical and vocational education. Later, in the early 1970s, another effort was made to expand secondary education by the creation of Junior Secondary schools. Junior Secondary school courses were extended to five years and all secondary education made free.

In a memorandum, The New Secondary Education--with Particular Reference to the Grades 10-11 Program, Phillips (1977) wrote:

The most significant point of departure in the conceptualization of the new secondary education is that it is heavily technical and vocational in its orientation. This is a sharp contrast to the traditional Grammar school education which is highly verbal or abstract. . . . A present
requirement of the Grades 10 and 11 program is that all students must do a vocational course. If the student expects to make his living by his trade or skill (and we expect that at least 4/5 of them will) he would spend somewhat over half of his time in these grades learning the skill. . . . By this means we hope to make a pool of skills that the country needs for its development and the graduates need for potential employment. (p. 1)

Phillips' concept regarding this new program seems to be one that reaches to the crux of the problem of needs supply for Jamaica. The program provides practical training for those choosing a more academic future, with the idea that such training would offer alternatives to those students at times of need.

An ongoing analysis and presentation of data seem indispensable to the process of educational and economic development in Jamaica as in any other developing independent nation. Educational planners will constantly need to be aware of the relationship that exists among such variables as career aspirations, education and manpower needs. Because education is of prime importance to manpower development in a democratic society, there is a large and inescapable responsibility that devolves upon educators to be students of the manpower problem.

Jamaica can learn from the concept of educational planners of the United States that manpower policy rests heavily upon education as its first essential. The Educational Policies Commission of the United States (1956) states:

Within schools and colleges and universities, educational policy toward manpower issues involves all phases of educational action. All who are active in the educational process share responsibility for helping determine educational adjustments to manpower implications.

In all these adjustments democratic values must be kept in mind. Individual well-being and responsibility are inherent in an acceptable manpower policy. (p. 63)
Within the context of democratic and social values, the career aspirations of the Jamaican college students become crucial for the economic and educational development of the nation. Choice of occupation is a right and responsibility of each individual, and as such there should be no forced abdication of an individual's right and responsibility to make his own career plans and decisions (Educational Policies Commission, 1956, p. 62). Career aspirations, however, become crystallized and realistic by facilitating a college educational system that provides for proper guidance and counseling activities. The resultant payoff is fourfold: (1) the dignity and worth of the individual student is fostered and maintained; (2) the student becomes informed (through the proper dissemination of information) and sensitive to the acceptance of social responsibility; (3) whereas prior to college the student's career decisions may have been at variance both with national well-being and his/her own personal welfare (because of the lack of accurate information and understanding), a more consistent articulation of aspirations and goals is achieved; and (4) education which produces or enhances such qualities together increases the nation's manpower resource and strengthens the democratic ideal.

For the Jamaican society then, guidance and counseling must be an important function of democratic education. Guidance is necessary to bring into focus all the experiences which will develop self-reliance and responsibility in the individual. An integral part of the characteristics of effective guidance is that of providing students with information; helping them to interpret it and apply it to their own decisions. In providing guidance services three value
factors are important to note: (1) the focus of guidance is individual (Peters and Shertzer, 1963, pp. 35-55; Moser and Moser, 1963, pp. 8-9); and this is relevant both to the point of view of manpower studies as well as to the philosophy of democracy; (2) guidance deals with the person as a whole, educationally, personally, vocationally, socially, physically and spiritually (Arbuckle, 1957, pp. 16-54); (3) vocational choice is a process, not a single action (Ginzberg, 1971, p. 169 and Super, 1957).

The Ministry of Education (1977) of Jamaica has expressed in the Five Year Education Plan (1978-1983) a commitment to assist the government in its effort to create a new society that is distinctly Jamaican, through the education process.

This Government's philosophy envisages the creation of an egalitarian society based on the twin pillars of social justice and equality of opportunity. Such a society will foster self-confidence, self-reliance, a community spirit and national pride growing from an appreciation of the value of all forms of work and a realization of each individual's personal worth.

These attributes will evolve within a democratic framework based on a deep respect for public welfare, safety and public opinion, the rights of the individual and his continuing development.

In order that education may help mould the Jamaican society we are seeking to create, the concept of education for change is pivotal. In other words, the education system must play a major role in equipping individuals with knowledge, skills, attitudes, creativity and a cultural milieu which assists in the rounded development of its citizens. (p. 5)

The Jamaican government has charted a political path for itself called democratic-socialism, and it is within this political philosophy that the educational process will be operative. The Five Year Education Plan (1978-1983) Draft II produced by the Ministry of Education is a presentation of objectives and strategies designed to
produce changes consistent with the social goals of the government embodied in its declared philosophy.

Among such social goals that education must now achieve are that of (1) producing equality of educational opportunity for all members of the society, with emphasis on quality of education; (2) recognizing differences in individual abilities, aptitudes and interests and catering to individual needs in order to ensure personal growth; and (3) enabling each individual to strive for excellence at all levels of endeavour thereby contributing positively to societal needs for economic production (Five Year Education Plan, 1978-1983, p. 6).

Three significant implications for the educational system arising from these social goals are: (1) that educational offerings must be geared to individual as well as social needs in order to provide the nation with people who have developed basic skills both to earn a living for themselves and to contribute to national development; (2) that educational programs must include productive work as an integral activity of the school system, in order to prepare students for entry into the world of work; and (3) that the needs of children and youth as well as the needs of society must be met through joint efforts of experts and laymen in designing suitable educational programs to meet the social and economic objectives of Jamaica (Five Year Education Plan, 1978-1983, pp. 7-9).

Ginzberg and Smith (1967) believe that if the educational system and the economy are to be kept in balance, it is of vital importance that information should be obtained regarding the employment and career prospects of graduates in order to improve the
structure of the curriculum (p. 13). In addition, efficient guidance and counseling services are necessary to effect proper information gathering and proper choices for self and nation.

Robert S. McNamara, President of the World Bank Group (1974), states that developing countries have greatly expanded their educational systems over the last twenty-five years, yet much of the expansion has been misdirected.

The results are seen in one of the most disturbing paradoxes of our time: while millions of people from among the educated are unemployed, millions of jobs are waiting to be done because people with the right education, training and skills cannot be found (p. 1)

The Education Sector Working Paper of the World Bank (1974) calls for a re-examination of the problem, given that the rate of unemployment is high among those who have been to school. In addition, the paper advocates a number of policies to help find employment for school leavers. Various policies reflect differences in the analysis and causes of the problem. One such policy that seems relevant to this study is known as "Adapting Education to Job or Role Requirements." This approach views the employment problem more as a qualitative than a quantitative imbalance between education and manpower. The concept is supported by the fact that in some developing countries, despite unemployment among school graduates, shortages in skills are observed in specific categories, such as science and technology, teachers, engineers, agronomists, and managers. This observation suggests that curriculum content should be reoriented to relate that which is taught to job needs, thus ensuring that graduates can be employed. Attempts to achieve such an reorientation of curriculum is possible not only through the emphasis on providing
vocational and technical schools but also through "vocationalizing" academic curriculum in colleges.

Rosenberg (1966) refers to the problem of job vacancies coexisting with unemployment in the United States as a strange paradox in that in a period of unemployment, a demand for workers goes unfilled because of the lack of properly trained persons to fill the vacancies. He advocates the collection of job vacancy data in situations where this problem exists, which would make it possible to match unemployed workers with the job openings which are available. He further suggests that educators would find such data of great value because of their use in vocational counseling. It is important that to be successful in the role of counselor an educator must have some knowledge of the job openings that exist in the labor market. In addition, such data would be useful in determining the skills that should be developed in training programs that could become a part of academic curricula.

Venn (1971) agrees with Rosenberg that if the right kind of people who are needed in middle-level occupations are to be found systematic selection and guidance must be available within educational institutions to match the requirements of the occupations and the potential of the people to fill them. Venn states:

Only an organized, sustained effort by educational institutions can meet the demand for more people in these fields. . . . The constant expansion of knowledge and the demands for specialization require thorough systematic preparation for job entry. . . . The education of people to enter these fields must be concerned with their minds as well as with their skills. (p. 136)

Educational planning seems inseparable from manpower development much the same way that the economic development of a nation
cannot experience progress without trained manpower. In agreement with this view, The New Deal for Education (1966) states that no developing country can promote or sustain a high level of economic activity without a specified stance in relation to that economic activity on the part of its educational system; nor could development continue to be dependent on expatriates.

**Overview of Current Structure of Education in Jamaica**

Public education in Jamaica is administered by a unit of government known as the Ministry of Education which operates in accordance with the Education Act of 1965. Provision for education is also made by the private sector in cooperation with the public sector with the goal of availing every child the best educational opportunities possible in the country.

The Ministry of Education is directed by a Minister of Education assisted by a Minister of State, a Parliamentary Secretary and a Chief Education Officer who are in charge of the administration of the educational system.

The current structure of the system covers seven levels: (1) Pre-Primary, (2) Primary and All-age, (3) First Cycle Secondary, (4) Second Cycle Secondary, (5) Teacher Training, (6) Continuing Education and (7) Further Higher Education. Table 1 shows the levels along with the types of institutions included in each level as well as ages and grades.

**Pre-Primary**

Pre-school or early childhood education in Jamaica begins at
TABLE I
CURRENT STRUCTURE OF THE EDUCATION SYSTEM

<table>
<thead>
<tr>
<th>Levels</th>
<th>Institutions</th>
<th>Ages</th>
<th>Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pre-Primary</td>
<td>Infant Schools, Infant Departments; Basic Schools</td>
<td>4-5</td>
<td>-</td>
</tr>
<tr>
<td>2. Primary and All-Age</td>
<td>Primary Schools</td>
<td>6-11+</td>
<td>1-6</td>
</tr>
<tr>
<td></td>
<td>All-Age Schools</td>
<td>6-14+</td>
<td>1-9</td>
</tr>
<tr>
<td>3. First-Cycle Secondary</td>
<td>New Secondary Schools</td>
<td>12-14+</td>
<td>7-9</td>
</tr>
<tr>
<td></td>
<td>Comprehensive High Schools:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High Schools</td>
<td>12-14+</td>
<td>7-9</td>
</tr>
<tr>
<td></td>
<td>Technical High Schools</td>
<td>13-14+</td>
<td>8-9</td>
</tr>
<tr>
<td></td>
<td>Comprehensive High Schools</td>
<td>15-17</td>
<td>10-11</td>
</tr>
<tr>
<td></td>
<td>High Schools</td>
<td>15-18+</td>
<td>10-13</td>
</tr>
<tr>
<td></td>
<td>Technical High Schools</td>
<td>15-17+</td>
<td>10-11</td>
</tr>
<tr>
<td></td>
<td>Vocational Schools</td>
<td>15-17</td>
<td></td>
</tr>
<tr>
<td>5. Teacher Training</td>
<td>Teachers Colleges</td>
<td>Entry</td>
<td>at 17+</td>
</tr>
<tr>
<td>6. Continuing Education</td>
<td>Community Colleges</td>
<td>15-16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-Formal Education Centres</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Further</td>
<td>College of Arts, Science and Technology (CAST)</td>
<td>Entry</td>
<td>at 17+</td>
</tr>
<tr>
<td></td>
<td>Jamaica School of Agriculture</td>
<td>Entry</td>
<td>at 17+</td>
</tr>
<tr>
<td></td>
<td>The Cultural Training Centre (CTC)</td>
<td>Entry</td>
<td>at 17+</td>
</tr>
<tr>
<td></td>
<td>University of the West Indies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

age 4 and is provided by both private and public institutions. These types of schools are often referred to as basic schools or infant departments. Many religious bodies contribute to education at this level.
Primary

Primary education begins at age 6 and continues through to age 11+, spanning six grades. Primary schools are probably evenly distributed between government and religious denominations in terms of ownership, although in many cases of private ownership government pays salaries, maintenance costs, and provides equipment.

At age 11+ students are selected to enter high school on the basis of their performance in the Common Entrance Examination. This examination determines entry to the government and government-aided high schools within the public system.

First-Cycle Secondary

First-Cycle Secondary education begins at age 11+ and continues through age 14+, covering grades 7-9. Public education is offered in new secondary schools and in the first three grades of comprehensive high schools at this level. The significant concept of the new secondary school is that it is heavily technical and vocational in its orientation (Memorandum, 1977, p. 2).

Second-Cycle Secondary

This type of education is offered in grades 10-11 at technical comprehensive, high and new secondary schools as well as in grades 10-13 of government and government-aided high schools. The new secondary schools award the Secondary School Certificate to students who complete grade 11, based on continuous assessment done by teachers and a terminal examination known as National Assessment set by the Ministry of Education.
Vocational

In addition to the vocational programs available in technical and secondary schools, special vocational training programs are offered in two vocational schools, Carron Hall for girls and Knockalva for boys.

Special selection tests are administered as the basis of admission to these schools. Courses vary from one to two years depending on the level of skill required. One or two-year courses in carpentry, auto-mechanics, building, metal work, plumbing, home-economics and commercial subjects are conducted.

Continuing Community Education

Continuing community education is provided in community colleges, evening institutes and non-formal education centers. Programs in these institutions are organized to meet the needs of people who are not served by the regular educational structure.

Teacher Education

Teacher training in Jamaica is directed mainly towards preparing teachers for primary and new secondary schools. Seven teacher training colleges along with the University of the West Indies (UWI), the College of Arts Science and Technology (CAST), the Jamaica School of Agriculture (JSA), the Cultural Training Centre (CTC), the Excelsior Community College training program provide teacher training programs. The West Indies College which is independently owned also provides a teacher training program.
Tertiary Education

In addition to the institutions mentioned above under teacher education, further education is offered in other post secondary schools such as the community colleges of Montego Bay, Excelsior Browns Town and Knox. In general, students qualify for entry into these institutions (except to UWI) upon successful completion of grade 11. The Jamaica School of Agriculture (JSA), The College of Arts Science and Technology (CAST), The Cultural Training Centre (CTC) and The University of the West Indies (UWI) are described below.

1. JSA is mainly responsible for training students in agriculture and as such is of prime importance in terms of contributing to Jamaica's economic development.

2. CAST is probably the single most important institution publicly owned upon which Jamaica relies heavily specifically for technicians and middle management personnel to meet the demands of industry and commerce. There are six departments at the college, namely: (a) mechanical, (b) electrical, (c) engineering, (d) business and commerce, (e) institutional management and (f) teacher training in technical and vocational areas.

3. CTC offers full-time training in the respective fields of arts, dance, music, and drama for a period of two to three years. Graduates of CTC are recognized as trained specialists in their respective areas.

4. UWI is a regional institution with its main campus in Jamaica. The islands of Barbados and Trinidad also have campuses. Education is offered at the graduate level as well as the undergraduate. Students qualifying for entry to the UWI must successfully
complete grade 13 in some subjects and grade 11 in others.

Since September 1973 no tuition fees were charged in any government grant-aided high school or technical school as a result of the government free education policy. Education is also provided free in primary, all-age, new secondary, and comprehensive schools. The government also pays tuition and boarding on campus for all Jamaicans who enter UWI, CAST and JSA. In return for this provision made by government, students are expected to give two years of national service after their graduation.

The Five Year Education Plan Draft Two 1978-1983 reports that in 1977 within the formal Public Education System under the Ministry of Education there were 871 primary and all-age schools, 5 special schools (for the handicapped), 71 new secondary schools, 5 comprehensive, 44 high schools, 6 technical high schools, 2 vocational schools, 7 teacher training colleges, CAST, JSA, and CTC.

Summary

The preceeding background of the problem has cited the early beginnings of the educational system in Jamaica, the country's colonial dependence from the seventeenth century until independence was gained from Great Britain in 1962. Also presented here was the fact that achievement of independence brought along with it the challenge of educational and economic development as the transition from colonial rule to nationhood took place.

It was shown that the educational preparation of the nation's youth and people are crucial to the development of expertise for the country's survival and as such the educational plan of Jamaica is
formulated to include the Government's philosophy of social justice and equality of opportunity, within a democratic framework. This section concluded with an overview of Jamaica's educational system.

Hypotheses

In order to determine differences of significance among the variables being investigated, the following hypotheses will be tested in the null form:

1. There is a significant difference between the career aspirations of Jamaican college students and the total need for skilled personnel throughout all occupational groups in Jamaica.

   a) There is a significant difference between the proportion of career aspirations of Jamaican college students and the proportion of need for professional, technical and related personnel in Jamaica.

   b) There is a significant difference between the proportion of career aspirations of Jamaican college students and the proportion of need for administrative, executive and managerial personnel in Jamaica.

   c) There is a significant difference between the proportion of career aspirations of Jamaican college students and the proportion of need for clerical and sales personnel in Jamaica.

   d) There is a significant difference between the proportion of career aspirations of Jamaican college students and the proportion of need for self-employed and independent occupations.

   d) There is a significant difference between the proportion of career aspirations of Jamaican college students and the proportion of need for personnel in service occupations.
f) There is a significant difference between the proportion of career aspirations of Jamaican college students and the proportion of need for craftsmen and production process personnel in Jamaica.

2. There is a significant difference between the career aspirations of Jamaican college students attending independent schools and those attending government schools.

Categories defined by each occupational group under Hypothesis 1 will be descriptively as well as statistically treated to determine whether or not differences exist between the career aspirations of Jamaican college seniors and each occupational group.

Definition of Terms

Aspiration. A desire or ambition relating to one's perception as being suitable for one.

Career. A profession or calling demanding special preparation to be undertaken as a life-work. It is likened to occupation in this study.

College. An institution of special or professional instruction providing two, three, or four courses beyond the secondary level leading to diplomas or bachelor's degrees.

Colonial/Colonialization. Any act or process employed by a ruling power upon which a distant territory is dependent. In this paper colonial or colonialization is used in reference to British rule in Jamaica.

Curriculum. Courses of study provided in an educational system.

Further higher education. In this study referring to
educational offerings in Jamaica at the baccalaureate level and above, such as provided by the University of the West Indies and the West Indies College upper biennium levels. (The University of the West Indies is government owned, West Indies College is independently owned.)

**Occupational choice.** The personal selection of an occupation for which an individual desires to prepare himself. Selection is made from a number of others of which the person is aware.

**Occupational groups.** The occupational structure of the employed labor force of Jamaica is classified into the following groups:

1. Professional (Technical and Related)
2. Administrative, Executive and Managerial
3. Clerical and Sales
4. Self-employed and Independent Procedures
5. Service, Sport and Recreation Occupations
6. Craftsmen, Production Process and Operating Occupations.

**Program development.** Referring to guidance services and curriculum development in independent and government institutions.

**Seniors.** Final year students of Jamaican colleges, whether in two year, three year, or four year programs who have completed secondary school and taken the General Certificate Examinations.

**Skills/Skilled.** Referring to the development of professional expertise not only in terms of technical proficiency.

**Tertiary education.** Post secondary programs of study offered in teacher training colleges, the College of Arts Science and Technology, The Jamaica School of Agriculture, Junior colleges and Community colleges. Students enrolled in these types of institutions pursue certifications and non-degree courses except in the case of the West
Indies College which also offers baccalaureate degree courses and is independently owned. Tertiary education precedes further higher education in the classification of the Jamaican educational system.

Third World. Used to describe the nations of Asia, Africa, Latin America, the Near East, South Pacific and the Caribbean of which Jamaica is a part.

**Delimitations of the Study**

This study is concerned only with government and independent colleges of Jamaica, which fall under the classification of tertiary education. As such all teachers colleges, business and commerce colleges, community colleges along with the College of Arts Science and Technology and the Jamaica School of Agriculture will be included in the population for this study. Secondary, technical and vocational schools and the University of the West Indies will not be used in this study.

Any conclusions arrived at in this study are applicable only in situations relevant to the population tested.

**Limitations of the Study**

The limitations of this study are as follows:

1. Any investigation pertaining to curriculum will be limited to the courses offered in colleges comprising the sample

2. A comprehensive guidance and counseling program has not yet been developed in all Jamaican colleges. Although some students may have come from secondary schools which had guidance counselors, it is conceivable that all may not be completely knowledgeable
concerning the variety of occupations available in the world of work.

Basic Assumptions

This study makes the following assumptions:

1. That Jamaican college youth can clearly indicate their career aspirations

2. That Jamaican college youth will provide reliable information concerning their career aspirations when asked to do so on a research instrument

3. That the sample of college students which will be drawn in this study will be representative of the population of Jamaican college seniors

4. That senior college students have more realistic career aspirations and are more decided on them than high school seniors or college freshmen

5. That a knowledge of the career aspirations of Jamaican college students will be meaningful to educational planners and consequently to the development of Jamaica.

Summary

Chapter 1 has presented the (1) purpose of the study, (2) need for the study, (3) statement of the problem, (4) background for the study, (5) hypotheses to be tested, (6) definition of terms used in the study, (7) delimitations of the study, (8) limitations of the study, and (9) basic assumptions.

Chapter 2 gives the review of literature relating to (1) theories of vocational development, (2) research done in the area of the career aspirations of college students generally, (3) research done in the area of career aspirations of Jamaican students, and (4) official documents of the Jamaican government pertinent to the study.

Chapter 3 presents the methodology employed in the execution
of the study. Chapter 4 reports the findings of the study, and chapter 5 gives the summary, conclusions, and recommendations.
CHAPTER II

REVIEW OF THE LITERATURE

The review of the literature pertaining to this study on the career aspirations of Jamaican college seniors is divided into four parts. The first part is concerned with theories of career development as conceptualized by such vocational researchers as Ginzberg, Crites, Caplow, Holland, Hoppock, Roe, Steffre, Super, Tiedeman and O'Hara, and others.

The second part focuses on related research done in the United States on various aspects of career aspiration pertaining to college students in particular. Such research is in relation to career guidance, curriculum development and manpower needs. A search of the literature revealed only three studies done on college seniors relating to career aspiration and thus these will be highlighted.

The third part of the review reports on related research done on the career aspiration of Jamaican students. Since no research has been found that has been conducted on Jamaican college students, this part of the review is limited to reviewing research reported on the career aspirations of Jamaican high school students.

The fourth part of the review presents pertinent official Jamaican Government documents.
Theories of Career Development

Based on the belief that career choice is a major factor in the development of each person, much effort has been made to understand the dynamic rationale of career planning and development. Theories have therefore been postulated in an attempt at understanding career choice. Shertzer and Stone (1971) state:

... theory is a way of organizing and systematizing what is known about a phenomenon. In effect a theory serves as a model is used to know what to look for, and what to expect and where to go. The model leads to a statement of the relationships believed to prevail in a comprehensive body of facts. Theory is more solidly supported by evidence than is hypothesis but less established by law. (p. 352)

Some investigators have concluded that one theory may seemingly conflict with another. Steffire (1966) in commenting on this conflict with reference to vocational theories posits the idea that theories compliment each other rather than contradict. Steffire's concept is that the use of more than one theory may be utilized to achieve clarity, resulting in illumination, whereas previously there existed confusion.

Osipow (1973) has stated that any attempt to categorize models of behavioral phenomena of any kind runs the risk of oversimplification. However, in order to discuss intelligently the dominant features, some classification of the models is necessary. Osipow therefore presents four distinct approaches to career development that seem fitting for this study.

1. Trait-factor theories. Trait and factor theories assume that "a straightforward matching of an individual's abilities and interests with the world's vocational opportunities can be accomplished, and once accomplished, solves the problem of vocational choice for the individual" (pp. 9, 10).
2. Sociology and Career Choice. A second approach is the sociological model of career development. Other names used to describe this model have been "reality" or "accident" theory of vocational choice. The central focus of this theory is that "circumstances beyond the control of the individual contribute significantly to the career choices he makes" (p. 10). The chief task the individual faces is the development of techniques to cope effectively with his environment. Caplow, Hollingshead, Miller and Form are proponents of this theory.

3. Self Concept Theory. This approach actually combines two theories into one, and can be referred to as either the developmental or the self-concept theory. The thesis of this approach is that:

(1) Individuals develop more clearly defined self concepts as they grow older, although these vary to conform with the changes in one's view of reality as correlated with aging;
(2) people develop images of the occupational world which they compare with their self-image in trying to make career decisions; and (3) the adequacy of the eventual career decision is based on the similarity between an individual's self concept and the vocational concept of the career he eventually chooses. (p. 10)

Buehler, Super, Rogers, and Ginzberg and his associates are contributors to this theory.

4. Vocational Choice and Personality Theories. The fourth category is known as the personality approach. The general idea is that workers select particular jobs because they see potential for the satisfaction of their needs. Studies have been done by Hoppock (1957) listing needs inherent in the process of vocational choice. Holland (1959) has described in detail personality types suitable for certain career areas. R. Schaffer, L. Small and Anne Roe have also done studies on the personality factors involved in career choice and career satisfaction.
In summary it must be borne in mind that these approaches are not independent of each other. Actually, they are closely related and in many instances they support each other. Thus vocational counselors are becoming more aware of the need for being eclectic in the use of the theories when counseling clients.

Theorists

Ginzberg

Ginzberg (1951) and his associates (S. W. Ginsburg, S. Axelrad and J. L. Herma) proposed a theory based upon the developmental process of making a vocational choice. Their theory is based on the belief that each individual selects a particular occupation through developing patterns of activities that are largely irreversible and take place throughout the formative years of a child's life. Ginzberg never believed that occupational choice came by chance. Ginzberg and his associates highlight three distinct phases in the process of occupational decision making: (1) the period of fantasy choice; (2) the period of tentative choice; and (3) the period of realistic choice.

The period of tentative choice is thought to progress through four stages namely (1) the interest stage, "because tentative choices made at this time are based almost exclusively on interests;" (2) the capacity stage, where the adolescent takes into consideration his capacities and becomes more aware of the necessity of introducing realistic elements into his considerations; (3) the value stage, characterized by the adolescent's attempts to find a place for himself in society; and (4) the transition stage at which time (around 17)
having completed high school the individual either looks forward to work or to entering college.

The realistic period is the time when individuals work out a compromise between their interests, capacities and values, and the opportunities and limitations of the environment (Ginzberg, 1951, p. 108).

Ginzberg (1972) published a restatement of his theory based on extensive research done subsequent to 1951 in which he said:

We no longer consider the process of occupational decision-making as limited to a decade; we now believe that the process is open-ended, that it can coexist with the individual's working life. . . .

Little is left of our original emphasis on irreversibility. . . . People make decisions about jobs and careers with an aim of optimizing their satisfactions by finding the best possible fit between their priority needs and desires and the opportunities and constraints that they confront in the world of work.

Our reformulated theory is that occupational choice is a life long process of decision-making in which the individual seeks to find the optimal fit between his career preparation and goals and the realities of the world of work. (p. 169)

Hoppock's theory provides ten basic propositions. However only four will be presented briefly, giving a general indication of his rationale.

Hoppock believes that (1) occupations are chosen to meet emotional needs and particular values, which are often unconscious, such as a need to remain in a familiar environment or a need to play a dominant role; (2) the occupation the individual chooses is the one he feels will best meet his needs; (3) needs may be intellectually perceived, or they may be vaguely felt as attractions which draw the
individual in certain directions, but in either case influence his choice; and (4) occupational choice is always subject to change. Choices may change as frequently as a person's awareness of his need changes or as frequently as he discovers that another occupation might better meet his needs.

Hoppock (1976) makes the following assertions as a basis for his propositions:

Most human action is caused by feelings, by our desire to be more comfortable or less uncomfortable, more satisfied or less frustrated; in short, by our desire to feel better than we do. Human action is affected by intellect only after feelings have indicated that some kind of action is desirable and only to the extent that our intellect can convince us that a particular course of action will improve or relieve our feeling tone. Intellect gives direction to our actions when factual information or logical reasoning indicates that one course of action is more likely than another to bring us the satisfaction that we seek. (p. 92)

Roe

Roe's theory concerning the determinants of vocational choice emphasizes the importance of early satisfactions in the development of interests and the primary unconscious needs that determine the nature of these interests. Roe (1958) suggests that the job in which an individual enters is a source of satisfaction of many needs. Social interaction and the social status linked to the job could be a major source of need satisfaction for a particular person. Thus Roe believes that in order to understand how a man functions in a job, one must know what his needs are and how and where they are satisfied. Maslow's (1954) concept of a hierarchy of needs have been adopted by Roe in her presentation of her theory of psychological needs, listed in the following order:
1. The physiological needs
2. The safety needs
3. The need for belongingness and love
4. The need for importance, respect, self-esteem and independence
5. The need for information
6. The need for understanding
7. The need for beauty
8. The need for self-actualization

The lower numbered needs are often referred to as the basic "lower order" needs while the higher numbered needs are referred to as the "higher order" needs.

Roe postulates that the modes and degrees of need satisfaction determines which will become the strongest motivators in vocational choice.

Roe (1957) also presents a schema which includes the child's pattern of early experiences with parents, the relationship between parental attitudes and needs satisfaction and the style of parental handling of the child. This schema leads to a prediction of the general area of vocational orientation that develops in the individual.

In addition to the schema she also developed an occupational classification scheme based on groups and levels found in table 2.

Holland

Holland (1959) has proposed a theory known as the Career Typology Theory of Vocational Behavior. Basically Holland employs in
### TABLE 2
CLASSIFICATION OF OCCUPATIONS

<table>
<thead>
<tr>
<th>Groups</th>
<th>Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Service</td>
<td>1. Professional and Managerial</td>
</tr>
<tr>
<td>2. Business contact</td>
<td>2. Professional and Managerial</td>
</tr>
<tr>
<td>4. Technology</td>
<td>4. Skilled</td>
</tr>
<tr>
<td>5. Outdoor</td>
<td>5. Semi-skilled</td>
</tr>
<tr>
<td>7. General Culture</td>
<td></td>
</tr>
<tr>
<td>8. Arts and Entertainment</td>
<td></td>
</tr>
</tbody>
</table>


Holland associates the preferred or habitual methods of the individual with different kinds of physical and social environments as well as differential patterns of abilities. He believes that individuals who are in the process of making a vocational choice "searches" for situations which satisfy their adjustive orientations.
Following are the major occupational environments Holland (1959) has proposed:

1. **The Realistic Environment.** Illustrative occupations are laborers, machine operators, aviators, farmers, truck drivers, and carpenters

2. **The Intellectual Environment.** Illustrative occupations are physicists, anthropologists, chemists, mathematicians, and biologists

3. **The Social Environment.** Illustrative occupations are social workers, teachers, interviewers, vocational counselors, and therapists

4. **The Conventional Environment.** Illustrative occupations are bank tellers, secretaries, bookkeepers, and file clerks

5. **The Enterprising Environment.** Illustrative occupations are salesmen, politicians, managers, promoters, and business executives

6. **The Artistic Environment.** Illustrative occupations are musicians, artists, poets, sculptors, and writers.

Extensive evidence has been gathered about persons in these major occupational classes (or environments) as a result of major research done by Strong (1943), Gough (1955), Laurent (1951), Weinstein (1953), Forer (1951) and others. Holland (1959) has presented an explanation of each modal personal orientation as a result of these studies and a review of the Strong scores. Although theoretical, Holland's formulations help to integrate research and develop theory about occupational classes.

Super

Super and his associates have formulated a Developmental
Self-Concept Theory of Vocational Behavior. Shertzer and Stone (1971) suggest that the key to understanding the formulations of Super lie in the following statement:

In expressing a vocational preference a person puts into occupational terminology his idea of the kind of person he is; that in entering an occupation he seeks to implement a concept of himself; that in getting established in an occupation he achieves self-actualization. The occupation thus makes possible the playing of a role appropriate to the self-concept (p. 360).

Super (1951) proposes the notion that a person strives to implement his self-concept by choosing to enter the occupation he sees most likely to permit his self-expression. In addition to this, Super believes that the particular behaviors in which a person engages to implement his self-concept vocationally are a function of the individual's stage of life development. The idea is that as a person matures, his self-concept becomes more stable. However, the manner in which the self-concept is implemented vocationally is dependent on existing environmental conditions. Consequently attempts to make vocational choices during adolescence assume a different form than those made during late adulthood or middle age (Super 1951, 1954, 1957). Thus Super sees vocational development as a continuous process and sees occupational choice as a synthesizing process.

From the works of Miller and Form (1951) and Davidson and Anderson (1937), Super expanded the concept of career patterns. The idea is that the career behavior of people follow general patterns which may be recognized as regular and predictable after study and examination of the individual.

The career pattern concept suggests that at various times in people's lives different vocational tasks may be imposed by virtue of
the life cycle; thus any one-shot decision of career choice in early adolescence may not be lasting. Super (1957) explains, therefore, that choice is in fact a process rather than an event, denoting a whole series of choices.

Tiedeman and O'Hara

Tiedman and O'Hara (1963) conceptualize career development as the "process of fashioning a vocational identity through differentiation and integration of the personality as one confronts the problem of work in living" (p. v). They further see career development as an evolving conception of self-in-situation which occurs over time. The point is, according to Tiedman and O'Hara, that career development does not occur in just one decision, but within a context of several decisions.

Crites

Crites (1969) investigated the career decision process and discovered that the process is characterized by a progressive narrowing down of the alternatives available to the individual. He refers to this characteristic as the exclusion of those occupations which for one reason or another are not desirable or feasible. The task of the individual in early adolescence is that of making a choice from a large number of different jobs. Thus the problem he faces is how to eliminate many of the alternatives and narrow down the range to those occupations for which he is best fitted.

He conceives of the vocational choice process and related variables along two dimensions: (1) the extent to which choice, preference, aspiration and interest are reality-based, and (2) the age
levels which are included in the choice stage of vocational development. Crites points out that at the lower age levels choice can be differentiated from preference and aspiration along the reality continuum. The older the person gets the more cognizant he becomes with regard to the realities which limit his possibilities. As a result, the choices and preferences become reality based and the occupational alternatives which appear feasible to him are now reduced. Crites posits that at this time the exclusion process is well on the way, occurring primarily after mid-adolescence and referred to as the point of discontinuity around age 16. He also states:

Finally when the individual reaches his early twenties, the exclusion process terminates as he selects an occupation, or a small group of related occupations as the one which he intends to enter. His choice is based to considerable extent upon reality, but also involves his more fanciful and subjective interests, preferences and aspirations. His choice is more realistic than any of these because it represents an appraisal of his limitations, both personal and environmental, as well as his assets and potentialities. (p. 165)

Caplow

Caplow (1954) proposed that the age at which occupational choices are made have much to do with the options available. He advances the thought that if occupational choice or status is inherited, then the "choice" may have taken place at birth. On the other hand, "if they are allocated rationally, on the basis of aptitude and interest, the allocation can scarcely take place before adolescence" (p. 214). Caplow believes that the permanent occupational choice is only identifiable after a period of many years. This being the case, occupational choice can only be studied retroactively and by such time the successive mental states in the choice process are
not likely to be accurately recalled; consequently error and accident become highly possible. He suggests that a number of important choices confront a school child as early as the eight grade, the major one presenting itself at high school graduation, which is whether or not the child should proceed to college: this decision is usually delayed a year or two. With respect to vocational choice in college however, Caplow states:

Finally,—and this is likely to be a conclusive choice so far as occupations requiring advanced training are concerned--the student must usually decide no later than his third year of college whether he will pursue a particular professional curriculum. (p. 218)

Summary

Ginzberg's postulation of a lifelong process of decision making that advances to the Transition stage (around age 17) of realistic choice formulation together with Crites conceptualization of the "exclusion period" and Caplow's "age and option" theory seem plausible for the rationale behind the choice of subjects for this study.

It seems logical to accept the concepts advanced regarding personality, needs, values and self-concept as functions of the career aspirations of varied individuals. In fact, these aspects referred to are integral parts of an individual's life. An individual's occupation is his way of life; thus the more an individual's career aspiration coincides with his actual occupation, the more self-actualized the individual will become. Thus the contribution of theorists in this respect surveyed in this review of literature serve as a point of reference for the study.

It must be reaffirmed that theories presented in this chapter are...
not mutually exclusive, and thus should be viewed as complimentary. No one theory provides the final or adequate explanation for career aspiration, but an integration of various concepts can provide a framework for comprehending this phenomenon.

**Related Research on the Career Aspirations of College Students**

Burton (1974) conducted a study of the career decisions and job values of seniors in the College of Business Administration of North Texas State University. The concern to which Burton addressed himself was the major source of employee dissatisfaction and turnover which lay in the incapacity of some jobs to satisfy the aspirations and job values of (certain types of) employees. Burton's construct was that the key to employment stability for college graduates is the relative compatibility between his job values and the capacity of the job to provide fulfillment for those aspirations.

The purpose of Burton's study was to investigate the relationships between grade-point averages, job values, and career decisions as perceived by the May 1973 graduating seniors of the College of Business Administration at North Texas State University, their professors and their employment recruiters. The students provided background data such as grade-point averages and job values. Their professors provided rankings of their job values. Those employers who had interviewed seniors through the Business Employment Services office during the spring semester of 1973 ranked the same job values and selected student characteristics in accordance with the emphasis placed upon them during recruitment.

The findings of the survey indicated that the students and
their professors reflect intrinsic job values. The recruiters reflect extrinsic job values. Positive correlations between college grade-point average and intrinsic job values were found. Significant correlations were found between college grades and job values, between college grades and selected student background factors, and between background factors and job values. Contrary to other findings, non-traditional career choice was not found to be related to career commitment.

Veres (1974) investigated the relationship between selected individual and family background factors and the educational and career plans of two-year college women. She predicted that the modelling effect of a working mother, the perceived support for career plans from others, perceived personality characteristics and school achievement would be important influences on women's career decision making. A questionnaire was administered to a random sample of graduating two-year college students in a comprehensive community college in central New York State. Both male (78) and female (109) students were included in the sample to allow for comparison and prevent response bias.

The results of the study indicated (1) that most of the women aspired to careers necessitating higher levels of preparation and education than that required by their mother's occupations, and (2) that two-year college women who expressed a greater degree of career commitment perceived themselves more self-confident but less emotional, less easily influenced and less excitable than women who anticipated a lower degree of future labor force participation. These women also perceived less support for their career plans from college counselors and teachers.

Veres reports that although the variables studied showed few
relationships with program and career choice, higher college and high school achievement was significantly related to selection of a less traditional career goal.

The study supported the notion that a dichotomy seems to exist between academia and the business world and between those factors predicting success in each. Consequently, recruiters utilize routine and ineffective selection devices, not allowing for the unique differences among college seniors and graduates, their value structures and career aspirations.

A recommendation made from the study was that much needs to be done in the areas of predicting the job values of a college senior and matching the individual graduate with that job which is most apt to provide a productive and meaningful career.

Hanley (1974) studied ninety-eight college senior women in an attempt to relate some achievement and femininity factors to career commitment and to one another. They were measured on seven predictor variables and the criterion variable, career commitment. Among the major hypotheses that were supported was the following: there was a significant positive relationship between career commitment and a sense of competence in work situations, achievement need, and perceived approval of significant males for career plans. Secondary hypotheses that were supported were predictions that identification with a feminine stereotype is significantly and negatively related to non-traditional career choice, achievement need, and approval of significant males; achievement need is significantly and positively related to non-traditional career choice and sense of competence. Achievement need also had a strong relationship with career commitment.
Hanley's study supports the findings that achievement need and approval of significant males were positively related to career commitment.

Hadsall (1977) tested and evaluated a comprehensive program of career awareness (Career Development Program) for fourth-year undergraduates at the Memorial University Counseling Center in Newfoundland. He analyzed the career awareness program to ascertain its effectiveness in preparing students for the job market. The program assumes that a highly developed career awareness and development program would help students towards a more meaningful integration of their academic program with their future goals. Three areas of development were highlighted in Hadsall's study: (1) assessment and development of the self; (2) exposure to career options and opportunities; (3) training in job search skills, including resume writing and interviewing.

Hadsall found that an increase in career awareness, a classification of career goals, and an increase of confidence in job search skills was demonstrated by students who took the Career Development Program.

Graves (1974) investigated the vocational maturity and college students' certainty and commitment to career choice by randomly selecting three hundred first-quarter sophomores and three hundred first-quarter seniors from the University of Northern Colorado and administering the Career Questionnaire and the Attitude Scale of the Career Maturity Inventory.

The research examined three areas: (1) the possibility of differences in the levels of vocational maturity of sophomores and juniors, (2) the possibility that vocational maturity might be a factor
causing repeated changes of major, and (3) determining if the level of certainty of vocational choice, as reflected by choice of college major, and the degree of commitment to completing the baccalaureate degree are a function of vocational maturity.

The results of the statistical analysis caused Graves to arrive at the following conclusions: (1) juniors are significantly more vocationally mature than sophomores; (2) sophomore males and females are quite similar in their vocational maturity, but junior females make significantly greater progress than junior males in this respect; (3) those sophomores making zero or only one change in their college major are significantly more vocationally mature than those making two or more changes in their major, so it may be concluded that vocational maturity may be a causative factor in frequent change of major by under class men. Other factors seem to be at work with juniors who make frequent changes of major as there was no significant differences in the vocational maturity of those making zero or one change and those making two or more changes in their major; (4) the greater the degree of certainty of vocational choice as represented by choice of college major, the higher the degree of vocational maturity--this appears to be true for both sophomores and juniors; and (5) the greater the degree of commitment to completing the baccalaureate degree the higher the degree of vocational maturity of sophomores and juniors.

Bessire (1965) reported a study designed to determine the extent to which the vocational training program at Shasta College, Redding, California has been responsive to the apparent occupational needs of its community and to certain expressed vocational interests of its students. Relevant documents and statements of purpose were
examined, procedures for curriculum development were explored, and
members of the college staff were interviewed to ascertain whether
community training needs and student interests had been of primary
concern in developing vocational technical curricula at Shasta College.

Over ninety selected labor leaders and employers in the
community were interviewed to assess whether the college's occupa­
tional training programs were based on existing training demands, and
to discover fields for which the demand for trained personnel was not
being satisfied. Another part of the study dealt with the exploration
of student interests by means of a questionnaire and by interviews
with high school counselors, principals and college counselors.
Bessire assumed that if students found and performed jobs directly
related to their education that their training had been based on
existing occupational needs. Thus a follow-up study was made of
former Shasta College vocational students who had completed training
during the three school years previous to the investigation.

The results of this study indicated that the occupational
needs of the community and the interests of the students were both
obvious concerns of the college. Established programs in the curric­
ula were based on job opportunities in the community. The follow-up
study showed that the majority of the former students had found
employment directly related to their training and were living within
the college service area. However, it was observed that despite the
concern with and provision for training needs and student interests,
some employers in large industries were found to be unfamiliar with
the college's training programs and curriculum development procedures
and did not insure a systematic knowledge of needs and interests.
Along with recommendations for new curricula, a principal recommenda­
tion was made to maintain a closer relationship with employers in the community.

Rouson (1972) examined the information St. Petersburg Junior College (SPJC) second year black students possessed about their voca­
tional preference. The study also functioned as a method of looking at the fulfillment of SPJC's educational objective to help students plan realistic vocational goals. He reviewed six areas of literature dealing with the general field of occupational choice and information. Related literature affirmed that adequacy of occupational choice is largely a function of knowledge about one's self and knowledge about various occupations. The greater and the more precise the information the individual has about each, the more reliable will be his choice to make appropriate career decisions. Students must possess essential information, for organization and synthesis of this information.

An instrument named the Expressed Vocational Preference Information Checklist (EVPIC) was administered to 157 students, 98 females and 59 males. Data from the study resulted in the following conclusion, among others, that at the .05 and .001 level of con­
fidence the mean scores of students on a scale of expected responses as measured by EVIPC were significantly independent of their expressed vocational preferences.

Hecklinger (1970) studied the relationship between the determination of vocational plans and satisfaction with the college environment at Trenton State College, New Jersey, using 356 junior class members for the sample. All juniors were at the end of their junior year. The purpose of the study was to determine whether the
presence or absence of decision regarding post-college plans, the presence or absence of assistance received in making these plans, the assessment of this assistance, and the relevance of course-work to post-college plans were related to the students satisfaction with his college environment.

It was hypothesized that students who had decided on post-college plans by the end of their junior year would score higher in satisfaction than those undecided. Similar higher satisfaction scores were predicted for students who had received assistance in making plans, who were satisfied with the assistance received, and who considered their course-work to be very relevant to their future plans.

The College Student Questionnaire (CSQ) Part II along with a supplementary questionnaire on post-college plans developed for the study were administered to the subjects. Four satisfaction scales; satisfaction with faculty, satisfaction with administration, satisfaction with major, and satisfaction with students, derived from responses to the CSQ served as dependent variables. Each hypothesis was tested for each of the four satisfaction scales. The results of the study revealed that students who stated they had received assistance in making vocational plans scored significantly higher on all four satisfaction scales than students who stated that they had received little or no assistance. Students who were classified as satisfied with assistance received higher scores on three of the four satisfaction scales, with "satisfaction with major" as the one exception. Students who considered their coursework to be very relevant to their future plans scored significantly higher on all of the
satisfaction scales with the exception of "satisfaction with students."

The hypotheses regarding decision were not confirmed. However, the results showed a clear tendency for the uncertain student to be less satisfied with the college environment, indicating a possible value in helping students make decisions about the future. This was further reinforced by the findings that students who had received assistance were satisfied with assistance, and considered coursework to be relevant to their future plans. These were significantly more satisfied with the environment. These results support traditional student personnel theory, which places a high value on vocational assistance.

Carroll (1970) studied college students values and occupational choice using 205 Whittier College students. Whittier College was chosen as representative of the average conservative, private, liberal arts college.

Value inquiry was implemented by three research instruments: an occupational preference inventory; an occupational status preference format; and occupational preferences and social status questionnaire. Carroll found that male students in the study preferred service-to-humanity related occupations that reflect interest in teaching people, developing information about people and the evaluation of people. They accorded high social status to such occupations as city manager, college professor, novelist and personnel manager because they view their own values in these occupations. Both male and female students rank highly technologically related occupations.

Clarke (1974) investigated the perceptions of the social status of careers by college students using 318 undergraduates.
The study sought (1) to assess how college students perceive careers for college graduates relative to social status, (2) to evaluate the applicability of occupational ego-centricism to students preparing to work in specific occupations, and (3) to report the occupational awareness of college students.

The results indicated that college students have similar perceptions of the status of careers. Only when specific occupations were analyzed within the student variables (college, class, grade-point average and sex) was it possible to detect differences in the perception of the status of careers. Occupational ego-centricism was found to exist among students preparing to work in specific occupations. Students training for occupations rated the careers they chose substantially higher than students in general. Two-fifths of the careers assessed in the survey were rated as being not familiar by more than 5 percent of the respondents.

Scott (1973) conducted a longitudinal study of change in vocational choice of 2,928 subjects drawn from a 1972 national sample of 62 two-year community junior colleges and vocational-technical institutions, representing thirty-three states. The purpose of the study was to test a major contention of Holland's theory of vocational choice regarding the frequency and direction of changes in vocational choices. A second purpose was to examine the utility of twenty-three independent variables for distinguishing between those who, over a period of eighteen months, did not make a change in their vocational choice and those who did make some change in their vocational choice.

Results showed a decrease in the proportions of vocational choice changes in three out of four independent samples examined.
Similar outcomes were derived in separate analyses for males and females. Overall, the findings provided limited support for Holland's theories regarding changes in vocational choice.

Nichols (1976) conducted a study designed to establish a career counseling process whereby career choices and career decisions could be used by the individual making the choice to locate possible places of employment. He developed a student-centered career-counseling workbook based on the 114 Worker Trait Groups in volume 2 of the Dictionary of Occupational Titles and the organizational headings of the yellow pages section of the telephone book. This he called the Yellow Pages of Careers which contains information and procedures needed for the student (1) to identify the Worker Trait Groups that are related to his or her interests; (2) to identify and select yellow pages headings for each Worker Trait Group; and (3) to use the yellow pages section of the telephone directory to locate potential employers.

College students (Spring quarter, 1976) enrolled in career planning classes at the Seattle Community College campuses were used to validate the career counseling workbook.

Nichols found that career counseling exercises in the Yellow Pages of Careers enabled participants to identify a greater number of possible places of employment than they demonstrated prior to completing the workbook exercises. Such research helps to expand the information for students on places of possible employment that relate definitely to their career interests.

Rosenberg (1977) investigated the effects occupational outlook information had on the career decision making of college students.
Fourteen variables were tested in the study. Four variables were presented as indicative of impact of outlook information on specific occupations. Three variables dealt with knowledge of career information. Two dealt with choice of major. Two others were concerned with realism of career choice. One variable each dealt with career certainty, short and long range goal and similarity of major to career choice.

Ninety-six college students randomly assigned to four treatment groups participated in the study. There were three experimental groups and one control group. The results showed (1) all three experimental treatments were significantly different from the control group in knowledge of information and choice of occupations with high or average prospects; (2) women were more realistic in career choices than men; and (3) career certainty showed no increase.

Donald (1977) investigated whether or not Academic and Career Orientation (ACO), a credit course in career decision making at the University of Wyoming, was effective in helping college students decide on an academic major and a career.

The study measured students' decision-making ability, specificity of academic and career choices, number of career-related information-seeking activities, maturity of career attitudes and knowledge about the career decision process.

Donald found that (1) the ACO was an effective way to help students in search for career information; (2) change in behavior was caused by the ACO and was important not only in and of itself but also in terms of its potential effects; (3) ACO may have been effective in helping students to be better decision makers, more specific in their
academic and career choices, more mature in their career attitudes and better able to make career plans, and (4) ACO was a successful method of helping undecided students.

Tillar (1978) investigated the concept that a systematic program of career exploration can improve career decidedness. He designed a program named the Career Exploration Program to facilitate two principal objectives of the career exploration process: (1) the understanding of personal needs and values which affect career decisions; and (2) the acquisition of meaningful career information from individuals in the world of work.

One hundred and sixty freshmen of the Roanoke College in Salem Virginia participated in the study. Tillar found that three groups that received treatments experienced greater decidedness. The fourth group which participated in a combination of components evidenced the greatest change in decidedness.

Summary

Studies such as Burton's and Hanley's provide direct relevance for the present study in terms of the choice of subjects, relationship of career choice to the world of work and career commitment. In addition to these, other reviewed studies contribute to other aspects related to this study such as curriculum and career choice, community needs, vocational information, career choice and satisfaction with college environment, values and occupational choice, perception of the social status of careers, consistency in the expression of vocational choice, counseling services, and the career aspirations of junior and community college students.
Related Research on Jamaican Students

Richards (1974) investigated the career aspirations of 425 secondary school students in Jamaica in relation to manpower needs, and arrived at the following conclusions:

1. The curricula of secondary schools in Jamaica are, in general, not consistent with the occupational needs of the majority of students and the manpower needs of the country.

2. Academic and technical high school students regard the school they attend and the courses they pursue as being consistent with their educational and occupational aspirations; however, there was a marked rejection on the part of vocational students of their school and the type of courses their school offers.

3. The majority of final-year students in secondary schools in Jamaica have plans to enter the labor market on their graduation. Despite this, only a relatively small proportion of these students acquire a marketable skill prior to the completion of their secondary education. Based on these findings, the conclusion was reached that the post graduation plans of the majority of secondary school students in Jamaica were not consistent with the education and training they received.

Jackson (1974) investigated the education and career aspirations and expectations of 567 selected Jamaica students. He found that two-thirds of the students indicated that they expected to achieve levels of education at or beyond the Bachelor's degree. More than half of the students expressed preferences of high-level occupations. Subjects also indicated both preferences and expectations to achieve high levels of education.
Jackson also found (1) a significant relationship between the student's educational aspirations and their occupational expectations, (2) a significant relationship between the occupational aspirations and the type of school in which they were enrolled, (3) a significant relationship between the students occupational expectations and the type of school in which they were enrolled. Students were sampled from grammar high schools, technical high schools, and vocational training centers.

Three other studies mentioned below pertained to educational aspirations and occupational preference.

Gardner (1972) investigated the educational and occupational aspirations of Jamaican high school students using a sample of 307 students from six rural and seven urban schools. She investigated the similarities and differences in the plans of sixth-form students on variables of sex, and geographical location.

The results of the study indicated aspiration on the part of the students for professional occupations, with no preference for such occupations as farming, sales, or laboring occupations.

Smith (1960) sought to determine the pattern of occupational preference of two junior adult age groups, the 15-24 and 25-39 age groups. He compared the occupational preference of rural adults with those of elementary school children to determine what relationship existed between career aspirations and employment prospects, and the changes of occupational preference which accompanied maturation.

The results showed major discrepancies between the aspirations of rural boys and the occupational prospects as adults.
Occupational choices between rural adults and children showed considerable differences. These differences indicated divergent aspirations and expectations on the part of both children and youth. Results revealed that the younger group of rural youth had occupational choices that were unrealistic; however a tendency for less unrealistic occupational decisions was observed among youth who were above age 24. Smith in his discussion of the findings emphasized irrelevancy of curriculum in preparing youth for occupational opportunities. He also chides the schools for not being able to provide appropriate occupational data for the students to make realistic choices.

Carnegie (1975) investigated the problem that Jamaica was not producing enough secondary school leavers with the skills needed to cope with the demands of an independent nation in this technological age. She sought to determine how relevant the secondary school system was to the needs of the country.

Carnegie discovered that: (1) the majority of the students aspired to further education and did not show preference for self-employment; (2) there was close relation between the students' most desired occupations and their choice of occupations in seven years time, but the occupations bore little correlation to the country's needs; (3) students seemed to regard secondary education as a means of moving into prestigious careers rather than of service to the country; (4) there was almost total absence of serious study in the fields of agriculture and industrial arts; and (5) there was need for better guidance programs and better linkage between the schools and the world of work.
She suggested that in the future schools would need to instill in their school leavers a greater sense of service to their country and dedication to its development. However, Carnegie also recommended that the school system would also need to provide the students with the tools for the job.

Summary

These studies represent a significant contribution to the understanding of the career aspirations and expectations of Jamaican high school, vocational and technical students. It is of interest to the present study to note that Richards (1974) found that curricula of secondary schools in Jamaica in general was neither consistent with the occupational needs of the majority of students nor the manpower needs of the country. It is also of interest to the present study that Jackson (1974) found that two-thirds of the students he studied indicated that they expected to achieve levels of education at or beyond the Bachelor's degree, and that more than half desired high level occupations as was in the case of Gardner's (1972) study.

Carnegie's study is also significant in that it points to three important aspects that this present research on college students investigates. It appears that high school leavers did not consider service to their country as primary. Secondly, job needs such as in the areas of agriculture and industry were not considered important enough to be pursued. Thirdly, guidance and linkage between schools and the world of work in the high school system was lacking.

With reference to the age group of the subjects investigated
in Smith's (1960) study of rural youth in Jamaica, although it seems odd that unrealistic occupational choices were found to exist among youth above the age of 24, yet it is conceivable that Smith's discovery regarding irrelevancy of the curriculum and lack of appropriate occupational information would result in this dilemma.

Jamaican Government Documents

The fourth and final section of this review of literature is a presentation of publications of various agencies and representatives of sectors of the Jamaican government deemed necessary for the enhancement of the study. Several documents have been gathered and are presented as follows:

1. The Educational Policy of Jamaica (1976), published by the Embassy of Jamaica in Washington D.C. is a paper which states the importance that the Jamaican government has placed on education and outlining the official policy of the government on education. Emphasis is placed on the development of human resources, curriculum, guidance services, expenditure and free places for Jamaican students at all levels of education.

2. The Education Thrust of the 70's (1973), forwarded by Glasspole, a past minister of Education, presents the strategies considered by the Ministry of Education for education and development, specifically pertaining to curriculum, teacher training, finances, facilities, and improvement of the academic levels of teachers.

3. Phillips (1969, 1975, 1977), special advisor in education for Jamaica, has presented the following papers:
   a) Educational Goals for Jamaica. This document
expresses the need for improvement, expansion and streamlining of the educational system in order to satisfy the national goals of Jamaica. Various steps are outlined with regards to basic primary education, secondary education, technical and vocational education, teacher training, post-secondary education and curriculum development.

b) The Future of Secondary Education in Jamaica. This document briefly reviews the effect of the colonial system on secondary education in Jamaica, the impact the World Bank Loan program will have, when complete, in alleviating the accommodation problem in secondary schools, the separate systems that operate on the secondary level and the entire program of re-constructing the system, with emphasis on relevant examinations and curriculum assessment. It closes with a perspective on the role of the technical schools in the new program of education.

c) New Strategies in Student Assessment. Phillips outlines the problem and purpose of examinations in the educational system of Jamaica and points to a need for change. In this document, he expresses the wisdom of a more rational and comprehensive system for assessing achievement. He presents the new evaluation pattern that will obtain generally. The various aspects dealt with are primary school assessment, replacement of the Common Entrance examination, grade nine assessment, secondary school assessment (involving the displacement of the Jamaica School Certificate and the replacement of the General Certificate of Education), a
phasing out timetable for action relating to the strategies assessment based on a six-year projection is presented for 1975-1981. Categories of achievement levels are also explained.

d) Memorandum--The New Secondary Education--with Particular Reference to the Grades 10-11 Program. This memorandum of February 1977, affirmed that the Ministry of Education has been exemplary in fostering educational growth that is right for Jamaica. The thrust of the document is an explanation of the concept of the new secondary education. Phillips points out that the new program is heavily technical and vocational in its orientation; a primary requirement of the Grades 10-11 program being that all students must do a vocational course. He also emphasizes that the development of a dynamic relationship with the world of work in a way that the educational system has never related in the past is another aim.

Shortcomings in various areas of planned development are reviewed in the document and recommendations for the future are outlined.


5. Directory of Educational Institutions 1975-1976 and 1976-1977 is a publication of the Ministry of Education in Jamaica which
presents by parish and levels of education the names, location, enrollment and ownership of schools in Jamaica. The directory also gives the capacity, daily organization and staffing for each school.

6. **Statistical Yearbook of Jamaica 1974** is an official statistical publication produced by the Information Section of the Central Planning and Development Division of the Department of Statistics.

The yearbook provides comprehensive and detailed information on: (1) the physiography, (2) history and government, (3) population, (4) health and sanitation, (5) prisons and social security, (6) education, (7) justice and crime, (8) transport and communication, (9) housing and construction, (10) labor and employment, (11) electricity and water supply, (12) agriculture, forestry and fishing, (13) mineral industry, (14) manufacture, (15) tourism, (16) external trade, (17) trade prices, (18) economic aggregates, (19) banking and credit, (20) central and local government expenditure of Jamaica.

7. **Ministry of Education Annual Report 1975-1976** is a report published by the Ministry of Education which presents a review annually of its organization and scope of its responsibility, finance, educational operations, qualitative developments, construction and maintenance, independent schools and statutory bodies.

8. **Economic and Social Survey of Jamaica 1976** is a government publication prepared by the National Planning Agency. This publication presents a detailed review of the economic activity in Jamaica, the economy (accounts, balance of payment, etc.), the performance of various sectors of government (agriculture, trade, tourism, etc.), and human development and welfare, under which category education falls.
9. **Labor Force Report--1976** is a publication of the Department of Statistics which outlines the state of the labor force, the employment situation, and the unemployment situation.

10. **Facts on Jamaica 1976** is published by the Agency for Public Information and provides general information about Jamaica such as its history, government, law, industry, culture and education.


   Eusse reports in his research the projections and expected rates of growth for each occupation for the next five years, 1977-1981. Indications of the sectors and sub-sectors of the economy demanding different categories of people are reported.

   A numerical summary of high level manpower needs are presented in tables for 1977 to 1981 for specific job categories and titles. This is a significant document for the present study.

12. **The New Secondary Graduates of 1976** is a 'first draft' report on the Vocational Tracer Study being conducted by the research section of the Ministry of Education in Jamaica. The study is designed to identify the job expectations of students of the New Secondary School and to trace the progress of these students six months after graduation to see how their expectations or choices are being fulfilled. The findings of this study will assist in assessing to what extent the New Secondary School is achieving the goal of preparing students for the world of work.

13. **The Five-Year Education Plan (1978-1983)** is a final draft
document prepared by the Planning Division of the Ministry of Education for presentation to the Parliament of Jamaica. The first section provides (1) the background for the five year (1978-1983) action plan of the Ministry of Education, (2) the long term objectives of the education system as determined by the social goals of the nation, and (3) a description of the present system and problems which the plan will address.

The second section states the rationale from which objectives are derived and presents strategies and activities necessary for specific areas of the educational process. Also included is a presentation of demographic and enrollment forecasts and the strategies for quantitative development of the education system.

Although The Five-Year Education Plan focuses on all levels of the educational structure, it does not deal with a comprehensive development of tertiary education.

Summary

Osipow (1973) reports that career education has taken or a significant programmatic development. The movement is partly as a result of extensive research based on various career development theoretical frameworks. The concept is that career development is designed to be a system-wide, kindergarten through college education that has vocational choice and development at its heart. "The rationale is to make education relevant to career life" (p. 306). The implementation of this rationale, in part, involves enhancing career and self-exploration, awareness and attitude development during childhood and adolescence, the shaping of decision making as well as
educational and career-related skills, training, and eventually job placement, all within the context of the curriculum.

Theorists such as Super and Ginzberg suggested that career aspirations are crystallized (thus bearing more meaning) during late adolescence to early adulthood. This is the age period of college students. For one to choose a career with an appreciable degree of certainty, the situation requires knowing much more about oneself and about possible occupations. This study will involve college seniors since it is expected that college seniors have learned enough about themselves and about vocations in order to make a satisfactory, definite, vocational choice. Berger (1967) states:

Students also change their vocational thinking as a result of the development of their interests and values. In general, social and aesthetic values and interests develop later in adolescence and it seems that the special stimulation of the college experience spurs their development. Not for all students but for many... We would expect most seniors in college to have matured enough so that their awareness of their abilities, limitations, interests and values have become stable enough to permit them to make a satisfying choice of an occupational field. Then the matter of how they want to work more specifically within the field can be worked out later as they get more training and experience. (p. 893)

Research conducted on college students in America and on high school students in Jamaica as well as the publications of the Ministry of Education and other government agencies of Jamaica referred to in this review will all together serve as enrichment to the present study.

The review supports the idea that the age and stage that the individual reaches when he or she is a senior in college provides for more realistic career decision and commitment. In addition to the student's stage of development, guidance counseling, career awareness
and enrichment programs seem advantageous to the sharpening of the student's career perspectives. It is within this framework that the present study is approached.
CHAPTER III

METHODOLOGY

Introduction

This chapter is an explanation of the methodology used in the study of the career aspirations of Jamaican college seniors. The methodology involved (1) the approach taken in conducting the study which was "ex-post facto" in nature; (2) the research design employed in the investigation of the dependent variable, that of career aspiration; (3) the selection of the population of college seniors and the sampling of 695 available subjects; (4) the development and pilot testing of the Career Aspiration Form (CAF) which was an instrument developed for this study; (5) the procedures for the execution of the study which involved obtaining permission from the Jamaican government and administering the CAF in selected colleges; and (6) the analysis of the data by means of computer programs.

Approach

Since the study involved not only the collection and description of data, but also the establishment of relationships between variables investigated, the "ex-post facto" causal comparative design was chosen as the most appropriate form of classification for this research.

According to Isaac and Michael (1976), the "ex-post facto" approach is suitable to both aspects of this study.
Causal comparative research is "ex-post facto" in nature, which means the data are collected after all the events of interest have occurred. The investigator then takes one or more effects (dependent variables) and examines the data by going back through time, seeking out causes, relationships and their meanings. (p. 22)

Isaac and Michael also agree with Van Dalen (1966) that the causal comparative method is appropriate in many circumstances where the more powerful experimental method is not possible. That is to say, the causal-comparative method is used where selecting, controlling, and manipulating factors necessary to study cause-and-effect relationships directly are not always possible.

Best (1977) states:

Descriptive research describes what is. It involves the description, recording, analysis and interpretation of conditions that now exist. It involves some type of comparison or contrast and may attempt to discover relationships that exist between existing nonmanipulated variables. (p. 15)

Sax (1968) justifies the use of the "ex-post facto" approach by defining it as a "cross between a descriptive and an experimental design" (p. 376).

The present study is both descriptive and experimental in that it seeks to (1) describe the career aspirations of Jamaican college seniors; and (2) determine relationship between and among those aspirations, the program they pursue and the manpower needs of Jamaica.

Research Design

Variables

One dependent variable was chosen for this study, namely, career aspirations. Students' career aspirations were determined by
their response to item 2 (which was an open-ended question) of the Career Aspiration Form (CAF) requesting them to indicate their specific career aspiration. This item was proceeded by item 1 which provided six controlled responses based on the classification of occupations determined by the Department of Statistics of Jamaica (The Labor Force 1976). In this item students were asked to indicate which occupational group they thought they would enter after completing their course of study.

The independent variables examined in this study to determine relationships to the dependent variable were type of school (i.e., independent and government owned) and the manpower needs of Jamaica as defined by the six occupational classifications of the government, namely:

1. Professional Technical and Related Occupations
2. Administrative, Executive and Managerial Occupations
3. Clerical and Sales Occupations
4. Self-employed and Independent Procedures
5. Sport and Recreation Occupations
6. Craftsmen, Production Process and Skilled Occupations.

Hypotheses

In order to determine differences of significance among the variables investigated, hypotheses were formulated into null statements of hypotheses to facilitate statistical testing.

1. There is no significant difference between the career aspirations of Jamaican college students and the total need for skilled personnel throughout all occupational groups in Jamaica.
IA. There is no significant difference between the proportion of career aspirations of Jamaican college students and the proportion of need for professional, technical, and related personnel.

IB. There is no significant difference between the proportion of career aspirations of Jamaican college students and the proportion of need for administrative, executive and managerial personnel.

IC. There is no significant difference between the proportion of career aspirations of Jamaican college students and the proportion of need for clerical and sales personnel.

ID. There is no significant difference between the proportion of career aspirations of Jamaican college students and the proportion of need for self-employed and independent procedures personnel.

IE. There is no significant difference between the proportion of career aspirations of Jamaican college students and the proportion of need for personnel in service, sport, and recreation occupations.

IF. There is no significant difference between the proportion of career aspirations of Jamaican college students and the proportion of need for craftsmen, production process, and operating occupations personnel.

2. There is no significant difference between the career aspirations of Jamaican college students attending independent schools and those attending government schools.

Selection of Subjects

Population

The population for this study consisted of all Jamaican college seniors who had completed secondary school up to the General
Certificate of Education level, were present on the day of testing, and were enrolled in (independent and government owned) colleges which offered two-, three-, or four-year courses of study.

The rationale for selecting college seniors was based on the theoretical concept that they have more realistic and decided career goals. Thus, career aspirations at this stage of educational development would be more firm with respect to entering the world of work (see pp. 36-38, 63).

Sample

A stratified random sampling technique was used with the aid of the computer random number selection procedure to select colleges geographically representative of the population including government and independent institutions. Geographical areas were identified as urban and rural. Government and independent colleges included teachers' colleges, community colleges, and business and commercial colleges. The College of Arts Science and Technology and the Jamaica School of Agriculture were included as the only colleges of their kind in their own individual category since they were government institutions specifically founded to aid in the supply of Jamaica's manpower needs. Each was grouped according to the type of college and geographical location, and a proportionate selection from each category was made. Colleges selected included two teachers' colleges, two special colleges as mentioned above (CAST & JSA), three community colleges, two business colleges, five commercial colleges, and one other that fell in a general category but was religiously oriented.

The list of colleges published in the 1976-77 School Directory
of the Ministry of Education in Jamaica was the source used for sampling. A total of fifteen colleges was chosen, eight independent and seven government, a list of which appears in table 3.

The total number of seniors in the colleges sampled was 790. The number available for testing was 695 (representing 88 percent of the population), which was a sufficient number to guarantee a high level of power for the statistical analysis. Power is the probability of rejecting the null hypothesis at the given criterion level when Ho is indeed false, which would produce a significant result (Welkowitz & Cohen 1976, pp. 192-93). Power is calculated based on (1) the significance criterion, (2) the sample size, and (3) the population effect size.

The significance criterion for this study was set at the .05 level, the sample size was 695, and the population effect size was .50. For a Chi-square goodness of fit study this effect size index, known as W, is a measure of the discrepancy between paired proportions (one given by the null hypothesis and the other by the alternate hypothesis) over the number of cells. For each cell, the difference between the two hypothetical proportions is squared and divided by the null specified proportion with the resulting values being added over the cells and the square root taken (Cohen 1977, p. 216).

Power for this study, therefore, was .99 which would give a 99 percent probability of finding statistical significance. The population effect size having been set at .50, this meant that there would be no practical significance for any result that would be smaller than .50 in terms of differences in the career aspirations of Jamaican college seniors and the manpower needs of Jamaica.
### TABLE 3

**List of Colleges According to Ownership and Geographical Area**

<table>
<thead>
<tr>
<th>Name</th>
<th>Ownership</th>
<th>Geographic Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Browns Town Community College</td>
<td>G</td>
<td>R</td>
</tr>
<tr>
<td>2 Calvary Baptist College</td>
<td>I</td>
<td>R</td>
</tr>
<tr>
<td>3 College of Arts Science and Technology (CAST)</td>
<td>G</td>
<td>U</td>
</tr>
<tr>
<td>4 Duffs Business College</td>
<td>I</td>
<td>U</td>
</tr>
<tr>
<td>5 Excelsior Community College</td>
<td>G</td>
<td>U</td>
</tr>
<tr>
<td>6 Fitz Henley Secretarial Inst.</td>
<td>I</td>
<td>R</td>
</tr>
<tr>
<td>7 Jamaica Commercial Inst. (KGN)</td>
<td>I</td>
<td>U</td>
</tr>
<tr>
<td>8 Jamaica Commercial Inst. (Montego Bay)</td>
<td>I</td>
<td>R</td>
</tr>
<tr>
<td>9 Jamaica School of Agriculture (JSA)</td>
<td>G</td>
<td>R</td>
</tr>
<tr>
<td>10 Jarretts Commercial</td>
<td>I</td>
<td>R</td>
</tr>
<tr>
<td>11 Manchester Business College</td>
<td>I</td>
<td>R</td>
</tr>
<tr>
<td>12 Mico Training College</td>
<td>G</td>
<td>U</td>
</tr>
<tr>
<td>13 Montego Bay Community College</td>
<td>G</td>
<td>R</td>
</tr>
<tr>
<td>14 Sam Sharpe Teacher Training College</td>
<td>G</td>
<td>R</td>
</tr>
<tr>
<td>15 West Indies Institute of Higher Education</td>
<td>I</td>
<td>U</td>
</tr>
</tbody>
</table>

**Note:** G—Government, I—Independent, R—Rural, U—Urban.
Instrumentation

Development

An instrument particularly designed for this study was developed which was called the Career Aspiration Form (CAF). Berdie and Anderson (1974) state that "each study using questionnaires is unique and must be tailored to fit the individual circumstances of that study" (p. 12).

The constructs used in formulating the items on the CAF were that of identifying the career aspirations of Jamaican college seniors, guidance and career experiences available to seniors, their plans for entry or re-entry into the labor market of Jamaica, and their perception of the relevance and value of the curriculum they were pursuing. A list of questions that the CAF was designed to answer appears in appendix 1.

It was thought best to use the word "form" in titling the questionnaire in that apprehensions on the part of respondents may have been lessened by the absence of such words as questionnaire, tests, instruments, or others. In developing the CAF a number of questionnaires were reviewed; however, questionnaires developed and used in previous research involving Jamaican secondary students conducted by Richards (1974) and Jackson (1974), served as more relevant resources.

The first draft of the CAF included thirty-six questions but after revision and tailoring, in consultation with research advisors, successive drafts eliminated redundant items until only fifteen items were maintained. These items were reviewed together with the variables

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being studied and the questions to be answered. It was then tenta­
tively approved for pilot-testing in order to gain further reaction
and comment from a set of twenty-two students who were considered
similar to the proposed respondents.

The items were arranged in a logical sequence to facilitate
key-punching and computerization with twelve controlled response
items and three open-ended questions.

The CAF carried one clear direction at the top requesting
respondents to place the number representing their response in the
box provided to the right of each item. This was so tailored that
respondents would not have to be bogged down with reading many
directions. Names or age were not requested on the CAF since such
identification of each respondent was unnecessary, and anonymity
would encourage participation. A limited number of questions was
also a goal. Berdie and Anderson (1974) state:

Far too many questionnaires ask these questions out
of habit when the data obtained will not be meaningfully
used... questionnaire items should be interesting to
the respondent, obviously relevant to the purpose of the
study, and limited to absolutely essential items.(pp. 60,
62)

Since the appearance and arrangement of a questionnaire is
vital to a successful study, the CAF was developed with the allowance
for much "white space." Levine and Gordon (1959) believe that "the
appearance of the questionnaire frequently determines whether it is
read or discarded" (p. 571). Berdie and Anderson (1974) state that
questionnaires with much "white space" are likely to achieve higher
response rates than questionnaires which have crowded pages (p. 62).
This completed the development of the instrument.
Pilot Test

The CAF was subjected to a pilot-run as a means of testing the instrument and obtaining students' reactions and comments to various items of the questionnaire.

Specifically, the pilot sought to determine whether or not (1) the items were clear, precise, and straightforward, thus making it easy to answer; (2) they were comprehensible to the students; (3) the form was attractive in appearance, lending to a desire to answer the items; (4) it was time consuming.

Students chosen for the pilot had to be as similar as possible to the students who would actually be tested in the study. Accordingly, twenty-two Jamaican college seniors (1977-78 school year) studying at Andrews University in Michigan, were chosen to be the subjects for the pre-test. These students were asked to give honest reactions and comments on the back of the form for improving the instrument, and to time themselves with no one being rushed. They were asked to react to the length of the form, to evaluate their ability to comprehend and answer the questions stating places where they experienced ambiguity. At the end of the pre-test, each student was asked to feel free to discuss the form.

At the conclusion of the pilot test students reported that: (1) the items were clear and easy to understand—although three students attested to possible ambiguity in three items; (2) the form was well spaced, attractive, and thus encouraged participation; (3) it was short and to the point. Suggestions were made regarding minor changes in terms of word choice and presenting additional options for responses to some items (see appendix 2).
The time factor was of much importance in the pilot test so discussions were held with the students regarding their personal opinions as to how disruptive to a daily college program the administration of the CAF would be when the final subjects were to be tested. All students agreed that it would be easy to administer the CAF without causing much disruption in the daily schedule of the colleges to be tested. They felt their experience with the pilot indicated that the CAF could be completed in an average of twelve minutes.

As a result of the feedback received from students participating in the pilot, adjustments were made to further improve the CAF. The final draft was made and was then considered ready for administration by the research advisors.

Field Procedures

Field procedures involved (1) obtaining permission and cooperation from the Ministry of Education in Jamaica in order to conduct the study; (2) obtaining permission from the principals of the colleges sampled for the administration of the CAF to their seniors; (3) the administration of the questionnaire to the seniors at each college; and (4) the data analysis.

Obtaining Permission and Cooperation from the Ministry of Education in Jamaica

A letter was written to the Chief Education Officer of the Jamaican Ministry of Education on March 3, 1978, informing him of the proposed study and requesting cooperation and permission for conducting it. A copy of the research proposal was also sent under separate cover at the same time. Six weeks following the first letter,
another was sent to the Permanent Secretary of the Ministry of Education (with a copy to the Minister of Education) citing requests made in the letter to the Chief Education Officer.

Having received no reply, a number of other letters were written to the above-mentioned personnel as well as other officials of the Ministry, including the Tertiary Education Unit directors (see appendix 3). As a result, permission was finally granted and cooperation assured on June 8, 1978.

Obtaining Permission and Cooperation of Principals of the Colleges Sampled

Upon receipt of subsequent letters from various departments of the Ministry assuring access to the government institutions involved, letters seeking cooperation were sent to the colleges sampled (see appendix 4).

Favorable responses were immediately received from some colleges. Others were slow to respond and some did not respond at all. However, as a result of personal visits and telephone calls to those non-responding institutions, permission and cooperation were received (except as explained below). College personnel in these particular instances expressed apologies for not responding due to pressure of work. One college had ceased functioning since 1974 (see appendix 5), information regarding which was received from a clergyman under whose denominational auspices the school had functioned. Another had closed out its college department because of financial difficulty, which was the reason for no response to the letter sent. Three other colleges responded to the effect that their students were still at the secondary level, even though their names
indicated an institution of higher education (see appendix 5).

Collection of Data

All colleges were visited and/or telephoned in order to arrange dates and times for the collection of the data. The final step was the actual administration of the instrument (CAF). It was personally administered in most cases, and in such instances where it was considered more convenient to the college administration for their personnel to administer the CAF, directions and procedures were explained to the person designated. All data were collected by the researcher except in one case where the data had to be mailed.

A total of 695 seniors were tested representing 88 percent of all the seniors who made up the population (see table 4). Some seniors were not available because of absences of various sorts on the day the tests were administered. Subjects were assembled in one place and given the explanations necessary. Questions raised by the respondents were answered for the benefit of all at the same time. The time limits which had been mentioned to college principals with respect to the completion of the CAF proved adequate for its administration. Generally administrators and respondents characterized the CAF as clear, to the point, relevant, short, and easy to understand and complete.

Data Analysis

The CAF had been developed to facilitate key punching by the computer for twelve items of the questionnaire. The number of the chosen response of the respondents were placed in a box provided
### TABLE 4

**NUMBER OF SENIORS IN THE POPULATION BY COLLEGE WITH NUMBER TESTED**

<table>
<thead>
<tr>
<th>College</th>
<th>No. of Seniors</th>
<th>No. Tested</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Browns Town Community College</td>
<td>60</td>
<td>47</td>
<td>78</td>
</tr>
<tr>
<td>Calvary Baptist</td>
<td>3</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>College of Arts, Sciences and Technology</td>
<td>171</td>
<td>144</td>
<td>85</td>
</tr>
<tr>
<td>Duffs Business College</td>
<td>52</td>
<td>47</td>
<td>90</td>
</tr>
<tr>
<td>Excelsior Community College</td>
<td>60</td>
<td>51</td>
<td>85</td>
</tr>
<tr>
<td>Fitz-Henleys Secretarial Institute</td>
<td>17</td>
<td>17</td>
<td>100</td>
</tr>
<tr>
<td>Jamaica Commercial Institute, Kingston</td>
<td>43</td>
<td>43</td>
<td>100</td>
</tr>
<tr>
<td>Jamaica Comm. Institute, Mo-Bay</td>
<td>12</td>
<td>12</td>
<td>100</td>
</tr>
<tr>
<td>Jamaica School of Agriculture</td>
<td>90</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td>Jarretts Commercial</td>
<td>6</td>
<td>6</td>
<td>100</td>
</tr>
<tr>
<td>Manchester Business College</td>
<td>20</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>Mico Training College</td>
<td>110</td>
<td>80</td>
<td>73</td>
</tr>
<tr>
<td>Montego Bay Community College</td>
<td>57</td>
<td>51</td>
<td>90</td>
</tr>
<tr>
<td>Sam Sharpe Teachers College</td>
<td>59</td>
<td>55</td>
<td>93</td>
</tr>
<tr>
<td>West Indies Institute of Higher Education</td>
<td></td>
<td>30</td>
<td>29</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>790</strong></td>
<td><strong>695</strong></td>
<td><strong>88</strong></td>
</tr>
</tbody>
</table>
beside each of these twelve items. The remaining three items were open-ended questions, two of which were coded for key punching. In the case of item two, one of the open-ended questions, coding was done according to the occupational categories of Jamaica as listed in item one. In the case of item fifteen, another of the open-ended questions, coding was done according to the stated occupational needs of Jamaica. Open-ended responses for item fourteen were tabulated, the results of which appear in chapter 4.

The coded responses were tabulated on computer cards for statistical computation. The CAP itself carried a six-digit coding system which identified (1) the school from which the data were collected, (2) the type-owned school (government or independent), and (3) the number of the respondent.

Data describing item responses to the CAP which were not statistically tested but were questions to be answered by the research were presented in tabulated form.

The Chi-square ($\chi^2$) Test for Two Independent Samples was used to test the hypotheses 1 and 2. The strength of the differences was determined by converting the chi-square statistic for each hypothesis to Phi ($\phi$) coefficient, the Cramer's Phi was used (where tables were more than 2 x 2) because it is a superior index to C (coefficient) always varying between 0 and 1. The Chi-square test was chosen because the research data were nominal, consisting of frequencies in discrete categories and significant differences were being determined. Siegel (1956) states:

When frequencies in discrete categories (either nominal or ordinal) constitute the data of research, the $\chi^2$ test may be used to determine differences among $K$ independent
groups. The $\chi^2$ test for $K$ independent samples is a straightforward extension of the $\chi^2$ test for two independent samples. . . . In general the test is the same for both two and $K$ independent samples. (p. 175)

The statistical analysis for the standard error of a proportion was used to test hypotheses $1A-1F$. This analysis yields $Z$ scores. Values obtained were tested for significance at the 95 percent confidence interval (.05) where the critical value of $Z = 1.96$ (two-tailed). Any value observed greater than $\pm 1.96$ would be significant at the .05 level.

The .05 level of probability was assigned as the region of rejection for all hypotheses.

Summary

This chapter has presented the methodology used to discover the career aspirations of Jamaican college seniors through the use of the Career Aspiration Form (CAF). The approach taken in conducting the study, the research design employed, the selection of the population and sample, the development and pilot testing of the instrument, the procedures, and the data analysis were explained.
CHAPTER IV

RESULTS

Introduction

This chapter presents the results yielded by the data obtained in identifying the career aspirations of Jamaican college seniors. The Career Aspiration Form was administered to all the available seniors of the colleges sampled. This represented a total of 695 seniors tested from a population of 790.

The data were analyzed (1) utilizing Futcher's (1974) Chi-Square Goodness of Fit (see table 5) and Futcher's (1975) Chi-square Contingency computer programs for hypotheses 1 and 2 respectively;

<table>
<thead>
<tr>
<th>Occupational Groups</th>
<th>0_1</th>
<th>0_2</th>
<th>0_3</th>
<th>0_4</th>
<th>0_5</th>
<th>0_6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students Asp.</td>
<td>448</td>
<td>58</td>
<td>120</td>
<td>11</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Jamaica's Needs</td>
<td>268</td>
<td>25</td>
<td>189</td>
<td>34</td>
<td>28</td>
<td>106</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 314.95 \text{ with 5 degrees of freedom} \]
\[ \alpha = .05 \]
Decision to reject \( H_0 \)

81
(2) applying the statistical test for finding the Standard Error of a Proportion which generated Z values for hypotheses 1A-1F. Results yielded by data analysis for hypotheses 1 and 2 are presented statistically, whereas results yielded by data analysis for hypotheses 1A-1F are presented both statistically and descriptively (see table 6).

Prior to the analysis of the data, the region of rejection for the null hypotheses was set at the .05 level of significance. This meant that all values of $x^2$ obtained, which are so large that the probability associated with their occurrence under the null hypotheses equal to or greater than $\alpha = .05$, would result in the rejection of the null hypotheses. The population effect size was set at .50, and since the amount tested was 695, with a significance criterion of .05, power for the study was approximately .99 (Cohen, table 7.3.19, p. 237).

In order to determine any possible change in the findings of this study due to the absence of 95 students at the time the data were gathered, the statistical analysis totals were altered to reflect the proportionate additions of those 95 students in hypothesis 1 and sub-hypotheses 1A-1F.

These altered data revealed that the significance of the findings of the study were not changed (the $x^2$ value yielded being 273.86), even with the added data distributed over all occupational categories. The data yielded a Phi of .58 and so practical significance was maintained (see appendix 6). This enabled generalizing the findings of the study to the entire population.

The results of testing the data for the strength of the differences occurring for hypotheses 1 and 2 are presented in this.
<table>
<thead>
<tr>
<th>Hypo No.</th>
<th>Hypo Designation</th>
<th>$\chi^2$ Value</th>
<th>Phi $\phi$</th>
<th>Level of Conf.</th>
<th>Decision</th>
<th>Probability</th>
<th>Z Value Higher/Lower</th>
<th>% of Need</th>
<th>Effect Size</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Career Asp. &amp; Total Manpower Needs</td>
<td>314.95 $\triangle$</td>
<td>.70</td>
<td>$\alpha = .05$</td>
<td>Reject</td>
<td>&lt;.0005</td>
<td>W = .50</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1A</td>
<td>Occ. Group I Asp. &amp; Manpower Needs</td>
<td>231.60 $\triangle$</td>
<td>.65</td>
<td>$\alpha = .05$</td>
<td>Reject</td>
<td>&lt;.0005</td>
<td>W = .50</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1B</td>
<td>Occ. Group II Asp. &amp; Manpower Needs</td>
<td>168.00 $\triangle$</td>
<td>.50</td>
<td>$\alpha = .05$</td>
<td>Reject</td>
<td>&lt;.0005</td>
<td>W = .50</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1C</td>
<td>Occ. Group III Asp. &amp; Manpower Needs</td>
<td>110.60 $\triangle$</td>
<td>.30</td>
<td>$\alpha = .05$</td>
<td>Reject</td>
<td>&lt;.0005</td>
<td>W = .50</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1D</td>
<td>Occ. Group IV Asp. &amp; Manpower Needs</td>
<td>68.00 $\triangle$</td>
<td>.20</td>
<td>$\alpha = .05$</td>
<td>Reject</td>
<td>&lt;.0005</td>
<td>W = .50</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1E</td>
<td>Occ. Group V Asp. &amp; Manpower Needs</td>
<td>31.00 $\triangle$</td>
<td>.10</td>
<td>$\alpha = .05$</td>
<td>Reject</td>
<td>&lt;.0005</td>
<td>W = .50</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1F</td>
<td>Occ. Group VI Asp. &amp; Manpower Needs</td>
<td>14.00 $\triangle$</td>
<td>.05</td>
<td>$\alpha = .05$</td>
<td>Reject</td>
<td>&lt;.0005</td>
<td>W = .50</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Ind. &amp; Govt. Students Asp. &amp; Manpower Needs</td>
<td>223.19 $\triangle$</td>
<td>.57</td>
<td>$\alpha = .05$</td>
<td>Reject</td>
<td>&lt;.0005</td>
<td>W = .50</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*$\alpha = .05$, critical values of $Z = \pm 1.96$

$\triangle$ Degrees of freedom = 5.
chapter. The Cramers Phi $\phi$ was used to determine the strength of the difference. Table 6 summarizes results yielded by the data, followed by tabulated data for questionnaire items mentioned in chapter 3.

**Hypotheses**

**Hypothesis 1:** Career Aspirations and the total need for personnel throughout all Occupational Groups.

Analysis of data for hypothesis 1, the major hypothesis, which sought to determine whether or not a significant difference exists between the career aspirations of Jamaican college students and the total need for personnel throughout all occupational groups in Jamaica, resulted in a $\chi^2$ value of 314.95; the $\chi^2$ probability being <.0005 (see table 5, Hypothesis 1). Since the region of rejection for this test statistic was set at the .05 level of significance, the null hypothesis is rejected. The Cramer's Phi $\phi$ was applied as a test for indicating the strength of the difference, which resulted in a Phi of .70.

The conclusion is made that there is a significant difference between the career aspirations of Jamaican college students and the total need for skilled personnel throughout all occupational groups in Jamaica.

**Hypothesis 1A:** Career Aspirations and Occupational Group No. 1.

The data for hypothesis 1A, which sought to determine whether or not a significant difference exists between the proportion of career aspirations of Jamaican college students and the proportion of need for Professional Technical and Related Personnel (Occupational Group No. 1) in Jamaica, yielded a Z value of 13.5. This value is
larger than the critical value of \( Z = \pm 1.96 \), therefore the null hypothesis is rejected at the .05 level of significance.

The conclusion is made that there is a significant difference between the proportion of the career aspirations of Jamaican college students and the proportion of need for Professional Technical and Related Personnel (Occupational Group No. 1) in Jamaica.

The data also revealed an observed frequency of 448 and an expected frequency of 268. This indicates that students' career aspirations are 40.2 percent higher than the expected needs of Jamaica in this occupational group.

**Hypothesis 1B: Career Aspirations and Occupational Group No. 2.**

The data for hypothesis 1B, which sought to determine whether or not a significant difference exists between the proportion of career aspirations of Jamaican college students and the proportion of need for administrative, executive, and managerial personnel (Occupational Group No. 2) in Jamaica, yielded a \( Z \) value of 6. This value is larger than the critical value of \( Z = \pm 1.96 \), therefore the null hypothesis is rejected at the .05 level of significance.

The conclusion is made that there is a significant difference between the proportion of the career aspirations of Jamaican college students and the proportion of need for administrative, executive, and managerial personnel (Occupational Group No. 2) in Jamaica.

The data also revealed an observed frequency of 58 and an expected frequency of 25. This indicates that students' career aspirations are 56.9 percent higher than the expected needs of Jamaica in this occupational group.
Hypothesis 1C: Career Aspiration and Occupational Group No. 3.

The data for hypothesis 1C, which sought to determine whether or not a significant difference exists between the proportion of career aspirations of Jamaican college students and the proportion of need for clerical and sales personnel (Occupational Group No. 3) in Jamaica, yielded a Z value of -5.5. This value is larger than the critical value of $Z = -1.96$, therefore the null hypothesis is rejected at the .05 level of significance.

The conclusion is made that there is a significant difference between the proportion of the career aspirations of Jamaican college students and the proportion of need for clerical and sales personnel (Occupational Group No. 3) in Jamaica.

The data also revealed an observed frequency of 120 and an expected frequency of 189. This indicates that the students' career aspirations are 36.5 percent lower than the expected needs of Jamaica in this occupational group.

Hypothesis 1D: Career Aspirations and Occupational Group No. 4.

The data for hypothesis 1D, which sought to determine whether or not a significant difference exists between the proportion of career aspirations of Jamaican college students and the proportion of need for self-employed and independent procedures personnel (Occupational Group No. 4) in Jamaica, yielded a Z value of -3. This value is larger than the critical value of $Z = -1.96$, therefore the null hypothesis is rejected at the .05 level of significance.

The conclusion is made that there is a significant difference between the proportion of the career aspirations of Jamaican college
students and the proportion of need for self-employed and independent procedures personnel (Occupational Group No. 4) in Jamaica.

The data also revealed an observed frequency of 11 and an expected frequency of 34. This indicates that the students' career aspirations are 67.6 percent lower than the expected needs of Jamaica in this occupational group.

Hypothesis 1E: Career Aspirations and Occupational Group No. 5.

The data for hypothesis 1E, which sought to determine whether or not a significant difference exists between the proportion of career aspirations of Jamaican college students and the proportion of need for service sport and recreational personnel (Occupational Group No. 5) in Jamaica, yielded a Z value of -3. This value is larger than the critical value of $Z = -1.96$, therefore the null hypothesis is rejected at the .05 level of significance.

The conclusion is made that there is a significant difference between the proportion of the career aspirations of Jamaican college students and the proportion of need for service sport and recreation personnel (Occupational Group No. 5) in Jamaica.

The data also revealed an observed frequency of 6 and an expected frequency of 28. This indicates that the students' career aspirations are 78.6 percent lower than the expected needs of Jamaica in this occupational group.

Hypothesis 1F: Career Aspirations and Occupational Group No. 6.

The data for hypothesis 1F which sought to determine whether or not a significant difference exists between the proportion of career aspirations of Jamaican college students and the proportion of need for craftsmen production process and operating occupations
personnel (Occupational Group No. 6) in Jamaica, yielded a Z value of -8. This value is larger than the critical value of \( Z = -1.96 \), therefore the null hypothesis is rejected at the .05 level of significance.

The conclusion is made that there is a significant difference between the proportion of the career aspirations of Jamaican college students and the proportion of need for craftsmen production process and operating operations personnel (Occupational Group No. 6) in Jamaica.

The data also revealed an observed frequency of 7 and an expected frequency of 106. This indicates that the students career aspirations are 93.4 percent lower than the expected needs of Jamaica in this occupational group.

**Hypothesis 2: Career Aspirations and Students Attending Government and Independent Institutions.**

Analysis of data for hypothesis 2 which sought to determine whether or not any significant difference exists between the career aspirations of Jamaican college students attending government colleges and those attending independent colleges resulted in a \( \chi^2 \) value of 223.19; the \( \chi^2 \) probability being \(< .0005\). Since the region of rejection for this test statistic was set at the .05 level of significance, the null hypothesis is rejected. The Cramers Phi \( \phi \) was applied as a test for indicating the strength of the difference and resulted in a \( \phi \) of .57 (see tables 7).

Since the population effect size was set at .50 as an index of practical significance and since the Cramers \( \phi \) yielded .57 for this hypothesis, the results obtained attained not only statistical significance, but also practical significance.
### Table 7

**Observed and Expected Frequencies for Students' Career Aspirations**

<table>
<thead>
<tr>
<th>Career Aspirations of:</th>
<th>Occupational Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0₁</td>
</tr>
<tr>
<td>Independent</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>120.6</td>
</tr>
<tr>
<td>Government</td>
<td>393</td>
</tr>
<tr>
<td></td>
<td>327.4</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 223.19 \text{ with 5 degrees of freedom} \]

\[ \alpha = 0.05 \]

Decision to reject \( H_0 \)
The conclusion is made that there is a significant difference between the career aspirations of Jamaican college students attending government schools and those attending independent schools.

The results of the data obtained from responses to each of the items of the CAF (except for item 2 which provided the data for the analysis results that appears above) will now be presented in tabulated form. These results will appear in the same order as the items on the CAF.

To facilitate interpretation of the data each table will be introduced by item number with an indication of the constructs operative in each. Each table will provide the raw score for each response possible along with the corresponding percentage it represents in the sample.

For example, table 8 should read: for Occupational Group No. 1, Professional Technical and Related, 412 college seniors state that they will enter this category immediately after completing college, which represents 59.3 percent of the sample. In the event that some students did not respond to some items, the number and percentage will appear at the bottom of the table together with the totals.

Item 1 of the Career Aspiration Form (CAF) sought to determine what occupational group students thought they would enter (taking into consideration their career aspirations and their present program of study) immediately after completing their present course in college. Responses to this item appear in table 8.
TABLE 8
OCCUPATIONAL GROUP ANTICIPATED FOR ENTRY AFTER COMPLETING COLLEGE

<table>
<thead>
<tr>
<th>Possible Response</th>
<th>No. of Students</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prof. Tech. and Rel.</td>
<td>412</td>
<td>59.3</td>
</tr>
<tr>
<td>2. Admin. Exec. and Man.</td>
<td>143</td>
<td>20.6</td>
</tr>
<tr>
<td>3. Clerical and Sales</td>
<td>55</td>
<td>7.9</td>
</tr>
<tr>
<td>4. Self Employed and Ind. Proc.</td>
<td>35</td>
<td>5.0</td>
</tr>
<tr>
<td>5. Service Sport and Rec.</td>
<td>21</td>
<td>3.0</td>
</tr>
<tr>
<td>6. Craftsmen, Production Process, Operating Occup.</td>
<td>20</td>
<td>2.9</td>
</tr>
<tr>
<td>Total</td>
<td>686</td>
<td>98.7</td>
</tr>
<tr>
<td>No Response</td>
<td>9</td>
<td>1.3</td>
</tr>
<tr>
<td>Total</td>
<td>695</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Item 3 sought to determine students' perception of the relevance and value of the curriculum they presently pursue to their career aspirations. Responses to this item appear in table 9.

TABLE 9
STUDENTS' PERCEPTION OF CAREER HELP FROM COLLEGE CURRICULUM

<table>
<thead>
<tr>
<th>Possible Response</th>
<th>No. of Students</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No help</td>
<td>10</td>
<td>1.4</td>
</tr>
<tr>
<td>2. Little help</td>
<td>40</td>
<td>5.8</td>
</tr>
<tr>
<td>3. Some help</td>
<td>186</td>
<td>26.8</td>
</tr>
<tr>
<td>4. Considerable help</td>
<td>452</td>
<td>65.0</td>
</tr>
<tr>
<td>Total</td>
<td>688</td>
<td>99.0</td>
</tr>
<tr>
<td>No Response</td>
<td>7</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>695</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Item 4 sought to determine what influence Jamaica's manpower needs had on the formulation of students' career aspirations. Responses to this item appear in table 10.

TABLE 10
INFLUENCE OF JAMAICA'S MANPOWER NEEDS ON STUDENTS' CAREER ASPIRATIONS

<table>
<thead>
<tr>
<th>Possible Response</th>
<th>No. of Students</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No influence</td>
<td>81</td>
<td>11.6</td>
</tr>
<tr>
<td>2. Little influence</td>
<td>110</td>
<td>15.8</td>
</tr>
<tr>
<td>3. Some influence</td>
<td>266</td>
<td>38.2</td>
</tr>
<tr>
<td>4. Considerable influence</td>
<td>221</td>
<td>31.8</td>
</tr>
<tr>
<td>Total</td>
<td>678</td>
<td>97.4</td>
</tr>
<tr>
<td>No Response</td>
<td>17</td>
<td>2.6</td>
</tr>
<tr>
<td>Total</td>
<td>695</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Item 5 sought to determine what time (in relation to the completion of their present course of study) students plan to enter or re-enter the labor force. Responses to this item appear in table 11.

TABLE 11
STUDENTS' TIME OF ENTRY INTO THE LABOR FORCE

<table>
<thead>
<tr>
<th>Possible Responses</th>
<th>No. of Students</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. After completing present college course</td>
<td>431</td>
<td>62.0</td>
</tr>
<tr>
<td>2. After completing a Bachelor's degree</td>
<td>130</td>
<td>18.7</td>
</tr>
<tr>
<td>3. After completing a Master's degree</td>
<td>73</td>
<td>10.5</td>
</tr>
<tr>
<td>4. After completing a Doctorate degree</td>
<td>41</td>
<td>5.9</td>
</tr>
<tr>
<td>6. Not planning on entering or re-entering the labor force</td>
<td>10</td>
<td>1.4</td>
</tr>
<tr>
<td>Total</td>
<td>685</td>
<td>98.5</td>
</tr>
<tr>
<td>No Response</td>
<td>10</td>
<td>1.5</td>
</tr>
<tr>
<td>Total</td>
<td>695</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Item 6 sought to determine the percentage of students who plan to work in Jamaica. Responses to this item appear in table 12.

**TABLE 12**

STUDENTS' DESIRED PLACE OF ENTRY INTO THE LABOR FORCE

<table>
<thead>
<tr>
<th>Possible Response</th>
<th>No. of Students</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Jamaica</td>
<td>580</td>
<td>83.5</td>
</tr>
<tr>
<td>2. Abroad</td>
<td>84</td>
<td>12.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>664</strong></td>
<td><strong>95.5</strong></td>
</tr>
<tr>
<td><strong>No Response</strong></td>
<td><strong>31</strong></td>
<td><strong>4.5</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>695</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Item 7 sought to determine the length of time students plan to work after graduating from college before continuing studies. Responses to this item appear in table 13.

**TABLE 13**

STUDENTS' WORK TIME BETWEEN GRADUATION AND FURTHER STUDY

<table>
<thead>
<tr>
<th>Possible Response</th>
<th>No. of Students</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Less than one year</td>
<td>59</td>
<td>8.5</td>
</tr>
<tr>
<td>2. One to two years</td>
<td>245</td>
<td>35.3</td>
</tr>
<tr>
<td>3. Three to four years</td>
<td>77</td>
<td>11.0</td>
</tr>
<tr>
<td>4. Five to six years</td>
<td>9</td>
<td>1.3</td>
</tr>
<tr>
<td>5. More than six years</td>
<td>15</td>
<td>2.1</td>
</tr>
<tr>
<td>6. Plan to work while continuing studies</td>
<td>201</td>
<td>29.0</td>
</tr>
<tr>
<td>7. Do not plan to work</td>
<td>74</td>
<td>10.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>680</strong></td>
<td><strong>97.8</strong></td>
</tr>
<tr>
<td><strong>No Response</strong></td>
<td><strong>15</strong></td>
<td><strong>2.2</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>695</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

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Item 8 sought to determine the organizations in which students desired to work upon entry into the labor force. Responses to this item appear in table 14.

TABLE 14
ORGANIZATION IN WHICH STUDENTS DESIRE TO WORK

<table>
<thead>
<tr>
<th>Possible Response</th>
<th>No. of Students</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Government</td>
<td>245</td>
<td>35.3</td>
</tr>
<tr>
<td>2. Non-Government</td>
<td>120</td>
<td>17.3</td>
</tr>
<tr>
<td>3. Both Government and non Government</td>
<td>317</td>
<td>45.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>682</strong></td>
<td><strong>98.2</strong></td>
</tr>
<tr>
<td><strong>No Response</strong></td>
<td><strong>13</strong></td>
<td><strong>1.8</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>695</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Item 9 sought to determine if students had made use of the services of a guidance counselor at their college. Responses to this item appear in table 15.

TABLE 15
STUDENTS' USE OF GUIDANCE COUNSELOR

<table>
<thead>
<tr>
<th>Possible Response</th>
<th>No. of Students</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Yes</td>
<td>142</td>
<td>20.4</td>
</tr>
<tr>
<td>2. No</td>
<td>231</td>
<td>33.2</td>
</tr>
<tr>
<td>3. No Counselor available</td>
<td>304</td>
<td>43.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>677</strong></td>
<td><strong>97.3</strong></td>
</tr>
<tr>
<td><strong>No Response</strong></td>
<td><strong>18</strong></td>
<td><strong>2.7</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>695</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

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Item 10 sought to determine if students had made use of career education services at their college. Responses to this item appear in table 16.

**TABLE 16**

**STUDENTS' USE OF CAREER EDUCATION SERVICES**

<table>
<thead>
<tr>
<th>Possible Response</th>
<th>No. of Students</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Yes</td>
<td>184</td>
<td>26.5</td>
</tr>
<tr>
<td>2. No</td>
<td>113</td>
<td>16.3</td>
</tr>
<tr>
<td>3. Service not available</td>
<td>363</td>
<td>52.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>660</strong></td>
<td><strong>95.0</strong></td>
</tr>
<tr>
<td><strong>No Response</strong></td>
<td><strong>35</strong></td>
<td><strong>5.0</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>695</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Item 11 sought to determine which college personnel had discussed career plans with students during their college years. Responses to this item appear in table 17 (more than one response was acceptable).

**TABLE 17**

**COLLEGE PERSONNEL DISCUSSION OF CAREER PLANS WITH STUDENTS**

<table>
<thead>
<tr>
<th>Possible Response</th>
<th>No. of Responses</th>
<th>Percentage of Sample</th>
<th>No. of &quot;No Responses&quot;</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-1 Guidance Coun.</td>
<td>93</td>
<td>13.9</td>
<td>602</td>
<td>86.1</td>
</tr>
<tr>
<td>11-2 Teacher</td>
<td>348</td>
<td>50.0</td>
<td>347</td>
<td>49.9</td>
</tr>
<tr>
<td>11-3 Academic Dean</td>
<td>34</td>
<td>4.9</td>
<td>661</td>
<td>95.1</td>
</tr>
<tr>
<td>11-4 Dept Chairman</td>
<td>75</td>
<td>10.8</td>
<td>620</td>
<td>89.2</td>
</tr>
<tr>
<td>11-5 Dean of Student Affairs</td>
<td>22</td>
<td>3.2</td>
<td>673</td>
<td>96.8</td>
</tr>
<tr>
<td>11-6 Dormitory Dean</td>
<td>3</td>
<td>0.4</td>
<td>692</td>
<td>99.6</td>
</tr>
<tr>
<td>11-7 Other</td>
<td>145</td>
<td>20.9</td>
<td>550</td>
<td>79.1</td>
</tr>
</tbody>
</table>

**NOTE:** The nature of this item requires that it be interpreted differently from the proceeding tables (as well as those to follow). It should read for example, for Guidance Counselor (11-1) 93 responses were derived representing 13.9 percent of the sample with 602 "No-response" presenting 86.1 percent of the sample.
Item 12 sought to determine how students rate the information they received in college concerning various types of occupations in Jamaica in terms of job descriptions. Responses to this item appear in table 18.

### TABLE 18

**STUDENTS' RATING OF JAMAICAN OCCUPATIONAL INFORMATION RECEIVED IN COLLEGE**

<table>
<thead>
<tr>
<th>Possible Response</th>
<th>No. of Students</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Good</td>
<td>136</td>
<td>19.6</td>
</tr>
<tr>
<td>2. Adequate</td>
<td>212</td>
<td>30.5</td>
</tr>
<tr>
<td>3. Poor</td>
<td>146</td>
<td>21.0</td>
</tr>
<tr>
<td>4. Information not received</td>
<td>182</td>
<td>26.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>676</strong></td>
<td><strong>97.3</strong></td>
</tr>
<tr>
<td><strong>No Response</strong></td>
<td><strong>19</strong></td>
<td><strong>2.7</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>695</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Item 13 sought to determine if students received job descriptions of their specific career aspiration during their college years. Responses to this item appear in table 19.

### TABLE 19

**SPECIFIC CAREER ASPIRATION OCCUPATIONAL INFORMATION RECEIVED BY STUDENTS**

<table>
<thead>
<tr>
<th>Possible Response</th>
<th>No. of Students</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Yes</td>
<td>436</td>
<td>62.7</td>
</tr>
<tr>
<td>2. No</td>
<td>242</td>
<td>34.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>678</strong></td>
<td><strong>97.5</strong></td>
</tr>
<tr>
<td><strong>No Response</strong></td>
<td><strong>17</strong></td>
<td><strong>2.5</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>695</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
Item 14 sought to determine students' perception of what is the most significant in their college curriculum to better assist in achieving their career aspiration. Responses to this item appear in table 20.

### TABLE 20

**STUDENTS' PERCEPTION OF MOST SIGNIFICANT NEED IN COLLEGE CURRICULUM**

<table>
<thead>
<tr>
<th>Response Rate</th>
<th>Area of Students' Perceived Needs</th>
<th>No. of Students</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most frequent response</td>
<td>Courses</td>
<td>258</td>
<td>37.1</td>
</tr>
<tr>
<td>Second most frequent response</td>
<td>Guidance/Couns/Career Services</td>
<td>170</td>
<td>24.5</td>
</tr>
<tr>
<td>Third most frequent response</td>
<td>Teaching/Teachers</td>
<td>59</td>
<td>8.5</td>
</tr>
<tr>
<td>Fourth most frequent response</td>
<td>Equipment</td>
<td>37</td>
<td>5.3</td>
</tr>
<tr>
<td>Least frequent response</td>
<td>Nothing</td>
<td>21</td>
<td>3.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>545</td>
<td>78.4</td>
</tr>
<tr>
<td>No Response Rate</td>
<td></td>
<td>150</td>
<td>21.6</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>695</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**NOTE:** Subjects' responses pertaining to perceived needs in their college curriculum are reported in order of the "most frequent" response to the "least frequent" response. The "no response" rate appears at the bottom of the table together with the totals. The table should read; e.g. line one; the most frequent response pertained to students' perceived needs in the area of course offerings, with 258 students stating their perceptions which represents 37.1 percent of the sample.
Item 15 sought to determine students' knowledge of jobs for which workers are in high demand in the Jamaican labor market. Responses to this item appear in Table 21.

**TABLE 21**

**STUDENTS' PERCEPTION OF JOBS WITH HIGH DEMAND FOR WORKERS**

<table>
<thead>
<tr>
<th>Possible Correct Responses</th>
<th>No. of Students</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. One</td>
<td>113</td>
<td>16.3</td>
</tr>
<tr>
<td>B. Two</td>
<td>168</td>
<td>24.2</td>
</tr>
<tr>
<td>C. Three</td>
<td>278</td>
<td>40.0</td>
</tr>
<tr>
<td>Total</td>
<td>559</td>
<td>80.5</td>
</tr>
<tr>
<td>No Response</td>
<td>136</td>
<td>19.5</td>
</tr>
<tr>
<td>Total</td>
<td>695</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Summary**

This chapter presented the results of the data obtained in identifying the career aspirations of Jamaican college students based on a sample of 695 college seniors.

Chi square values were obtained for hypotheses 1 and 2 utilizing Futcher's (1974) Chi square Goodness of Fit and Futcher's (1975) Contingency computer programs respectively. Both hypotheses 1 and 2 were rejected at the .05 level with the strength of the differences being .70 and .57 as indicated by the Cramers Phi $\phi$.

Data for hypotheses 1A-1F were presented both statistically and descriptively, and responses to the items of the CAF were presented in tabulated form.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

The first chapter of this study presented the problem which prompted the research concerning the career aspirations of Jamaican students. After discussing the problem, hypotheses for the study were postulated. Chapter II reviewed literature pertinent to both the particular problem of this study and the general area of career aspirations.

Chapter III presented the methodology employed in conducting the study which included an explanation of the type of research, the procedures followed, and the statistical analysis. Chapter IV presented the findings of the study.

This chapter presents a summary of the findings, problem and methodology, draws conclusions regarding those findings, and after a general discussion of the conclusions and findings lists recommendations which grow out of this study.

Summary of the Problem

This study is concerned with identifying the career aspirations of Jamaican college students, with implications for program and manpower development. A knowledge of these aspirations seems necessary for educational and economic planning by the government of Jamaica.

The research sought to determine whether or not a significant
difference exists between the career aspirations of Jamaican college students, the program they pursue (independent or government offerings), and the manpower needs of the country. College students were selected based on the theory that their vocational decision would be more firm (because of their age and stage of development) than secondary school students. Furthermore, studies have been conducted with respect to the career aspirations and educational expectations of Jamaican secondary school students. It was felt that colleges should play a crucial role in providing necessary expertise for Jamaica and as such the need for investigating the contribution they were making seemed plausible.

Two major research hypotheses were posited along with six sub categories under hypothesis 1. These dealt with differences of significance between the total need for skilled personnel in Jamaica and career aspirations, the needs in each occupational group and career aspirations, and the career aspirations of students attending independent and government colleges.

Summary of the Methodology

The population of this study consists of all seniors in Jamaican colleges who were present on the day of testing. By a stratified random sampling method fifteen colleges were selected to include proportionately, independent and government colleges, rural and urban colleges, as well as colleges by type (i.e., teacher training, business, etcetera). All available seniors were tested representing a total of 695 seniors from a population of 790.
The Career Aspiration Form (CAF) was used to collect the data. This instrument was particularly designed for the study. The CAF, which contained fifteen items tailored for keypunching, was guaranteed to take no longer than fifteen to twenty minutes to complete.

Items on the CAF were designed to gather data in order to test the hypotheses set forth as well as to report descriptively investigations relating to guidance, career education services, and curriculum. Collection of the data took place during the months of October and November 1978, and generally was done with all subjects together in one place at each college. The data collection had full approval of and cooperation from the Ministry of Education's Tertiary Education Unit and the Ministry of Education's Research Unit.

Analysis of the data was done by Andrews University Computing Center utilizing (1) Futcher's (1974) Chi-square Goodness of Fit and Futcher's (1975) Contingency computer programs, and (2) the statistical test for finding the standard error of a proportion yielding Z values.

**Summary of Findings**

The results of the study indicate that there is a statistically significant difference between the career aspirations of Jamaican college students and the manpower needs of Jamaica. The data also depict a significant difference between the seniors who attend independent colleges and those who attend government colleges. The results yielded by the data not only achieved statistical significance but also practical significance: the population effect size having been set at .50. The strength of the difference was .70 and .57, respectively, as derived by the Cramers $\phi$. Differences existing
between the career aspirations and specific occupational groups also were reported descriptively.

The null hypotheses 1 and 2, including sub hypotheses 1A-1F, were rejected at the .05 level of significance.

**Conclusions**

As a result of the test of the hypotheses and the responses to various items of the CAF, the following conclusions have been reached.

1. The results of the data yielded by the test of hypothesis 1 indicate that there is significant difference (both statistical and practical) between the career aspirations of Jamaican college seniors and the manpower needs of Jamaica.

   The object of this research was not to suggest that the need for skilled personnel is the only answer to Jamaica's manpower needs, so that identifying career aspirations should not be viewed as being totally conclusive. However, this research views a knowledge of the career aspirations of Jamaican college seniors as a vital part of the answer to Jamaica's needs. Such a knowledge is definitely a part of the process of manpower development. Thus the obvious discrepancy that exists as indicated by the findings of this research is cause for concern. If, as an independent nation, Jamaica is to be dependent on its own people as a major part of the resource for economic development, definite efforts must be taken to help college students become aware of the needs of the country on an on-going basis, so that as manpower needs change or vary, students can be kept abreast of the actual situation.
Manpower need projections and career aspirations are often found to be at variance when the time frame for those projections is some distance in the future. Historically, manpower needs projections and aspirations move more closely together as the time frame shortens, since workers modify their career aspirations according to the job market, and manpower needs are modified according to the availability of workers.

One of the constructs (9) used in developing the items the CAF was based on guidance and counseling activities. The data revealed that 43.7 percent of the sample reported that they have no counselor available to them, 33.2 percent report that they have never made use of a counselor's service, and only the remaining 20.4 percent indicated that they have made use of a counselor's service during their college years (see table 15). It is alarming that approximately 76.9 percent of the sample are seniors completing college in preparation for the world of work without having had the benefit of a professional counselor to help in their career decision-making process. Such a counselor could help students make informed career choices as well as help students become aware of where they could best fit in the manpower needs of the country. Certainly this lack existing in the program offerings of both government and independent colleges contributes to such a significant difference in the results of the hypotheses.

In addition to the results of item 9, item 10 was developed to look at career education services. The data revealed that 52.2 percent of the sample indicate that no career education services were available
to them; another 16.3 percent said they did not make use of the services available (see table 16). This item, therefore, revealed that 68.5 percent of the sample are completing college without the benefit of career education services. This, undoubtedly, has direct bearing on the results of the study.

In item 11, where students were asked which college personnel discussed career plans with them during their college years, only 14 percent of the sample reported that a guidance counselor had done so, 10.8 percent reported that a department chairperson had done so, 20.4 percent said it was some other person (parents, friends, and church leaders), and 50.0 percent said a teacher.

Because of the absence of professionals in the area of guidance and career education, it seems to fall the lot of the next most professionally prepared person, the teacher, to function both as a teacher and a "guidance counselor" (as indicated by the 50.0 percent response mentioned above). But this is a taxing responsibility for one individual to bear two jobs, equally demanding, at the same time, especially when the teacher is not professionally qualified in one area. The professional level necessary for outstanding performance in both areas could hardly be expected given this lack of preparation in one of them. Thus the responses for item 12 where 26.2 percent of the sample report that they have not received information regarding various types of occupations in terms of job descriptions: 21 percent report that the information they received was poor, 30.5 percent rated the information they received as adequate, and 19.6 percent rated the information they received as good
(see table 18). This would suggest that 47.2 percent of the sample were at a disadvantage in being informed, even at an adequate level, with respect to the occupations available in Jamaica, a situation that leaves much to be desired.

It is evidenced in responses to item 13 that 62.7 percent of the sample received job descriptions for their specific career aspirations during college years, as an aid towards their preparation for entry into the world of work. Even with these favorable responses, these data reveal that one in three did not receive a job description of the job they were preparing for. This is unfortunate.

Results of item 14, where students were asked an open-ended question regarding what they perceived to be needs in their college curriculum, showed 37.1 percent indicating the need for more courses (and expansion of present courses) with the next most frequent response being the need for Guidance Counseling and Career Education Services totalling 24.5 percent of the sample (see table 20). Many of the respondents that comprised 37.1 percent of the sample were asking that courses be made more practical to the world of work. This could be the function of a career education program.

Students' response to the influence Jamaica's manpower needs have had on the formulation of their career aspirations (item 4) revealed 31.8 percent of the sample as having felt that the manpower needs had a considerable influence on them. Another 38.2 percent responded to "some influence." Those who felt "little" or "no influence" accounted for 27.4 of the sample, more than a quarter of the sample. Quite a formidable number of college students are making
career decisions without a knowledge of their country's manpower needs, and it is safe to conclude that some of these would probably make other types of decisions were they adequately informed. Most students plan to enter the labor force after completing their present college courses. This group accounted for 62.0 percent of the sample. If these were properly directed the imbalance between career aspirations and manpower needs that presently exists might well be reduced. A further factor to note is that data for item 6 (see table 12) revealed that 83.5 percent of the sample plan to enter the labor force in Jamaica with 12.0 percent indicating a desire to work abroad, which would suggest that Jamaica can count on its youth for service in the country.

On the final item of the CAF, item 15 (see table 21), students' response indicated that 40 percent of the sample correctly identified at least three occupations that were presently in high demand in Jamaica, 24.2 percent identified two occupations, and 16.3 percent identified one occupation. However, 19.5 percent did not respond to the item. This again is evidence of a lack of information and an awareness of needs existing in Jamaica on the part of some students. This is a situation that can be adjusted by proper improvements in curriculum offerings in which career education services play a vital role.

The preceding section presented a discussion of hypothesis 1 together with discussions of CAF item responses relevant to this hypothesis. It has shown that the need for guidance services in Jamaica is overwhelming.

The discussions pointed to career education as an integral
function of guidance; implying the fact that guidance will help students make reasoned choices and decisions that will bring personal satisfaction as well as benefit to society.

2. The career aspirations of Jamaican college seniors attending independent colleges and those attending government colleges are not the same. Statistical analysis reveals a significant difference between the two. The strength of the difference indicated by the Cramers Phi $\phi$ is .57. This is suggesting that there is a difference in emphases in the occupational aspirations of the students in an independent college which may be a function of the type of college, its curriculum emphasis, or the type of student that opts to attend an independent institution. The career aspirations of students in government institutions are higher for each occupational group except in the case of Occupational Group No. 3 (clerical and sales); where students' career aspirations are higher in independent institutions.

3. Students' career aspirations are higher than the projected needs of Jamaica in two high-level occupational groups 1 and 2. This means that Jamaica faces a problem of reconciling the high output of so many professional technical and related personnel as well as administrative and managerial personnel with manpower projections indicating insufficient jobs of that nature to be filled. If students who face the obvious dilemma of unemployment for their field of preparation could have been directed in other areas of need with proper guidance, most of the frustrations likely to occur could have been averted. This is indeed crucial to preservation of willing manpower and should be seen as a likely "brain-drain" valve, because of unfulfilled aspirations.
4. Students' career aspirations are lower than the projected manpower needs of Jamaica in middle and low-level occupational groups 3, 4, 5, and 6. This presents a reverse problem to that which was mentioned above in that the problem Jamaica faces within these occupational categories is that of being unable to have these needs filled because the college seniors approaching the labor market in Jamaica are insufficient for these categories. Here one finds a further index of the imbalance or a disparate relationship between aspirations and needs.

5. The high occupational aspirations of Jamaican college seniors definitely poses a problem for the development of a balanced pool of skilled manpower needed by the country for economic growth, since the majority of Jamaican college seniors do aspire to high-level occupations.

6. Jamaican college seniors perceived the need for guidance, counseling, and career education services in their curriculum as crucial to their achievement of their career aspirations.

For career education to function well, trained guidance and counseling personnel with properly organized programs are a necessity. Two basic thrusts are needed now. The first is the development of an information system designed to disseminate occupational information, bearing clear job descriptions, requirements, and availability on an ongoing basis that can be funneled to college students. The second entails the development of a battery of tests somewhat like the Strong Vocational Interest Blank (SVIB), the Career Assessment Inventory (CAI), and the 16PF as well as tests of aptitude and ability suitable
in the Jamaican context. These tests would serve as career guides for proper direction and placement for Jamaican college students. This would open a whole new productive avenue for meeting manpower needs in a professional manner.

**Recommendations for Further Research**

This study has raised issues for further research. Certain questions could not be answered by this study because they were not within the scope of investigation. Following is a list of recommendations for further research that are a natural outgrowth of this study:

1. A study should be made of the present manpower needs projections to ascertain their validity as well as to affirm a manpower base for constant updating and revision. Manpower studies are generally modified to fit changing needs, and a constant look at the career aspirations of Jamaican college seniors and an updating of manpower needs may result in narrowing the gap that now exists.

2. A tracer-study could be conducted to follow the present subjects in this study to see what actually happened to them every three or five years, in terms of entry into various occupational groups, to gain insights as to how the disparate career aspirations and manpower needs could be reconciled in Jamaica.

3. A study should be done that would develop a model for Guidance, Counseling, and Career Education Services for Jamaican colleges that would serve to disseminate information for Jamaican college students, thus aiding in their own individual aspirations as well as fitting Jamaica's manpower needs.
4. A study should be conducted of the "Significance of Change" method (McNemar Test) with college students at the beginning of their college program and then again, at point of senior year, to see if the infusion of guidance and career education modules in curriculum affect career aspirations with respect to manpower needs.

5. A study investigating the factors that contribute to the differences between the career aspirations of Jamaican college seniors attending independent colleges and those attending government colleges should be conducted. Such a study may provide useful insights for educational development in independent institutions that could bring high dividends for manpower development.

Summary

This chapter summarized the problem, methodology, and findings of the study, generated conclusions and discussions, and posited recommendations for further research.
APPENDIX 1

List of Questions Career Aspiration Form was designed to answer

Career Aspiration Form
The CAF was designed in order to determine:

1. The career aspirations of Jamaican college seniors
2. Jamaican college seniors' perception of the relevance and value of the curriculum they are pursuing to their career aspirations
3. The percentage of Jamaican college seniors that have been to guidance counselors to seek career guidance
4. The percentage of Jamaican college seniors who have been involved in career guidance experiences
5. At what time in relation to the completion of their course of study do Jamaican college seniors plan to enter (or re-enter the labor force of Jamaica
6. If Jamaica's manpower needs have had any influence on the formulation of the career aspirations of Jamaican college seniors
7. In what occupations Jamaican college seniors plan to work upon completion of their course of study
8. The percentage of Jamaican college seniors who plan to work in Jamaica
9. Jamaican college seniors' perception of what is needed in their particular college curriculum (in terms of subjects or any other type of academic help) in order to better assist them towards achieving their career aspirations
10. How Jamaican college students rate the information they have received in college regarding various types of occupations in Jamaica.
CAREER ASPIRATION FORM

Place the number representing your response in the box provided to the right.

1. Taking into consideration your career aspiration and your present program of study, which of these occupational groups do you think you will enter (assuming you enter) immediately after completing college?

1. Professional, Technical and Related
2. Administrative, Executive or Managerial
3. Clerical and Sales
4. Self-Employed Independent Procedures
5. Service, Sport and Recreation Occupations
6. Craftsmen, Production Process and Operating Occupations

2. Indicate the specific occupation to which you presently aspire

________________________________________________________
________________________________________________________
3. To what degree has your college curriculum helped in preparing you for entry in your career?

1. No Help
2. Little Help
3. Some Help
4. Considerable Help

4. What influence has Jamaica's manpower needs had on the formulation of your career aspiration?

1. No Influence
2. Little Influence
3. Some Influence
4. Considerable Influence

5. When do you plan to enter or re-enter the labor force?

1. After completing my present college course
2. After completing a Bachelor's Degree
3. After completing a Master's Degree
4. After completing a Doctoral Degree
5. Not planning on entering or re-entering the labor force
6. Where do you plan to enter the labor force?
   1. Jamaica
   2. Abroad (Please Specify) ______________________

7. How long do you plan to work after graduating from college before continuing studies?
   1. Less than 1 year
   2. 1-2 years
   3. 3-4 years
   4. 5-6 years
   5. More than 6 years
   6. Plan to work while continuing studies
   7. Do not plan to work

8. With which of the following do you desire to work?
   1. Government (e.g. civil service, public schools, government industries, etc.)
   2. Non-Government (e.g. private industries, church organizations, etc.)
   3. Both Government and Non-Government Organizations
9. If your college has a guidance counselor, have you personally made use of his/her services?

1. Yes
2. No
3. No counselor available

10. If career education services are available to you at your college, have you made use of these services in any way?

1. Yes
2. No
3. Career education services not available

11. Which of the following college personnel discussed career plans with you during your college years? (More than one response is acceptable - place the number/s you choose in the corresponding box.)

1. Guidance Counselor
2. Teacher
3. Academic Dean
4. Department Chairman or Coordinator
5. Dean of Student Affairs
6. Dormitory Dean
7. Other (Please Specify) _______________________

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12. How would you rate the information you received in college regarding various types of occupations in Jamaica in terms of job descriptions?

1. Good
2. Adequate
3. Poor
4. Have not received any information regarding the various types of occupations in Jamaica, in terms of job descriptions

13. Did you receive information regarding the job description of your specific career aspiration during your college years?

1. Yes
2. No

14. What do you perceive as the single most significant need in your college curriculum (in terms of subjects or any other type of academic help) in order to better assist you in achieving your career aspiration? ______

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
15. List the jobs you believe workers are presently in high demand in the Jamaican labor market ________

_______________________________________________________

_______________________________________________________

_______________________________________________________
APPENDIX 2

Report of Pilot Study
ATTENTION: Committee Members

FROM: Newton W. Hoilette

RE: Questionnaire Pilot

The attached Career Aspiration Form (CAF) designed for my study of the career aspirations of Jamaican college seniors was administered to twenty-two Jamaican college seniors attending A.U. as a pilot.

The following is a report of the comments the participants of the pilot made with regard to the questions asked on the (CAF).

Participants were asked to write their comments on the back of the form indicating whatever difficulty they may have had in responding to each question. They were also asked to indicate how much time they took to complete the form and to give their overall impression of the instrument.

Comments on Specific Questions (19 participants commented)

Ques. 1 -- Five participants indicated they felt a need for some examples to be given for each occupational group (as per Jamaica's occupational classifications).

Ques. 3 -- Five participants suggested rewording this item, because numbers 1 & 2 of the possible answers to this question could both be chosen as a response.

Ques. 3 -- Two participants suggested using either "considerable help" or "great help" instead of both.

Ques. 7 -- Two participants suggested adding another possible response in order to include those who planned to work while continuing studies.

Ques. 9 -- One participant suggested a third option to include the possibility of working with both government and non-government.

Ques. 15 -- One participant indicated the need to include the period of time referred to in this question (e.g. during college years).

Timing

All participants completed the questionnaire within 15 minutes excepting one who was engaged in a conversation while doing it. (This participant took 20 minutes). The range of time included times such as 4 mins, 5 mins, 9 mins, 10 mins, 12 mins, and 15 mins.

General Comments

All participants responding felt that the questionnaire was good overall. Some stated that it appeared longer than it really
is and that this may give the impression that it would take a long time to complete; thus causing possible reluctance on the part of possible subjects. Questions were perceived as being good, clear, to the point, relevant, simple and easy to understand, except in one case where the participant felt the need for more punctuation marks.

Participants also felt that the questionnaire was well spaced with sufficient questions on each page, easy to read thus encouraging them to complete the form.

Two participants requested that the instructions should indicate directions to include those questions that were open-ended.

Researcher's Note:

I discussed the questionnaire with each participant in groups and individually and was encouraged by their observations and contributions towards refining the questionnaire.

Adjustments will be made with regard to Questions 5, 3, 7, 9 and 15 to improve on the instrument. In the case of the observation made re-Question 1, the researcher will have copies of the Jamaican Government classification of occupational groups on hand should subjects need classification with respect to this question.

From this pilot exercise I am more confident that Jamaican College seniors understand what the questionnaire asks and are able to answer accordingly.

-- Newton W. Hoilette
APPENDIX 3

Letters Requesting Permission from Jamaican Government

Replies Granting Permission and Cooperation for the Study
The Chief Education Officer  
Ministry of Education  
Kinston, Jamaica  
West Indies  

Dear Sir:  

The Department of Education of Andrews University at Berrien Springs, Michigan, is willing to cooperate with me in conducting a research study in Jamaica. I hereby respectfully request that your Ministry consider the possibility of cooperating with us in conducting this study.  

The purpose of the study is to ascertain the career aspiration of Jamaican College seniors, with the aim of providing suggestions for program and manpower development. Program development refers directly to guidance, counseling, and curriculum.  

It seems that this will be an excellent opportunity for me as a Jamaican student in collaboration with Andrews University and your Ministry to contribute positively to the growth and development of Jamaican college students in terms of preparing them to meet the manpower needs of Jamaica.  

In cooperating with this research the Ministry of Education will be making it possible for me to collect necessary data for my doctoral dissertation. I shall be mailing to you, under separate cover, a copy of my research proposal.  

I am hoping to hear from you at your earliest convenience, since plans regarding this study and my educational pursuit are contingent upon your response to this request.  

Sincerely yours,  

Newton W. Hoilette  

Robert A. Williams,  
Chairman, Department of Education  
Assistant Dean, Director of the Doctoral Program
April 18, 1978

Mr. G. R. Woodham
Permanent Secretary
Ministry of Education
2 National Heroes Circle
P. O. Box 498
Kingston, Jamaica

Dear Mr. Woodham:

I am a Jamaican student at Andrews University in Berrien Springs, Michigan, completing a programme in Educational Psychology and Counselling for the Ed.D. degree. My dissertation focuses on the career aspirations of Jamaican college seniors with implications for curriculum (particularly counselling and guidance services) and manpower development.

My advisor and I recently wrote a letter to the Chief Education Officer informing him/her of my study requesting the cooperation of the Minister of Education in the execution of the study.

We have not yet received a reply to this request, however it is possible that our letter may have gone astray. Since such requests may come under your portfolio, I hereby respectfully request your kind consideration in granting Andrews University and I the cooperation necessary.

We feel that such a study will be of significance to tertiary educational planning, and manpower development in Jamaica.

Awaiting your earliest response,

Newton Hoilette

Robert A. Williams
Assistant Dean, Director of
the Doctoral Programs
Chairman, Department of
Education

be

cc to A.G.R. Byfield
May 23, 1978

The Chief Education Officer  
Ministry of Education  
Kingston, Jamaica

Dear Sir:

I am a Jamaican student at Andrews University presently completing a doctoral program in Educational Psychology and Counseling with the view of returning to serve at West Indies College as Dean of Students.

Recently, I wrote to you requesting your Ministry's cooperation with Andrews University and myself in the execution of my dissertation study entitled "The Career Aspirations of Selected Jamaican College Seniors with Implications for Programme and Manpower Development". Program development referred to in the title is specifically directed towards Guidance and Counseling Services as well as curriculum.

I imagine that your busy schedule has not permitted you to respond to our request as yet. I trust, however, we will receive a favorable response soon since the collection of data from the colleges sampled is dependent on this.

Yours sincerely,

Newton W. Hoilette

Robert A. Williams  
Assistant Dean, Director of  
the Doctoral Programs  
Chairman, Department of Education
May 23, 1978

Mr. G. R. Woodham
Permanent Secretary
Ministry of Education
2 national Heros Circle
P.O. Box 498
Kingston, Jamaica

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Yours sincerely

Newton W. Hoilette

Robert A. Williams
Assistant Dean, Director of the Doctoral Programs
Chairman, Department of Education
Mr. Haulton Haultette,
Andrews University
Berrien Springs
Michigan,
U.S.A.

Dear Mr. Haultette,

Your letter addressed to the Permanent Secretary has been referred to me as the Acting Senior Education Officer for Tertiary Education.

Since you have not really stated specifically the nature of assistance you require I am to ask that you let me know in what respects I shall be requested to assist you in your programme of work.

I look forward to hearing from you and shall be happy to assist in whatever way possible.

With best wishes.

Yours truly,

Inez Christie (Mrs.)
(Acting Senior Education Officer
Tertiary Education)
for Permanent Secretary.
Mr. Newton Hoilette,
c/o Dr./Mr. Robert A. Williams,
Chairman,
Department of Education,
Andrews University,
Berrien Springs,
Michigan,
U.S.A.

Dear Sir,

I refer to your letter dated 18th April, 1978, relating to your request for assistance in connection with your doctoral programme in Educational Psychology and Counselling.

A copy of your letter has been sent to Dr. Keith Lowe, Senior Educational Research Officer, 37 Arnold Road, Kingston 5, Jamaica, W.I. with a request that he co-operate with you as fully as possible and reply direct to you.

Yours sincerely,

(D.M.E. Flemlinson),
for Permanent Secretary.

Tertiary Education Unit,
97A Church Street,
KINGSTON.
MINISTRY OF EDUCATION
Research, Evaluation & Counselling Unit,
37 Arnold Road,
Kingston, Jamaica West Indies.

8th June, 1976.

Mr. Newton Hoilette,
c/o Dr. Robert A. Williams,
Chairman,
Department of Education,
Adnrews University,
Berrien Springs,
Michigan,
U.S.A.

Dear Sir,

We would be willing to co-operate generally with your proposed doctoral research, especially by way of facilitating access to the institutions to be studied.

You should be aware that a tracer study of U.W.I. graduates is proposed, and that our own research section is making a rather general survey of the job aspirations of secondary school leavers as part of our Vocational Tracer Study.

Yours sincerely,

(Keith Lowe,
Senior Researcher),
for Permanent Secretary.
June 14, 1978

Mrs. Inez Christie
Ministry of Education
97A Church Street
Kingston
Jamaica

Dear Mrs. Christie:

I thank you very much for your letter of May 16, 1978. I appreciate your willingness to assist in this study. I am confident that you will be of tremendous help to me in your official capacity.

The nature of assistance I am requesting is as follows:

1. That the principals of the colleges sampled for the study be written a cover letter on my behalf firstly to inform them of the Ministry's willingness to cooperate with me in this study and secondly to encourage them to cooperate with me in the collection of the data. In order to collect the data my plan is to visit the colleges as the beginning of the 78-79 school year and administer a fifteen minute questionnaire to a select percentage of seniors whose names will have to be ascertained from the registry.

2. I would appreciate your sending me a list of independent colleges that qualify under the heading of tertiary education, in order for me to verify my sampling.

3. Any ideas you have regarding any effort that the Ministry could make in making the results of this study available and usable for Jamaican Colleges, students and Government would be appreciated.

4. Seeing that this study will undoubtedly be of benefit to the Ministry of Education and the Jamaican Government in terms of the development of (a) Guidance Services, (b) Curriculum, and (c) the Expansion of Higher Education to meet manpower needs etc., I respectfully request that the ministry look with favour upon granting me some financial assistance in funding this study. Such expenses that would be involved are: (1) travel to Jamaica (2) travel to various colleges around Jamaica, (3) board and
Ms. Inez Christie

June 14, 1978

lodging for approximately one month, (4) duplicating material, and (5) preparation and reproduction of the data and manuscript. Any financial assistance possible in these areas would be appreciated. Details can be forwarded later if the Ministry considers this aspect of help.

Kindly send me a copy of the letter you will have written to the principals of these colleges. I will be forwarding a letter to them in the next five days which will allow enough time for my letter to arrive immediately after yours. In my letter to the principals I will be requesting from each the approximate number of seniors that are presently attending with the possibility of graduating in 1979.

Your earliest response will be appreciated. Thank you in advance.

Respectfully yours,

Newton W. Hoilette

Robert A. Williams
Advisor/Graduate Dean

P.S. I am sending to you a copy of the research proposal under separate cover, and would like to call your attention to Chapter 1 in particular.
June 21, 1978

Dr. Keith Lowe
Ministry of Education
37 Arnold Road
Kingston
Jamaica W.I.

Dear Sir:

Thank you very much for your letter of June 8, 1978, which I received today. I certainly appreciate your willingness to cooperate with Andrews University and I in my doctoral research. I am particularly pleased with your offer to facilitate access to the institutions to be studied.

A few days ago I responded to Mrs. Inez Christie of the Tertiary Education Unit (who has also expressed willingness to cooperate with this study) indicating the specific areas of assistance necessary. It may be that she will contact you on this matter, however I am enclosing a copy of my letter to her so that you both may coordinate efforts on my behalf. Kindly respond to the items listed in my letter to her.

My study focuses on college seniors both in government and independent colleges across the country, however I shall be happy to receive from you any material that can be released from time to time on the tracer studies you mentioned.

One of my particular needs at this point is the most current manpower-needs report or studies for various occupations in Jamaica. Kindly furnish me with this as soon as possible.

I shall be coming to Jamaica in August and would appreciate the privilege of arranging an appointment with you towards the end of August in order to exchange ideas with you regarding the research.

Looking forward to hearing from you and meeting with you.

Yours sincerely,

Newton W. Hoilette
Robert A. Williams
Advisor/Graduate Dean
June 21, 1978

Mrs. Inez Christie  
Tertiary Education Unit  
Ministry of Education  
97A Church Street  
Kingston  
Jamaica

Dear Mrs. Christie,

I received a letter today from Mr. D. M. B. Tomlinson stating that a copy of my letter of April 13, 1978 requesting assistance from the Ministry in conducting my research has been passed on to Dr. Keith Lowe requesting him to cooperate with me as fully as possible.

I am very appreciative of this type of cooperation being received already. I am enclosing a copy of my response to Mr. Tomlinson to you as Acting Senior Education Officer, and also in view of the fact that I had recently responded to you regarding the assistance I need at this time.

Hoping to hear from you at your earliest convenience.

Yours sincerely,

Newton W. Hoilette

Robert A. Williams  
Advisor, Graduate Dean

Enclosure

ddw
June 21, 1978

Mr. D. M. B. Tomlinson
Tertiary Education Unit
97A Church Street
Kingston
Jamaica

Reference No. G 560/01

Dear Sir,

I appreciate very much your response of May 18, 1978 which I received today.

A few days ago I also received a similar letter expressing the Ministry's willingness to cooperate with Andrews University and I in the execution of my study, from Mrs. Inez Christie.

Both your response and Mrs. Christie's response have been very encouraging to me. I responded to her letter on June 14, 1978 stating the specific areas of assistance I need at this point. It may be that this information will be passed on to Dr. Keith Lowe, however I will await his response.

I thank you again for your cooperation.

Yours sincerely,

Newton W. Hoilette

Robert A. Williams
Advisor, Graduate Dean

cc: Mrs. Inez Christie
APPENDIX 4

Letters to Colleges Sampled Seeking Cooperation for the Study

Responses from Some of the Colleges
Dear Sir/Madam:

I am a Jamaican student presently completing a Doctorate in Educational Psychology and Counseling at Andrews University.

My dissertation study is focused on the career aspirations of selected Jamaican college seniors with implications for program and manpower development. Program development is directly concerned with guidance and counseling services as well as curriculum.

The Ministry of Education in Jamaica is cooperating with me in the execution of this study. Your college has been chosen by a stratified, random sampling procedure as one of the colleges from which I need to collect my data.

I respectfully request that you allow me the privilege of visiting your college at the beginning of the 1978-79 school year in order to administer a fifteen-minute questionnaire to some of your seniors, who are prospects for graduation in 1978-79.

If this meets your approval could you kindly mail to me immediately the approximate number or list of seniors you now have as prospects for graduation.

Thanking you in advance.

Yours respectfully,

Newton W. Hoilette

Robert A. Williams
Advisor/Graduate Dean

P.S. In your reply kindly answer the following for me: Does your institution offer post-secondary (i.e. post high school) programs leading to at least a two-year diploma; and as such have students you accept in your school already completed high school?
Mr. Newton W. Hoilette  
Andrews University  
Berrien Springs  
Michigan 49104  
U.S.A.

Dear Mr. Hoilette,

I refer to your letter of 21st June requesting assistance with the completion of your Psychology and Counselling degree.

We would certainly be happy to assist you in the coming academic year with administration.

Normally we have a number of these types of research projects from time to time, and if necessary we give assistance with the person doing the questionnaire in reviewing the questions for maximum benefit, in particular with regard to the understanding by the students.

With regard to the nature of our institution, I am enclosing a copy of our current brochure, and you will see from it that we operate a wide variety of programmes all at post secondary level. These range from junior technician through to technician technologist and professional, and in respect to your question you will notice that again we have a wide variety of types of students, who are doing full time, part time and evening courses. You could look through our latest copy of the Principal's report, and this would give you some idea of the graduating numbers in the various areas, so that you might find an adequate sample for selection of your test.

With every good wish,

Yours sincerely,

A.W. Sangster  
PRINCIPAL.

AWS/jm
Mr. Newton Hoilette,
Andrews University,
Berrien Springs,
MICHIGAN 49104.

Dear Sir,


You are welcome to visit the Jamaica School of Agriculture during the 1978-79 school year.

As our senior students will be going out on a work study programme from September 11, 1978, I suggest you visit the School before that date.

Approximately 127 Agricultural and Home Economics students will graduate in December 1978.

The Jamaica School of Agriculture is a tertiary educational institution. For your information I have enclosed an Information Sheet.

Yours truly,

D.H. Scott (Miss)
Registrar.
APPENDIX 5

Responses from a College which Ceased Functioning and Another which did not Qualify as a College
Dear Sir,

Greetings and peaceful Salutations!

I am replying on behalf of the Principal of the Black River Commercial School. I must advise you that the School has ceased functioning since 1974.

I regret that you will have to make alternate contacts in order to collect your data.

Blessings and every good wish.

Sincerely Yours,

Rupert H. Evans

"Fast from Fear — Feast on Faith"
Dear Mr. Heilette,

Your letter has been received and contents noted.

Waulgrove College is really a High School and so the students we accept have already completed only the primary school programs.

When they graduate from this school they are then ready for post-secondary programs.

We estimate that there should be about forty such graduates at the end of the 1978-79 school year.

School resumes on the 4th of September and we shall be happy to have you visit at any time.

Yours truly,

A.Gibs

(Principal)
August 21, 1978

The Principal
Waulgrove College
2a Avon Park Crescent
Kingston 5

Dear Sir:

Thank you for your letter of July 17, 1978. I appreciate your letting me know the status of your school. This being so, it seems that I will not be able to visit with your school because of the fact that I need College seniors for my sample.

Let me wish you continued success in your programme at Waulgrove College.

Yours sincerely,

Newton W. Holette
Dean of Student Affairs

:ja
APPENDIX 6

Altered Data for 95 Subjects Missing from Data Collection

Z Values for Hypotheses IA-IF Reflecting the Altered Data
ALTERED DATA FOR 95 MISSING SUBJECTS - HYPOTHESIS 1

<table>
<thead>
<tr>
<th>Occupational Groups</th>
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<tbody>
<tr>
<td>Students' Career Aspirations</td>
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<tr>
<td>Jamaican Needs</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>505 64 161 18 12 30</td>
</tr>
<tr>
<td>325 31 230 41 34 145</td>
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</tbody>
</table>

\[ \chi^2 = 273.86 \text{ with 5 degrees of freedom} \]
\[ \alpha = .05 \]
Decision to Reject \( H_0 \).
Cramers Phi = .58

Z VALUES YIELDED IN ALTERED DATA FOR 95 MISSING SUBJECTS: HYPOTHESES 1A-1F

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Z Value Before Alteration</th>
<th>Z Value After Alteration</th>
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<tbody>
<tr>
<td>1A</td>
<td>13.5</td>
<td>11.5</td>
</tr>
<tr>
<td>1B</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>1C</td>
<td>-5.5</td>
<td>-3</td>
</tr>
<tr>
<td>1D</td>
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<tr>
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<td>-3</td>
<td>-3</td>
</tr>
<tr>
<td>1F</td>
<td>-8</td>
<td>-16</td>
</tr>
</tbody>
</table>

NB. Z Values Greater than ± 1.96
Decision to Reject \( H_0 \).
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Super, Donald E. "Vocational Adjustment: Implementing a Self Concept." Occupations 30 (1951):1-5.


Jamaican Government Publications and Documents


VITA

Name: Newton W. Hoilette

Place of Birth: St. Ann's Bay, St. Ann, Jamaica

Marital Status: Married to G. Elaine Young Hoilette

Undergraduate &
Graduate Schools
Attended: West Indies College & Andrews University

Degrees Awarded: 1968 Bachelor of Theology--West Indies College

1975 Master of Arts (Religion)--Andrews University

1979 Doctor of Education (Educational Psychology
and Counseling)--Andrews University

Experience: Pastor-Evangelist and Youth Camp Director (5 years)--
Central Jamaica Conference

Dean of Men and Teacher (1 year)--West Indies
College

Part-time Instructor--Andrews University

Graduate Assistant (Counseling and Testing Center,
Chairman of Education Department, and Educa-
tional and Counseling Area)--Andrews University

Present
Appointment: Dean of Student Affairs, West Indies College,
Mandeville, Jamaica